

*Research Article*

## Impact of Psychological Conditions and Physical Environment on Hospitality Services through Patient Experience

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**Abstract:** Modern healthcare services are undergoing transformation toward a more humanistic and patient-centered approach, emphasizing hospitality based services in hospitals. However, many healthcare institutions, particularly in outpatient settings, have not fully adopted this concept. Patients often experience psychological distress, and when coupled with an unsupportive physical environment, their comfort and overall experience may be diminished. These conditions can negatively affect perceptions of service quality, patient satisfaction, and loyalty toward hospital services. This study aimed to analyze the influence of patients' psychological conditions and the physical environment on hospitality-based services, with patient experience as an intervening variable, at the internal medicine outpatient clinic of BM Hospital. A quantitative research design using a cross-sectional approach was employed. The study involved 200 respondents selected through purposive sampling. Data were collected using structured questionnaires with Likert-scale items and analyzed with Structural Equation Modeling Partial Least Squares (SEM-PLS). The results showed that patients' psychological conditions, the physical environment, and patient experience simultaneously and significantly influenced hospitality-based services. Hypothesis testing confirmed that both psychological conditions and the physical environment had a direct and significant impact on hospitality-based services. Furthermore, patient experience played a mediating role, strengthening the relationship between these factors and perceived service quality. The findings highlight the need for hospitals to integrate psychological support and a conducive physical environment into outpatient care delivery. Enhancing these dimensions can improve patient experience, foster greater satisfaction and comfort, and build stronger loyalty toward hospital services

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### 1. Introduction

Modern healthcare services are currently experiencing a paradigm shift from merely treating diseases to adopting a more holistic and humanistic approach. One manifestation of this shift is the implementation of the hospitality concept in hospital services, emphasizing friendliness, comfort, and care for patients. This concept has developed as a response to patients' needs, who not only seek medical treatment but also desire a pleasant and reassuring service experience.

Although the hospitality concept is increasingly recognized, its implementation in many hospitals, especially in outpatient services, remains suboptimal. Services often still focus on medical and administrative aspects, while emotional factors and patient comfort receive less

attention. Meanwhile, patient experience during the service process greatly influences their perception of service quality.

Patients' psychological conditions are one of the factors affecting the quality of interaction and acceptance of hospital services. Patients experiencing anxiety, stress, or emotional discomfort tend to perceive services negatively, even when the technical medical aspects have been well performed. This indicates that mental health support needs to be integrated into hospitality-based services.

In addition to psychological factors, the hospital's physical environment also plays an important role. Clean, comfortable, organized, and patient-friendly facilities can create a conducive atmosphere for recovery. Conversely, an unsupportive environment can cause discomfort, worsen emotional conditions, and reduce the quality of patient experience.

Patient experience acts as a bridge between psychological conditions, physical environment, and perception of hospitality-based service quality. When patients feel comfortable both emotionally and physically, they will evaluate the service more positively, ultimately increasing satisfaction and loyalty to the hospital. Therefore, patient experience can serve as an important mediating variable in improving service quality.

Based on this background, this study was conducted to analyze the influence of patients' psychological conditions and physical environment on hospitality-based services, with patient experience as an intervening variable, in the internal medicine outpatient clinic at BM Hospital. The study's findings are expected to provide input for hospital management in designing service strategies that are not only medically excellent but also provide maximum comfort and satisfaction for patients

## 2. Preliminaries or Related Work or Literature Review

Consumer behavior is a field of study that explores how individuals and groups make decisions related to the search, purchase, use, evaluation, and disposal of products or services to fulfill their needs and desires. Schiffman and Kanuk (2014) define consumer behavior as the actions exhibited by consumers when seeking, purchasing, using, evaluating, and disposing of products and services that they expect will satisfy their needs. A similar view is presented by Swastha (2016), who emphasizes the importance of the decision-making process involved in acquiring and utilizing goods or services. Hawkins, Best, and Coney (2001) further highlight that consumer behavior is influenced by both internal factors, such as perception and motivation, and external factors, including social and cultural environments.

Kotler and Keller (2016; 2017) describe consumer behavior as the study of how individuals, groups, and organizations select, buy, use, and dispose of goods, services, ideas, or experiences to satisfy their needs and wants. They identify four major factors influencing consumer behavior: cultural, social, personal, and psychological factors. Solomon (2019) expands this understanding by stressing that the processes of selecting, consuming, and disposing of products are also closely tied to the formation of consumer identity. Foxall (2014) examines consumer behavior through a behavioral analysis lens and emphasizes the importance of empirical approaches, while Blackwell, Miniard, and Engel (2006) explore consumer behavior through a complex decision-making model influenced by various internal and external variables. Collectively, these perspectives reinforce the idea that consumer behavior is a dynamic and multidimensional process that must be thoroughly understood to develop effective marketing strategies.

Hospitality-based service is a service approach that integrates both functional and emotional aspects to create a positive and meaningful experience for service recipients. Lashley and Morrison (2000) define hospitality service as a form of service delivery that meets practical needs while simultaneously providing emotional comfort through care, warmth, and friendliness. Similarly, Jones and Lockwood (2002) emphasize personal attention and warm human interaction as central to exceeding customer expectations. Pizam and Ellis (1999) highlight the importance of empathy, politeness, and attentiveness in building emotional satisfaction and memorable service experiences. Walker (2010) further explains that hospitality is not merely technical service delivery, but involves creating a safe and emotionally comfortable environment. Within the SERVQUAL framework, Parasuraman, Zeithaml, and Berry (1990) stress that hospitality-based service must not only meet but exceed patient expectations by offering a warm, attentive, and comforting experience.

The effectiveness of hospitality-based service is influenced by a range of interconnected factors. Junça-Silva and Lopes (2023) suggest that daily micro-events in the workplace, such as social interactions and routine tasks, significantly affect employee well-being and performance in the hospitality industry. Emotional regulation and mindfulness are key to sustaining high service quality. Tasci (2020) notes that hospitality research remains fragmented, calling for a more integrated theoretical framework to better understand the complex dynamics of hospitality service. Nailon (1982) advocates for a multidisciplinary approach in managing hospitality, proposing a conceptual model to identify interdependent elements. Smith et al. (2013) argue that clear and appropriate theoretical use is essential for strengthening scientific foundations in hospitality studies. Synthesizing these views, Lashley and Morrison (2020) outline three key dimensions of hospitality service: social hospitality (emphasizing genuine, empathetic interaction), private hospitality (prioritizing privacy and comfort), and commercial hospitality (focusing on professional, standardized service delivery). These dimensions provide a comprehensive framework for assessing and improving hospitality-based services across various sectors, including healthcare.

The physical environment significantly influences consumer perceptions, behaviors, and service experiences. According to Kotler (2020), the physical environment refers to all tangible elements of the service setting that can be perceived through the five senses, including building design, spatial layout, lighting, colors, sounds, and cleanliness, which shape consumers' impressions and behaviors. Bitner (1992) introduced the concept of *servicescape*, defining it as the man-made physical surroundings in which services are delivered. This includes layout, decoration, ambient conditions such as temperature, aroma, and lighting, as well as symbolic cues, all of which can impact customer satisfaction and behavioral intentions.

Griffin and Moorhead (2014) describe the physical environment as the external conditions surrounding individuals in an organization, such as workspace layout, lighting, ventilation, and noise, which affect comfort, performance, and psychological well-being. Robbins and Judge (2017) emphasize that the physical environment comprises real, tangible aspects of the workplace—including spatial design, cleanliness, safety, comfort, and available equipment—that influence employee satisfaction and work effectiveness. Similarly, Davis (2011) highlights the role of architectural elements, interior design, lighting, color schemes, and spatial arrangements in shaping human interaction and perception within service spaces. Synthesizing these views, Kotler (2009) proposed three key dimensions for measuring physical environment: environmental conditions (e.g., temperature, lighting, scent), layout and functionality (e.g., adequacy of facilities, comfortable waiting areas), and signs, symbols, and artifacts (e.g., directional signage and interior elements reflecting brand identity).

Patient experience is a key indicator in evaluating the quality of healthcare from the patient's perspective. According to Picker (2011), patient experience refers to feedback given by patients based on their interactions with the healthcare system, emphasizing respect, communication, emotional support, and involvement. Lavela and Gallan (2014) highlight that it includes all interactions between patients and healthcare providers, staff, and the healthcare environment. Similarly, Doyle et al. (2013) explain that patient experience is shaped by how well patient needs, preferences, and values are acknowledged. The Institute of Medicine (2001) further emphasizes that quality care is defined by how responsive it is to individual patient values and needs.

Picker (2011) identifies several key dimensions of patient experience, including information and education, care coordination, physical comfort, emotional support, respect for patient preferences, involvement of family and friends, continuity and transition, and access to care. These dimensions reflect that patient experience goes beyond technical service delivery, encompassing emotional, relational, and human-centered aspects of healthcare.

### 3. Proposed Method

This study employed a quantitative approach, with data collected through questionnaires and semi-structured interviews. The population consisted of patients who visited the Internal Medicine Outpatient Clinic at Bhakti Mulia Hospital. The sampling technique used was purposive sampling, with inclusion criteria including patients over 18 years of age, having more than one visit, registered under the national health insurance (BPJS), able to communicate, read, and write properly, and willing to participate as respondents. The

sample size was determined using Hair et al.'s (2021) formula, which recommends a minimum of five times the number of indicators, resulting in 200 respondents. The exclusion criteria included patients who were unwilling to participate or failed to complete the questionnaire.

The study utilized both primary and secondary data sources. Primary data were obtained through direct distribution of structured questionnaires and in-depth interviews with selected respondents, while secondary data were gathered from literature reviews and field observations. The questionnaire was measured using a four-point to assess patient perceptions and experiences. Preliminary interviews were conducted to identify key issues, followed by questionnaire distribution to collect quantitative data. This methodology ensured the collection of comprehensive and accurate data relevant to patients' experiences and perceptions of healthcare service quality.

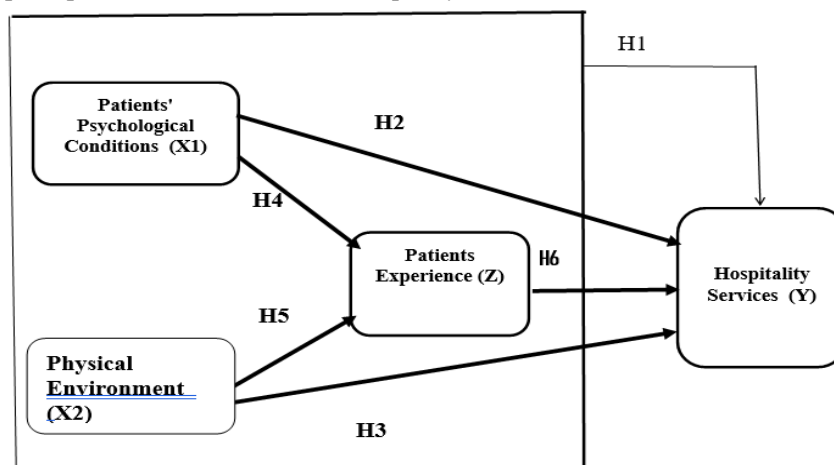


Figure 1. Conceptual Framework.

## 4. Results and Discussion

### Results

#### Respondens Characteristics

The characteristics of the respondents in this study indicate that the majority (55%) were female. The most represented age group was 47–56 years (36.5%). Most respondents had completed senior high school or its equivalent (40.5%) and were employed as private sector workers (45.5%). In terms of healthcare coverage, the majority were enrolled in the national health insurance program (BPJS Kesehatan), accounting for 90.5%. Additionally, most respondents were returning patients, with 83% having previously received treatment at the facility.

#### Hipotesis Test

The construction of the structural model test path diagram in this study uses 3 exogenous variables and 2 endogenous variables which describe the relationship between variables as shown i

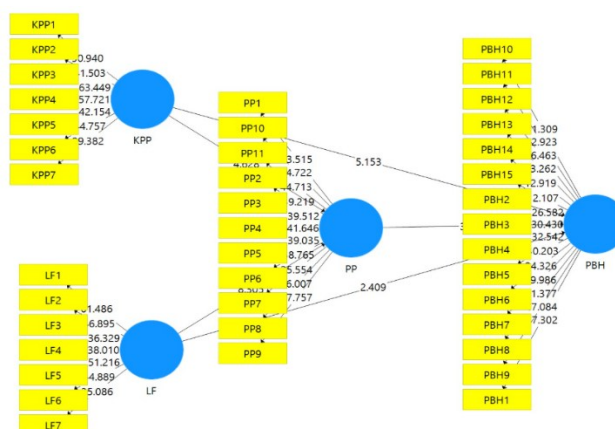


Figure 2. Construction of the Structural Model Test Path Diagram.

**Tabel 1.** Simultaneous Hypothesis Test (Uji F).

Model	Sum of Squares	df	Mean square	F	Sig
Regression	17,631	3	5,877	215,696	0,000
Residual	2,6162	96	0,27		
Total	20,247	99			

The statistical research results show that there is a significant relationship between patients' psychological condition, physical environment, and patient experience simultaneously on hospitality-based services.

**Tabel 2.** Direct Effect Hypothesis Test.

	Orginal Sample (O)	T Statistik (OSTDEV)	P Value	Hypotesis
Psychological Condition → Hospitality Service	0,387	5,160	0,000	Accepted
Psychological Condition → Patient Experience	0,359	0,419	0,000	Accepted
Physical Environment → Hospitality Service	0,224	2,336	0,000	Accepted
Physical Environment → Patient Experience	0,624	7,934	0,000	Accepted
Patient Experience → Hospitality Service	0,369	3,346	0,001	Accepted

Based on table , the results indicate that all variables have a positive and significant relationship. The psychological condition of patients (X1) has a significant effect on patient experience (Z), with a t-statistic value of 4.419 and a p-value of 0.000, and also on hospitality-based services (Y), with a t-statistic of 5.160 and a p-value of 0.000. This implies that better psychological conditions are associated with improved patient experiences and more positive perceptions of hospitality-based services. Furthermore, patient experience (Z) significantly affects hospitality-based services (Y), as shown by a t-statistic of 3.464 and a p-value of 0.001. In addition, the physical environment (X2) significantly influences patient experience (Z), with a t-statistic of 7.934 and a p-value of 0.000, and also impacts hospitality-based services (Y), with a t-statistic of 2.336 and a p-value of 0.020. These findings suggest that the better the physical environment of the hospital, the better the patient experience and their perception of the services received.

**Tabel 3.** Indirect Effect Hypotesis Test.

	Original sample (O)	T-Statistics (  O/STDEV  )	P value	Hypotesis
Psychological Conditiont →Patient Experience →Hopsitality Service	0.132	2,511	0.012	Accepted
Physical Environment →Patient Experience → Hospitality Service	0.230	3,371	0,001	Accepted

Based on table the results of the indirect effect (mediation) hypothesis test indicate that patient experience plays a significant mediating role in two relationships. First, the relationship between patients' psychological condition (X1) and hospitality-based services (Y) is significantly mediated by patient experience (Z), with a t-statistic of 2.511 and a p-value of 0.012. Second, the relationship between the physical environment (X2) and hospitality-based services (Y) is also significantly mediated by patient experience (Z), with a t-statistic of 3.371 and a p-value of 0.001. These findings suggest that patient experience serves as a crucial intervening variable that enhances the influence of both psychological condition and physical environment on perceptions of hospitality-based healthcare services.

## Discussion

The findings of this study indicate that patients' psychological conditions, the physical environment of the hospital, and patient experiences simultaneously have a positive and significant influence on hospitality-based healthcare services. These three variables interact to shape patients' perceptions of services that go beyond clinical outcomes, encompassing emotional comfort, interpersonal warmth, and personalized care. This aligns with consumer behavior theory by Schiffman and Kanuk, which suggests that consumers' evaluations of services are influenced by internal factors (psychological), external factors (environmental), and actual consumption experiences. In the context of healthcare, this suggests that patients do not merely assess services based on medical interventions, but also through the atmosphere, communication, and flow of service encountered during their care journey.

Patients' psychological condition plays a critical role in shaping their perceptions of service quality. Those with stable and positive emotional states—covering affective, cognitive, and somatic dimensions, as described by Neuman (2011)—tend to be more cooperative, calm, and responsive during treatment. In contrast, patients experiencing anxiety or stress are more sensitive to their environment and social interactions, often resulting in negative service perceptions, even if the services meet clinical standards. Therefore, empathetic approaches, clear communication, and emotional support are essential strategies in delivering effective hospitality-based care.

The hospital's physical environment also significantly contributes to the perception of hospitality-oriented services. Elements such as lighting, cleanliness, ventilation, and spatial design—especially those supporting privacy and calmness—can greatly enhance patients' emotional comfort. According to Kotler (2020) and Bitner (1992), a well-designed *servicescape* not only shapes sensory experiences but also reflects the hospital's professionalism and concern for patient well-being, thus reinforcing the image of hospitality in healthcare.

Furthermore, patient experience acts as a strong mediating factor between psychological condition and physical environment in relation to perceived hospitality. When patients feel respected, receive timely and accurate services, and experience a supportive and friendly atmosphere, they are more likely to evaluate the service positively. Picker (2011) highlights that patient experience encompasses multiple dimensions including information provision, emotional support, physical comfort, and family involvement. Hospitals that consistently manage these dimensions are more likely to succeed in delivering meaningful hospitality-based services.

These conclusions are further supported by the *Three Box Method* analysis, which found high index values across all three variables—psychological condition, physical environment, and patient experience. This indicates that the majority of patients have positive perceptions of these aspects. They reported feeling comfortable in the hospital's internal medicine outpatient unit, demonstrated psychological readiness, and had generally positive service experiences. This reflects the hospital's success in integrating hospitality principles into its healthcare delivery, particularly through approaches that prioritize emotional comfort and the holistic patient journey.

## 5. Conclusions

Based on the series of tests, analyses, and discussions conducted, it can be concluded that the psychological condition of patients, physical environment, and patient experience simultaneously have a positive and significant influence on hospitality-based healthcare services. These three variables work in synergy to shape services that are not only clinically effective but also emotionally comforting, warm, and patient-centered. The better the patient's psychological state, the more comfortable the hospital's physical environment, and the more positive the patient experience, the higher the perceived quality of hospitality-based care.

Individually, both psychological condition and physical environment show direct and significant effects on patient experience and hospitality-based service quality. A stable psychological state enables patients to be more cooperative, calm, and receptive to care. Meanwhile, a well-organized and comfortable physical environment enhances the patient's sense of security and emotional well-being, thereby strengthening their perception of service

quality. Patient experience acts as a key variable, bridging and reinforcing the influence of both psychological and physical factors on hospitality service perceptions.

Finally, patient experience serves as a mediating variable that strengthens the effect of psychological condition and physical environment on hospitality-based services. Patients who encounter empathetic communication, timely service, and a welcoming atmosphere tend to develop a more positive evaluation of the service. Moreover, employee engagement plays a significant mediating role in the link between physical environment and patient experience. When the work environment is supportive, healthcare staff become more active, friendly, and responsive ultimately enhancing the overall patient experience and reinforcing the perception of hospitality in healthcare

## Implications

### *Theoretical Implications*

This study provides significant contributions to the development of consumer behavior theory, particularly in the context of hospitality-based healthcare services. The findings indicate that patients' psychological conditions, physical environment, and patient experience simultaneously and partially influence the quality of hospitality-based services. These results support the theory proposed by Schiffman and Kanuk (2014), which posits that consumer decisions and evaluations of a service are shaped by internal factors (such as psychological state), external factors (such as the physical environment), and actual service experiences. Moreover, this study adds theoretical value by identifying patient experience as a mediating variable that strengthens the influence of psychological and environmental factors on service perceptions, highlighting the need for a multidimensional and human-centered approach in healthcare service delivery.

The results reinforce existing concepts, such as Neuman's systems model (2011), which emphasizes the importance of balance across affective, cognitive, and somatic aspects in psychological health, and the servicescape theory from Kotler and Bitner, which describes how physical elements influence consumer perceptions and behaviors. The findings also align with the patient experience framework developed by Picker (2011), affirming that positive patient experiences are a reflection of respectful interactions, clear communication, emotional support, and personalized care. Theoretically, this study affirms that hospitality-based healthcare services rely not only on technical and clinical competence, but also on patients' emotional perceptions and their subjective experiences throughout the care process.

### *Managerial implication*

Based on the research findings, several managerial improvements are recommended for Bhakti Mulia Hospital to enhance hospitality-based healthcare services. First, since patients' psychological conditions significantly affect the perception of service quality, the hospital should address the affective dimension—identified as the lowest index in the psychological aspect. This can be achieved by strengthening the emotional support system through staff training in empathetic communication, implementing psychosocial services, and creating a calming hospital environment that allows for meaningful patient-provider interaction.

Second, improvements are also needed in the hospital's physical environment, particularly in the layout and functionality, which received the lowest score in the Three Box analysis. Management should consider reevaluating and redesigning the spatial layout to ensure it is ergonomic, accessible, and supports smooth and efficient service flow. Additionally, the patient experience dimension that scored lowest—patient preference—highlights the need for more personalized care. This can be addressed by offering service options, actively listening to patient expectations, and tailoring both medical and non-medical services to individual needs, thus fostering a stronger sense of care, satisfaction, and emotional connection in the patient journey.

## References

- A, Feirn, et al. (2009). *Building patient trust and satisfaction in healthcare: The role of experience*. Health Affairs, 28(3), 687-694.
- A, Feirn, et al. (2009). *Building patient trust and satisfaction in healthcare: The role of experience*. Health Affairs, 28(3), 687-694.
- Bougie, R., & Sekaran, U. (2016). *Research methods for business: A skill-building approach* (7th ed.). John Wiley & Sons.



- Firdaus. (2021). *Metodologi penelitian: Konsep dan aplikasi*. Penerbit Andi.
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2021). *Multivariate data analysis* (8th ed.). Cengage Learning.
- Sugiyono. (2019). *Metode penelitian kuantitatif, kualitatif, dan R&D*. Alfabeta
- Doyle, C., Lennox, L., & Bell, D. (2013). A systematic review of evidence on the links between patient experience and clinical safety and effectiveness. *BMJ Open*, 3(1), e001570. <https://doi.org/10.1136/bmjopen-2012-001570>
- Institute of Medicine. (2001). *Crossing the quality chasm: A new health system for the 21st century*. National Academy Press.
- Lavela, S. L., & Gallan, A. (2014). Evaluation and measurement of patient experience. *Patient Experience Journal*, 1(1), 28–36. <https://doi.org/10.35680/2372-0247.1004>
- Picker Institute. (2011). *The principles of person centred care*. Picker Institute Europe. <https://www.picker.org>
- Bitner, M. J. (1992). Servicescapes: The impact of physical surroundings on customers and employees. *Journal of Marketing*, 56(2), 57–71. <https://doi.org/10.1177/002224299205600205>
- Davis, M. C. (2011). Physical environment. In P. R. Sparrow, C. L. Cooper, & M. Robertson (Eds.), *The Oxford Handbook of Organizational Well-being* (pp. 150–169). Oxford University Press.
- Griffin, R. W., & Moorhead, G. (2014). *Organizational behavior: Managing people and organizations* (11th ed.). Cengage Learning.
- Kotler, P. (2020). *Marketing management* (15th ed.). Pearson Education.
- Robbins, S. P., & Judge, T. A. (2017). *Organizational behavior* (17th ed.). Pearson Education.
- Copel, L. C. (2015). *Psychological foundations of psychiatric mental health nursing*. F.A. Davis Company.
- Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. Springer Publishing Company.
- Neuman, B. (2011). *The Neuman systems model* (5th ed.). Pearson Education. Stuart, G. W. (2013). *Principles and practice of psychiatric nursing* (10th ed.). Mosby/Elsevier.
- Videbeck, S. L. (2014). *Psychiatric-mental health nursing* (6th ed.). Wolters Kluwer Health / Lippincott Williams & Wilkins.
- Jones, P., & Lockwood, A. (2002). *The management of hotel operations*. Thomson Learning.
- Lashley, C., & Morrison, A. (Eds.). (2000). *In search of hospitality: Theoretical perspectives and debates*. Butterworth-Heinemann.
- Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1990). *Delivering quality service: Balancing customer perceptions and expectations*. Free Press.
- Abidova, A., & Silva, F. (2021). The role of patient experience in building trust in healthcare services: A mediation analysis. *Health Services Management Research*, 34(2), 95–104. <https://doi.org/10.1177/0951484820971578>
- Guan, L. (2024). Emotional and environmental factors affecting patient perception in healthcare settings. *Journal of Healthcare Management and Practice*, 36(1), 15–28. <https://doi.org/10.1016/j.jhmp.2024.01.003>
- Lashley, C., & Morrison, A. (2000). *In search of hospitality: Theoretical perspectives and debates*. Butterworth-Heinemann.
- Lavela, S. L., & Gallan, A. (2014). Patient-centered care: A systematic review of definitions and frameworks. *Patient Education and Counseling*, \*96
- Pizam, A., & Ellis, T. (1999). Customer satisfaction and its measurement in hospitality enterprises. *International Journal of Contemporary Hospitality Management*, 11(7), 326–339. <https://doi.org/10.1108/09596119910293231>
- Walker, J. R. (2010). *Introduction to hospitality* (6th ed.). Pearson Education.