



Measurement Model of Sustainable Servicescape and Service Quality on Green Space and Environmental Satisfaction



Muzakir Muzakir^{*}, Wahyuningsih Wahyuningsih^{*}, Ponirin Ponirin

Faculty of Economics and Business, Tadulako University, Palu 94118, Indonesia

Corresponding Author Email: muzakirmuzakir.untad@gmail.com

Copyright: ©2024 The authors. This article is published by IETA and is licensed under the CC BY 4.0 license (<http://creativecommons.org/licenses/by/4.0/>).

<https://doi.org/10.18280/ijstdp.191027>

ABSTRACT

Received: 29 February 2024

Revised: 31 July 2024

Accepted: 19 September 2024

Available online: 30 October 2024

Keywords:

servicescape, service quality, green space, environmental satisfaction

This study explores the influence of servicescape and service quality on sustainability and environmental satisfaction in public hospitals managed by the regional government in Central Sulawesi, Indonesia. In response to increasing competition, hospitals are focusing on enhancing green spaces to improve visitor satisfaction. Using a purposive sampling technique, 120 respondents were surveyed, and quantitative data were analyzed with Partial Least Squares (PLS) analysis. The results show that servicescape, including surrounding conditions, layout, functionality, signs, symbols, artifacts, and cleanliness, has a significant positive impact on service quality (path coefficient = 0.287, $p = 0.005$) and green space (path coefficient = 0.271, $p = 0.039$). Green space significantly improves environmental satisfaction (path coefficient = 0.462, $p = 0.00$), and serves as a significant mediating variable between servicescape and environmental satisfaction ($p < 0.05$). These findings indicate that environmental satisfaction occurs when patients feel comfortable, with green space playing a critical role in this process. The servicescape also directly influences patient satisfaction (path coefficient = 0.269, $p = 0.009$). Therefore, healthcare providers must integrate environmental considerations into service quality frameworks, and policymakers should prioritize the protection and promotion of green spaces as part of sustainable urban development strategies to enhance environmental satisfaction in healthcare settings.

1. INTRODUCTION

Public buildings serve as venues for social activities and meetings, commercial transactions, educational activities, and cultural exchanges. These buildings offer opportunities to promote environmental sustainability and incorporate green spaces, which are crucial for the physical and mental well-being of people. Previous studies have explored the connection between sustainable green spaces and environmental satisfaction in public buildings [1, 2]. Environmental satisfaction refers to an individual's subjective evaluation of the physical environment [3]. It is influenced by environmental quality, visual aesthetics, and perceived usability [4]. Environmental satisfaction plays a significant role in shaping people's experiences and behavior in public spaces. Studies have indicated that the level of environmental satisfaction significantly affects occupants' overall health, performance, and well-being [3].

Moreover, green space refers to any vegetated area within an urban setting, such as parks, gardens, and trees. The presence of green spaces enhances the visual appeal of public spaces and promotes environmental sustainability. Sustainable design for public buildings involves designing with careful consideration of the environmental impact. Sustainable design seeks to minimize the use of non-renewable resources, reduce carbon emissions, and promote energy efficiency. The use of

sustainable design principles can lead to the creation of healthier environments and enhance the usability and effectiveness of public spaces [5, 6]. Several studies have investigated the relationship between sustainable green space and environmental satisfaction in public buildings. Zhang et al. [7] found that the presence of green spaces had a significant effect on occupants' environmental satisfaction. The study also found that sustainability features of buildings, such as energy efficiency and water conservation, had a positive impact on environmental satisfaction. Li et al. [8] investigated the impact of green spaces on the environmental satisfaction of residents in urban buildings. The study found that the presence of green spaces enhanced visitors' environmental satisfaction and positively impacted their overall experience. Benvenuti [9] found that sustainable elements such as green roofs and rainwater harvesting systems improved visitors' perception of environmental sustainability.

This study aims to investigate how public hospitals managed by the regional government in Central Sulawesi, Indonesia, can address service challenges and enhance visitor satisfaction by improving the servicescape and service quality. Specifically, the study examines the role of green space in creating a more satisfying hospital environment and its impact on visitor satisfaction. More specifically, the key objectives of this study are:

- 1). To assess the current state of servicescape and service

quality in public hospitals in Central Sulawesi.

2). To explore the role of green space in enhancing the hospital environment and its influence on environmental satisfaction for patients, visitors, and staff.

3). To analyze the mediating role of green space in enhancing visitor satisfaction within the hospital environment.

This paper is structured as follows: Section 2 reviews relevant literature on servicescape, service quality, and the impact of green space in healthcare environments. Section 3 outlines the research methodology, including data collection and analysis techniques. Section 4 presents the research findings, while Section 5 discusses the implications of the findings for hospital management and policy. Finally, Section 6 concludes with recommendations for enhancing visitor satisfaction and service quality in public hospitals.

2. LITERATURE REVIEW AND HYPOTHESIS

The servicescape, or the physical environment in which service interactions occur, plays a crucial role in shaping customer experiences in service industries, including healthcare. Lovelock and Wirtz [10] define servicescape as a combination of environmental factors such as layout, functionality, cleanliness, and ambiance. Several studies have explored the relationship between service quality and green space, with a focus on the impact of service quality on customer satisfaction and behavior. Liu et al. [11] found a positive relationship between service quality and customer satisfaction with urban parks in China. The study found that factors such as cleanliness, safety, and leisure facilities were critical in determining customer satisfaction with urban parks. Previous research also suggests that green space can have a positive impact on service quality, with several studies highlighting the role of green space in improving the physical environment and promoting health and wellbeing. Shanahan et al. [12] found that exposure to nature and green space can reduce stress and improve mental health, which can, in turn, improve job satisfaction and productivity.

Kwon et al. [13] found that green space in hospitals can improve patient satisfaction and reduce the length of hospital stays. In hospitals, servicescape is vital in ensuring that patients feel comfortable and safe, which can positively impact their perception of the hospital's environment. Research indicates that a well-designed servicescape can enhance the use and appreciation of green spaces within healthcare facilities. By integrating green spaces into the servicescape, hospitals can create a restorative environment that promotes healing and relaxation for patients [14]. Therefore, servicescape has a direct impact on the effectiveness of green spaces, leading to improved patient satisfaction and environmental satisfaction.

H1: *Servicescape has a significant effect on green space.*

H2: *Servicescape has a significant effect on environmental satisfaction.*

The hospital belongs to the service industry as a business. Since services are intangible, visible manifestations of hospital services are necessary to attract customers to their products and aid in decision-making. Therefore, hospitals may use their physical environment, or servicescape, to promote their services as a business tactic to keep up with competitors in the private sector. A servicescape is defined as the physical space

where interactions between customers and employees take place, with its aesthetics and ambiance. It is important to manage the servicescape adequately because it can affect the customer's overall experience. This is determined by factors such as the environment, layout, functionality, signs, symbols, and artifacts that make up the servicescape [10]. By having a pleasant environment for services, such as hospitals, service providers can give consumers a high-quality experience. It's important for the facilities to be comfortable, well-equipped, staffed with skilled medical personnel, and uphold cleanliness standards in order to promote patient recovery. Cleanliness and comfort are crucial factors for visitors and families in their hospital experience.

Service quality, defined by the ability to meet or exceed customer expectations, is essential for patient satisfaction in healthcare settings. High service quality is typically characterized by cleanliness, safety, and the availability of necessary facilities [11]. The inclusion of green space in hospitals can enhance service quality by improving the physical environment, thus creating a more welcoming and healing atmosphere for patients. Kwon et al. [13] found that hospitals that integrate green spaces into their services report higher patient satisfaction and shorter hospital stays. This suggests that green spaces contribute significantly to perceptions of service quality by enhancing the overall hospital environment. As green spaces become an integral part of hospital services, they also play a role in determining the overall quality of care patients receive.

H3: *Service quality has a significant effect on green space.*

H4: *Service quality has a significant effect on environmental satisfaction.*

Previous research suggests that the presence of green space in a public building environment, such as a hospital, can lead to a more restorative effect on patients, resulting in increased attention, cognitive function, and relaxation [14]. This can have profound implications for patient health and recovery, considering the role that restorative environments play in reducing stress levels and promoting healing. The presence of green space in a hospital environment can lead to increased patient satisfaction, which in turn, can lead to better compliance with treatment regimens, reduced likelihood of negative outcomes, and overall, better health outcomes [15].

Green space in hospitals has been extensively studied for its positive impact on both patients and staff. Several studies suggest that the presence of green spaces can promote better mental health, reduce stress, and improve recovery outcomes [12, 16]. A study conducted in Stockholm found that the presence of green spaces positively impacted individuals' perceived environmental quality and satisfaction with their neighborhood [17]. In particular, green spaces in healthcare environments provide patients with restorative experiences that help reduce anxiety and foster relaxation, leading to increased environmental satisfaction. Green space not only enhances patient experiences but also plays a mediating role between servicescape and environmental satisfaction. Kabisch and Haase [18] found that individuals' satisfaction with their environment is closely linked to the quality and availability of green spaces, highlighting its importance in creating a positive healthcare environment. As a result, green space mediates the effect of servicescape and service quality on environmental satisfaction.

H5: Green space has a significant effect on environmental satisfaction.

H6: Servicescape significantly affects environmental satisfaction with green space as an intervening variable.

H7: Service quality significantly affects environmental satisfaction with green space as an intervening variable.

3. METHOD

This research is quantitative and describes the four research variables: servicescape, service quality, and green space (Figure 1). The causal aim of this study is to examine and analyze the influence and interrelationships between these variables. The population in this study comprised visitors and their families in Central Sulawesi who met the study criteria and were experiencing the services of the General Hospital of Central Sulawesi. A sample of 120 respondents was selected through purposive sampling. This technique, a non-probability sampling method, involves the intentional selection of individuals who meet specific criteria relevant to the research objectives. Purposive sampling was deemed appropriate to assess visitor satisfaction with the servicescape, service quality, and green space in public hospitals in Central Sulawesi. Respondents needed to be visitors or their families with firsthand experience of hospital services, as they are best suited to provide insights into the quality of the hospital environment.

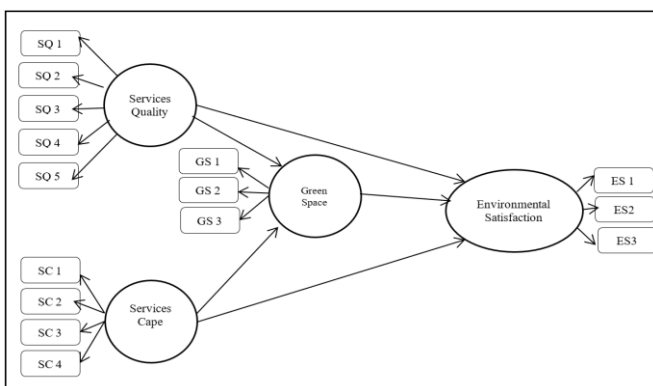


Figure 1. Path analysis model

Quantitative primary data were collected through an offline questionnaire survey using a Likert scale ranging from strongly disagree (1) to strongly agree (5). This study involves two types of variables: the independent variables (X) and the dependent variable (Y). The aim of the study is to determine the extent to which the independent variables—servicescape (X1) and service quality (X2)—affect the dependent variable, green space (Y).

The variable of environmental satisfaction (ES) was measured using three items: air quality (ES1), good distribution of green spaces (ES2), and waste management (ES3). The variable of green space (GS) was measured with three indicators: open space/GS1 (the absence of buildings and other infrastructure in an area as an indication of green space), human use patterns/GS2 (the frequency and intensity of human activities within green spaces as indicators of their importance to the local community), and noise levels/GS3 (the noise levels within green spaces as an indicator of human disturbance and its potential impact on biodiversity). The variable of servicescape was measured with four items: layout

and spatial plan (SC1), functionality signs (SC2), symbols and artifacts (SC3), and cleanliness (SC4), which are adopted by Lee et al. [19]. The variable of service quality was measured using five items from Parasuraman et al. [20], including reliability, responsiveness, assurance, empathy, and tangibles. The quantitative analysis referred to in this study is path analysis. Path analysis is conducted using correlation, regression, and path techniques to determine whether a direct path or an indirect path through intervening variables leads to the final dependent variable. In this study, path analysis was used to measure the effects of servicescape and service quality on green space and their impact on environmental satisfaction. The analytical tool used in this study is Partial Least Squares (PLS), with analysis performed using SmartPLS 3.0 software. PLS was selected as the primary data analysis method due to its suitability for handling complex models and managing several latent variables with formative indicators. PLS is well-suited for models with multiple interrelated variables, particularly when dealing with a combination of reflective and formative constructs. With a sample size of 120 respondents, PLS is advantageous as it performs well with smaller sample sizes compared to other methods like Structural Equation Modeling (SEM), which often requires larger samples to achieve robust results.

4. RESULTS

The results regarding layout dimensions at general hospitals show that, overall, layout dimensions have an average mean of 4.20, which is classified as good/high. These results indicate that the interior design makes visitors feel comfortable while being treated. The results as shown in Table 1 regarding the reliability dimension show that it has an average mean of 3.89, which is classified as good/high. This result indicates that the hospital's reliability dimension satisfies visitors with the reliability of hospital services. The results regarding patient satisfaction at the hospital show that the overall dimensions of satisfaction have an average mean of 3.94, which is classified as good/high. These results indicate that the satisfaction dimensions at the hospital are positively experienced by visitors. The results regarding environmental satisfaction show that the overall environmental satisfaction dimension has an average mean of 3.99, which is classified as good/high. This result indicates that the environmental satisfaction dimension positively impacts visitors.

Table 1. Descriptive statistics

No.	Variable	Dimension	Average
1	Servicescape	Layout	4.20
		Spatial plan and functionality	4.14
		Signs, symbols and artifacts	4.06
		Cleanliness	4.15
		Reliability	3.89
2	Services Quality	Responsiveness	4.07
		Assurance	4.22
		Empathy	4.08
		Tangible	4.14
3	Green Space	Open space	3.94
		Noise levels	4.02
		Human use patterns	4.11
4	Environmental satisfaction	Air quality	3.99
		Distribution of green spaces	4.15
		Waste management	4.21

Source: Processed data, 2022

The results of testing the hypothesis using SmartPLS 3.0 can be seen in Figure 2. The results indicated that the servicescape had a significant effect on patient satisfaction. Green space reflects the customer's reaction to the evaluation of the perceived disparity between prior expectations or performance standards and the actual service output, particularly in the service environment (servicescape) experienced during consumption. The findings of this study align with Bitner's [21] theory and Lovelock and Wirtz's [10] assertion that the servicescape plays a crucial role in directly influencing the level of satisfaction achieved by service customers and supports service quality that fosters satisfaction. Additionally, Lee [22] demonstrates that the servicescape affects environmental satisfaction. The service environment, or servicescape, is essential in providing services to consumers and in shaping their behavior and perceptions of satisfaction. According to Zeithaml et al. [23], understanding the servicescape is crucial for service marketers, as it can serve multiple roles: as a package, facilitator, socializer, and differentiator.

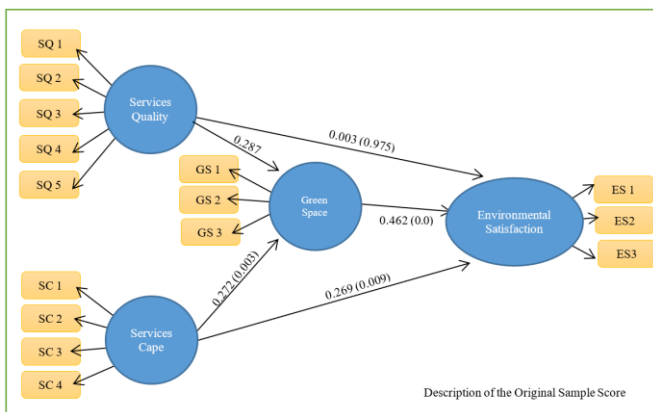


Figure 2. Results of hypothesis testing

The results showed that the variable service quality has a significant effect on the green space experienced by visitors in public hospitals. Green space reflects the customer's reaction to the evaluation of the perceived disparity between previous expectations or performance standards and the actual service output, particularly in the service quality experienced. The findings indicate that service quality, through the tangibles dimension, which concerns equipment, physical facilities, and communication media, is significant. Research findings suggest that modern equipment is widely used to support hospital services, and there is a high level of demand, which contributes to high satisfaction among visitors. The reliability dimension pertains to the ability of medical personnel, doctors, and nurses to provide promised services promptly, satisfactorily, and accurately. While this dimension is generally good, there are still complaints about the scarcity of

medications. The responsiveness dimension relates to the willingness of medical personnel, doctors, and nurses to assist visitors and provide responsive services. Assurance involves the knowledge, courtesy, ability, and trustworthiness of medical personnel, doctors, and nurses. The empathy dimension concerns the hospital system's communication facilities, the relationship between visitors and medical staff, and the hospital's understanding of customer needs and personal attention. All these aspects need improvement by the hospital to enhance patient satisfaction. According to Zeithaml et al. [23], the influence of service quality dimensions on customer expectations is based on information conveyed through personal needs, external communication, and experience (advertising and various other forms of corporate promotion) compared to the reality they receive. A service quality conceptual model is developed to illustrate these relationships.

The results showed that the servicescape had a significant effect on environmental satisfaction. The findings of this study align with the theory that elements of the servicescape influence visitors and their families through exterior attributes (such as well-organized parking lots, clean and tidy gardens, and clean corridors) and interior attributes (such as service concepts, instructions, and signs for obtaining services, as well as information on hospital services). While the research findings are generally positive, there is still room for improvement. The results indicate that the servicescape, which encompasses the physical environment of the hospital, significantly influences the behavior of visitors and their families and shapes the patient's experience with the services provided. The hospital servicescape plays a crucial role in directly impacting patient satisfaction, demonstrating a positive effect and supporting the service qualities that contribute to patient satisfaction. These results are consistent with research indicating that physical conditions of the servicescape influence environmental satisfaction, as noted [24]. The findings also align with Zhang et al. [7], which demonstrate a correlation between atmospheric environmental factors and the public's level of environmental satisfaction.

The results showed that the service quality variable had no significant effect on environmental satisfaction. The findings indicate that the majority of environmental satisfaction stems from visitors' perceptions of hospital service quality. For environmental satisfaction to be effective, hospitals must create a positive image of service quality by addressing visitors' difficulties in solving their health problems and responding appropriately to complaints about the services provided. This implies that service quality must be improved to meet expectations and enhance visitor satisfaction, which in turn increases the likelihood of recommending the hospital to others. It is further suggested that environmental satisfaction results from positive experiences with service quality, as positive service quality impacts the creation of favorable environmental satisfaction [25].

Table 2. Hypothesis testing

Hypothesis	Path Coefficient	P-Value	Significance
H1: Services Quality → Green Space	0.287	p = 0.005	<0.05 Significant
H2: Services Capes → Green Space	0.271	p = 0.039	<0.05 Significant
H3: Green Space → Environmental Satisfaction	0.462	p = 0.00	<0.05 Significant
H4: Services Quality → Environmental Satisfaction	0.003	p = 0.975	>0.05 Not significant
H5: Services Capes → Environmental Satisfaction	0.269	p = 0.009	<0.05 Significant

The results showed that green space had a significant effect on environmental satisfaction (Table 2). The findings indicate that the majority of environmental satisfaction stems from visitors' perceptions of the service quality dimension, which impacts the level of patient satisfaction. To generate positive environmental satisfaction at the hospital, the level of patient satisfaction must improve over time. To achieve this, the hospital must provide high-quality service by addressing patients' difficulties in solving health problems. This approach is expected to result in a high level of satisfaction and positive environmental satisfaction for the hospital [26].

The results showed that the servicescape had a significant effect on environmental satisfaction, with green space serving as an intervening variable. This indicates that green space mediates the relationship between the servicescape and patient environmental satisfaction. The findings revealed that environmental satisfaction is achieved when patients feel comfortable, leading to greater satisfaction. The patient satisfaction variable is also influenced by the servicescape variable. One of the factors affecting environmental satisfaction is green space; the higher the level of comfort consumers experience, the greater the potential for positive environmental satisfaction. These results are consistent with Schipperijn et al. [27], who found that the servicescape significantly affects green space, and align with research indicating that the servicescape impacts environmental satisfaction [10].

The results showed that the service quality variable had a significant effect on patient environmental satisfaction, with green space serving as an intervening variable. This indicates that green space mediates the relationship between service quality and patient environmental satisfaction. The findings revealed that environmental satisfaction is empirically supported by patient satisfaction, which is influenced by several variables, including service quality. One key factor affecting environmental satisfaction is green space. The higher the level of patient satisfaction with the services provided, the greater the level of satisfaction and positive feedback to others. These results are consistent with Erbil and Sezer [28], Mao et al. [1], Young [29], and Ostoić et al. [30], who found a significant influence of service quality on environmental satisfaction through green spaces in public buildings.

Overall, the findings suggest that green spaces have a positive impact on service quality. The results highlight the role of green space in enhancing the physical environment and promoting health and well-being. This is consistent with Shanahan et al. [12], who found that exposure to nature and green space can reduce stress and improve mental health, which in turn can enhance job satisfaction and productivity. The findings are also aligned with Kwon et al. [13] and Bitner [21], which indicate that servicescape and green space in hospitals can improve patient satisfaction and reduce the length of hospital stays. Additionally, the results emphasize the importance for healthcare service providers to consider the environmental impact of their services and actively work to reduce their environmental footprint.

5. CONCLUSIONS

The findings highlight the significant impact of service quality on green space and underscore the vital role of green space in promoting sustainable development. Service providers and policymakers must prioritize the provision of

high-quality green space to enhance customer satisfaction, promote health and well-being, and protect the environment. The results also reveal that the servicescape has a positive and significant effect on green space, and service quality also positively affects green space. Furthermore, the servicescape significantly influences the environmental satisfaction of visitors in public hospitals, while service quality does not have a significant effect on environmental satisfaction. The findings suggest that service quality significantly impacts customer satisfaction and behavior in green spaces. Green space can also positively influence service quality by providing a conducive physical environment.

Therefore, it is crucial for service providers and policymakers to prioritize high-quality green space to promote sustainable development. The results further indicate that green space positively and significantly affects the environmental satisfaction of visitors. Additionally, the servicescape positively and significantly affects environmental satisfaction with green space serving as an intervening variable. Service quality also positively and significantly impacts environmental satisfaction with green space as an intervening variable. One implication of this research is the need to incorporate environmental considerations into service quality frameworks. Service providers must account for the environmental impact of their services and actively work to reduce their environmental footprint. Similarly, policymakers must ensure that green spaces are adequately protected and promoted as a critical component of sustainable urban development.

Future research should focus on developing comprehensive frameworks that integrate environmental considerations into service quality measurement and evaluation. Future studies should not only analyze statistical data but also incorporate qualitative data, such as interviews, review analysis, and comments from visitors or their families. Additionally, future research should explore the relationship between servicescape, trust, and service quality, examining how these factors impact green space and potentially introducing trust as a new variable. This approach could provide insights into how these elements influence broader patient loyalty amid competition in the hospital sector.

REFERENCES

- [1] Mao, Q., Wang, L., Guo, Q., Li, Y., Liu, M., Xu, G. (2020). Evaluating cultural ecosystem services of urban residential green spaces from the perspective of residents' satisfaction with green space. *Frontiers in Public Health*, 8: 226. <https://doi.org/10.3389/fpubh.2020.00226>
- [2] Douglas, O., Russell, P., Scott, M. (2019). Positive perceptions of green and open space as predictors of neighbourhood quality of life: Implications for urban planning across the city region. *Journal of Environmental Planning and Management*, 62(4): 626-646. <https://doi.org/10.1080/09640568.2018.1439573>
- [3] Stedman, R.C. (2003). Is it really just a social construction?: The contribution of the physical environment to sense of place. *Society & Natural Resources*, 16(8): 671-685. <https://doi.org/10.1080/08941920309189>
- [4] Kytä, M., Broberg, A., Tzoulas, T., Snabb, K. (2013). Towards contextually sensitive urban densification: Location-based softGIS knowledge revealing perceived

- residential environmental quality. *Landscape and Urban Planning*, 113, 30-46. <https://doi.org/10.1016/j.landurbplan.2013.01.008>
- [5] Ali, K.A., Ahmad, M.I., Yusup, Y. (2020). Issues, impacts, and mitigations of carbon dioxide emissions in the building sector. *Sustainability*, 12(18): 7427. <https://doi.org/10.3390/su12187427>
- [6] Akadiri, S.S., Adebayo, T.S. (2022). Asymmetric nexus among financial globalization, non-renewable energy, renewable energy use, economic growth, and carbon emissions: impact on environmental sustainability targets in India. *Environmental Science and Pollution Research*, 29(11): 16311-16323. <https://doi.org/10.1007/s11356-021-16849-0>
- [7] Zhang, Q., Gao, T., Liu, X., Zheng, Y. (2020). Exploring the influencing factors of public environmental satisfaction based on socially aware computing. *Journal of Cleaner Production*, 266: 121774. <https://doi.org/10.1016/j.jclepro.2020.121774>
- [8] Li, L., Zheng, Y., Ma, S. (2023). Links of urban green space on environmental satisfaction: A spatial and temporarily varying approach. *Environment, Development and Sustainability*, 25(4): 3469-3501. <https://doi.org/10.1007/s10668-022-02175-z>
- [9] Benvenuti, S. (2014). Wildflower green roofs for urban landscaping, ecological sustainability and biodiversity. *Landscape and Urban Planning*, 124: 151-161. <https://doi.org/10.1016/j.landurbplan.2014.01.004>
- [10] Lovelock, C., Wirtz, J. (2022). *Services Marketing: People, Technology, Strategy*. Sixth Edition. Pearson.
- [11] Liu, Y., Hu, J., Yang, W., Luo, C. (2022). Effects of urban park environment on recreational jogging activity based on trajectory data: A case of Chongqing, China. *Urban Forestry & Urban Greening*, 67: 127443. <https://doi.org/10.1016/j.ufug.2021.127443>
- [12] Shanahan, D.F., Fuller, R.A., Bush, R., Lin, B.B., Gaston, K.J. (2015). The health benefits of urban nature: How much do we need? *BioScience*, 65(5): 476-485. <https://doi.org/10.1093/biosci/biv032>
- [13] Kwon, H., An, S., Lee, H.Y., Cha, W.C., Kim, S., Cho, M., Kong, H.J. (2022). Review of smart hospital services in real healthcare environments. *Healthcare Informatics Research*, 28(1): 3-15. <https://doi.org/10.4258/hir.2022.28.1.3>
- [14] Chang, K.G., Chien, H. (2017). The influences of landscape features on visitation of hospital green spaces—A choice experiment approach. *International Journal of Environmental Research and Public Health*, 14(7): 724. <https://doi.org/10.3390/ijerph14070724>
- [15] Chías, P., Abad, T. (2017). Green hospitals, green healthcare. *International Journal of Energy Production and Management*, 2(2): 196-205. <https://doi.org/10.2495/EQ-V2-N2-196-205>
- [16] Mitchell, R., Popham, F. (2008). Effect of exposure to natural environment on health inequalities: An observational population study. *The Lancet*, 372(9650): 1655-1660. [https://doi.org/10.1016/S0140-6736\(08\)61689-X](https://doi.org/10.1016/S0140-6736(08)61689-X)
- [17] Stigsdotter, U.K., Grahn, P. (2011). Stressed individuals' preferences for activities and environmental characteristics in green spaces. *Urban Forestry & Urban Greening*, 10(4): 295-304. <https://doi.org/10.1016/j.ufug.2011.07.001>
- [18] Kabisch, N., Haase, D. (2014). Green justice or just green? Provision of urban green spaces in Berlin, Germany. *Landscape and Urban Planning*, 122: 129-139. <https://doi.org/10.1016/j.landurbplan.2013.11.016>
- [19] Lee, C.J., Wang, Y.C., Cai, D.C. (2015). Physical factors to evaluate the servicescape of theme restaurants. *Journal of Asian Architecture and Building Engineering*, 14(1): 97-104. <https://doi.org/10.3130/jaabe.14.97>
- [20] Parasuraman, A., Zeithaml, V.A., Berry, L.L. (1985). A conceptual model of service quality and its implications for future research. *Journal of Marketing*, 49(4): 41-50. <https://doi.org/10.1177/002224298504900403>
- [21] 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>
- [22] Lee, K.Y. (2021). Relationship between physical environment satisfaction, neighborhood satisfaction, and quality of life in Gyeonggi, Korea. *Land*, 10(7): 663. <https://doi.org/10.3390/land10070663>
- [23] Zeithaml, V.A., Bitner, M.J., Dwayne, D.D. (2018). *Services MARKeting: Integrating Customer Focus Across the Firm* (Seventh Ed). MCGraw-Hill Education.
- [24] Shi, X. (2015). Factors influencing the environmental satisfaction of local residents in the coal mining area, China. *Social Indicators Research*, 120: 67-77. <https://doi.org/10.1007/s11205-014-0584-z>
- [25] Mosadeghrad, A.M. (2014). Factors influencing healthcare service quality. *International Journal of Health Policy and Management*, 3(2): 77-89. <https://doi.org/10.15171/ijhpm.2014.65>
- [26] Whitehouse, S., Varni, J.W., Seid, M., Cooper-Marcus, C., Ensberg, M.J., Jacobs, J.R., Mehlenbeck, R.S. (2001). Evaluating a children's hospital garden environment: Utilization and consumer satisfaction. *Journal of Environmental Psychology*, 21(3): 301-314. <https://doi.org/10.1006/jev.2001.0224>
- [27] Schipperijn, J., Stigsdotter, U.K., Randrup, T.B., Troelsen, J. (2010). Influences on the use of urban green space—A case study in Odense, Denmark. *Urban Forestry & Urban Greening*, 9(1): 25-32. <https://doi.org/10.1016/j.ufug.2009.09.002>
- [28] Erbil, Y., Sezer, F.S. (2016). User satisfaction of environmental quality in university buildings. *European Journal of Sustainable Development*, 5(3): 476-476. <https://doi.org/10.14207/ejsd.2016.v5n3p476>
- [29] Young, R.F. (2010). Managing municipal green space for ecosystem services. *Urban Forestry & Urban Greening*, 9(4): 313-321. <https://doi.org/10.1016/j.ufug.2010.06.007>
- [30] Ostoić, S.K., van den Bosch, C.C.K., Vuletić, D., Stevanov, M., Živojinović, I., Mutabdžija-Bećirović, S., Lazarević, J., Stojanova, B., Blagojević, D., Stojanovska, M., Nevenić, R., Malovrh, Š.P. (2017). Citizens' perception of and satisfaction with urban forests and green space: Results from selected Southeast European cities. *Urban Forestry & Urban Greening*, 23: 93-103. <https://doi.org/10.1016/j.ufug.2017.02.005>