

Improving the Aesthetic Function of Parks at Mokopido Regional Hospital: A Study on the Role of Landscape in Improving Visitor Comfort

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Abstract

The phenomenon at Mokopido Hospital shows that the park in the hospital environment is less attractive, causing visitors to tend to ignore the park. This can reduce comfort and relaxation functions for patients and visitors who use the park as a green open space. This study aims to improve the aesthetic function of the park at Mokopido Hospital by assessing and optimizing existing landscape elements so that visitor comfort can improve. This study uses qualitative analysis with a direct observation approach and literature studies on park design in the hospital area. Data processing techniques involve identifying important elements in the landscape and linking them to park design theories that support the comfort and beauty of open spaces. The results of the study indicate that park elements such as lighting, vegetation, and walkway design can be improved to create a more attractive and comfortable atmosphere for visitors, as well as support patient healing by creating a space that is more in tune with nature.

Keywords: Landscape Architecture, Parks, Therapeutic Concepts, Green Open Spaces.

Abstrak

Fenomena yang terjadi di RSUD Mokopido menunjukkan bahwa taman yang ada di lingkungan rumah sakit ini kurang menarik, menyebabkan pengunjung cenderung mengabaikan keberadaan taman. Hal ini berpotensi mengurangi kenyamanan dan fungsi relaksasi bagi pasien dan pengunjung yang memanfaatkan taman sebagai ruang terbuka hijau. Tujuan penelitian ini adalah untuk meningkatkan fungsi estetika taman di RSUD Mokopido, dengan menilai dan mengoptimalkan elemen lanskap yang ada sehingga dapat meningkatkan kenyamanan pengunjung. Penelitian ini menggunakan analisis kualitatif dengan pendekatan observasi langsung dan studi literatur terkait perancangan taman di area rumah sakit. Teknik pengolahan data melibatkan identifikasi elemen-elemen penting dalam lanskap dan mengaitkannya dengan teori-teori desain taman yang mendukung kenyamanan dan keindahan ruang terbuka. Hasil penelitian menunjukkan bahwa elemen-elemen taman seperti pencahayaan, vegetasi, dan desain jalan setapak dapat diperbaiki untuk menciptakan suasana yang lebih menarik dan nyaman bagi pengunjung, serta mendukung penyembuhan pasien melalui penciptaan ruang yang lebih menyatu dengan alam.



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Kata Kunci: Arsitektur Lanskap, Taman, Konsep Terapi, Ruang Terbuka Hijau.

INTRODUCTION

The role of parks in hospital environments is increasingly being considered because of their impact on the well-being of patients and visitors. Hospitals, as places requiring severe medical treatment, often ignore the importance of green open spaces that provide tranquility (Putra, Idedhyana dan Lestari, 2023). At Mokopido Regional Hospital, the existing park no longer attracts visitors. Lack of attention to the aesthetic design of the park can reduce the experience of patients and visitors in feeling comfortable while in the hospital. In this context, the importance of creating a landscape that functions as a green open space and as an element that can improve the quality of life and comfort and provide a healing atmosphere for visitors is increasingly being considered. Therefore, improving the aesthetics of this park is expected to improve the quality of public space in the hospital (Rama Noval Pratama, Anwar Effendi dan Djoko Darmawan, 2020).

Regulations regarding green open spaces (RTH) in the hospital area are increasingly emphasized in hospital architectural and landscape design guidelines. In recent years, the Indonesian Ministry of Health has encouraged hospitals to provide open spaces that can support recreation and healing (Golonggomo, Djafar dan Pratiwi, 2023). Law No. 36 of 2009 concerning Health and Regulation of the Minister of Health No. 75 of 2014 concerning Hospitals emphasize the importance of providing public spaces that support physical and mental health (Kemenkes RI, 2012), (Rahayu, Pahude dan Rosid, 2024). In addition, at the local level, the Tolitoli Regency Parks and Urban Forest Service has also developed park design standards by landscape principles that support comfort and sustainability (Astuti, Soeroso dan Manalu, 2023). This opens up opportunities for Mokopido Hospital to adopt existing regulations and improve park designs to be more by applicable regulations.

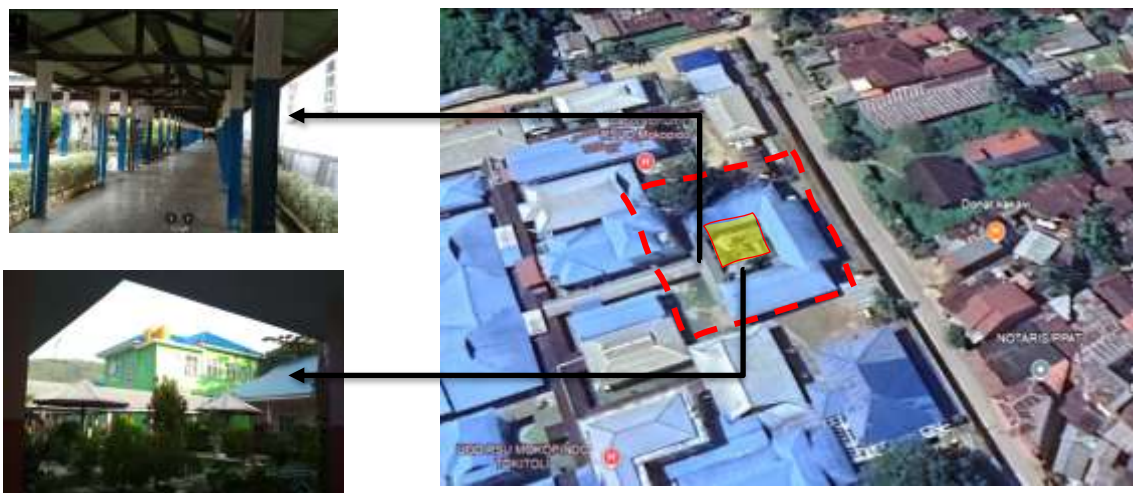


Figure 1. Existing Mokopido Regional Hospital Park

RSUD Mokopido is located in Tolitoli Regency and is one of the hospitals that is the leading health center in the area. The park that is the object of the study is on the west side of the hospital, between the class II patient room buildings. This park used to function as a green open space that was expected to improve the comfort of patients and visitors but is now less attractive. This research approach focuses on the aspects of the park's aesthetic, comfort, and social function that improve the experience of hospital visitors (Fahri dan Satwikasari, 2023). The

research object approach will evaluate the current physical condition of the park, identify landscape elements that need to be improved, and compile design recommendations that can improve the attractiveness and functionality of the park as a recreation and relaxation space.

The proposed solution to this problem includes several design elements that can improve the aesthetics of the Mokopido Hospital garden—first, rearranging more varied vegetation, both in terms of type and arrangement. Using plants that are not only visually appealing but can also absorb air pollution and refresh the atmosphere is essential. Second, selecting furniture elements such as park benches, lighting, and user-friendly paths can increase visitor comfort. Third, introducing the concept of a therapeutic garden by including water elements and natural sounds to create a more relaxing atmosphere and support patient healing (Sarjito, Marwati dan Juddah, 2023). In addition, the garden must be easily accessible to all groups, including people with disabilities. Using environmentally friendly materials is also an aspect that cannot be missed when designing a sustainable garden that can respond to climate change.

METHOD

Research Location

This research was conducted at the Mokopido Hospital located at Jl. Lanoni No.37, Baru, Baolan District, Toli-Toli Regency, with the main focus on the garden on the hospital's west side, right between the class II patient room buildings. This park has a large area but is not optimally utilized by visitors and patients. The research period, from the administrative preparation stage to the design of the Mokopido Regional Hospital garden, was carried out from June 2024 to December 2024.



Figure 2. Research Location

Analysis Method

The method used in this study is a qualitative approach with direct observation of the condition of the park (Ahwal dan Ali, 2024). Quantitative analysis is used to determine the site's THI value and carrying capacity. THI measurements are generated using the following formula:

$$THI = 0,8 T + \frac{RH \times T}{500}$$

Keterangan:

THI : *Temperature Humidity Index*

T : Suhu udara (°C)

RH : Kelembaban udara (%)

Data were collected through interviews with hospital visitors and staff and visual surveys of existing landscape elements. The analysis was carried out by comparing the park's current condition with the principles of good park design and references from other hospital parks.

Table 1. Data collection and data analysis

Data	Data analysis
Respondent background	Quantitative descriptive analysis
Preferences for visits to green lanes	Quantitative descriptive analysis
Preferences for types and physiological characteristics of plants	Quantitative descriptive analysis
Preferences for types and visual characteristics of philosophical and local plants	Quantitative descriptive analysis

Community choices are analyzed as indicators to determine the types of therapeutic plants that can later be recommended for new parks. The respondents' backgrounds and their preferences for visits to Mokopido Hospital are used to calculate the level of visitor comfort based on a physical and psychological assessment scale for the park, which includes aspects of lighting, vegetation, space circulation, and accessibility. This assessment scale can measure the influence the park design has on visitor comfort (Sugiarto, Yusuf dan Ali, 2023).

Architectural Design Visual Tools

The visual tools used to describe the park design are design software such as SketchUp, which creates a 3D model of the park, and AutoCAD, which produces more detailed technical drawings. These images will show how the new park design can be implemented.

The advantage of this study is that it will create a more aesthetic and functional park, improving hospital visitors' comfort. Another benefit is improving the quality of the hospital environment, supporting the patient's healing process, and creating a green open space that is more environmentally friendly and sustainable (Ali dan Munir, 2024).

RESULTS AND DISCUSSION

General Condition

The park at Mokopido Hospital is located between class II patient rooms and has a reasonably large area, but it is not optimally utilized. Although this park can be a green open space supporting visitor comfort, its current design is not attractive or functional enough. The selection of inappropriate design elements, such as limited vegetation and uncomfortable footpath arrangements, are some factors that affect this park's quality. The existing park only functions as a

transition area and does not provide a meaningful experience for visitors or is assessing and repairing existing landscape elements to improve the aesthetic quality and comfort of the green open space.

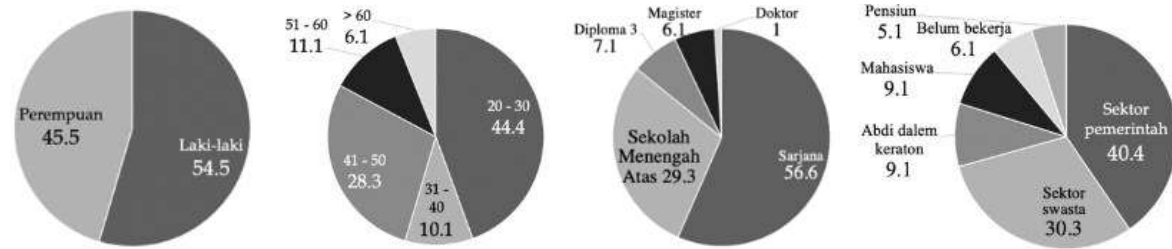


Figure 3. Percentage of users based on patient visits

This study paid special attention to the selection of plants, the arrangement of paths, and furniture elements in the park. The evaluation was carried out by looking at elements that could be improved, such as more varied vegetation arrangements, the use of more functional plants, such as pollution-absorbing plants, and the arrangement of more user-friendly paths (Fahri dan Satwikasari, 2023). The park must support visitor comfort, improve the quality of green open spaces in the hospital, and positively impact patient healing by creating a calming environment

Physical and Biological Aspects

The physical aspects of the park at Mokopido Hospital show that it is less visually appealing, although it has excellent potential for development. Several elements, such as narrow paths, irregularly growing trees, and poorly arranged open spaces, make this park less than optimal in providing comfort for visitors. Soil conditions and drainage are also a problem because several puddles of water interfere with visitor comfort. The arrangement of open spaces and insufficient areas to sit or relax cause this park to not function optimally as a relaxation space.

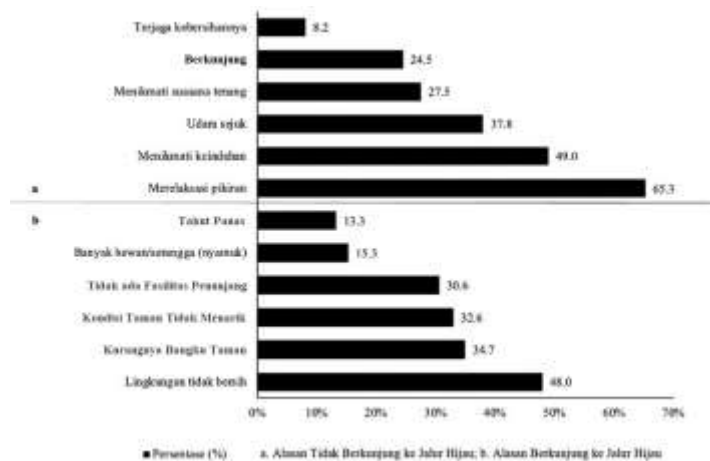


Figure 4. Percentage of visitors based on patient visits

Regarding biological aspects, the park has several large plants but is not diverse enough in terms of type and ecological function. The vegetation consists mainly of large trees that do not provide enough shade during the day. Plant diversity needs to be increased to create a more lively atmosphere and provide health benefits for visitors, such as plants that absorb air pollution or have calming

aromatherapy. The diversity of plant types is also important in creating various levels of space in the park, such as shaded, open, and breezy areas (Longa, 2019).

Ornamental plants must also be increased to add visual variety to the park. The selection of flowers and flowering plants can provide beauty and visual freshness, supporting a relaxing atmosphere for patients and hospital visitors. In addition, vines along the fence or in higher areas can also provide additional dimensions to the park. The arrangement of these elements must balance the aesthetic and biological functions of plants to create a more attractive and functional garden.

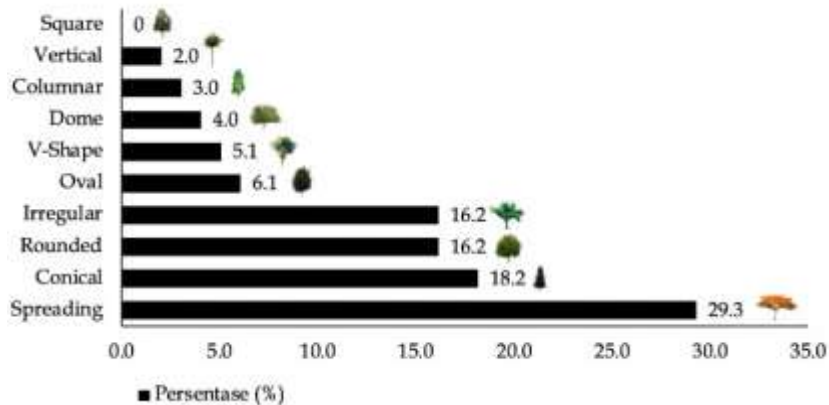


Figure 5. Preferred canopy shape by respondents

The physical aspects of the park include plants, paths, furniture, and water elements. Wider paths, environmentally friendly materials, and easy accessibility to all groups, including people with disabilities, are important for visitor comfort. Furniture such as park benches placed in strategic areas will also improve the quality of the park as a recreational space. Using water elements such as ponds or fountains will provide a calming effect and enhance the aesthetic atmosphere of the park.

Architectural analysis method

Researchers observed existing park design elements, such as vegetation, paths, lighting, and garden furniture, and how these elements interact with visitors. BMKG data for 2024 showed that the lowest air temperature was 19.3°C in August, and the highest temperature was 34.2°C in May. The average temperature in 2024 was 22.2-31.7°C. The average humidity of Tolitoli City is at 75%. Rainfall fluctuates, with the highest rainfall in December and the lowest in April. The most prolonged sunshine is in August for 7 hours, and the shortest in January for 1.6 hours. The maximum wind speed averages 3.8 m/s to 5.6 m/s with the wind direction dominated from the south and southwest. The wind speed in each month does not change much, an average of 1.1 m/s.

$$THI = 0,8T + \frac{RH \times T}{500} = 0,8(26,1) + \frac{84,2 \times 26,1}{500} = 25,3$$

The THI value obtained at the research location was 25.3, so it can be categorized as comfortable. Therefore, climate modification at the research location is not really necessary. However, the addition of shade and wind control on the site can increase comfort. This can be done by providing a canopy or pergola and using vegetation.

Literature analysis on therapeutic garden design and the benefits of landscapes for health was also used to explore how garden design elements can positively impact patients and hospital visitors. This comparison model helps produce better design recommendations that are in accordance with hospital needs (Kusuma, Kohdrata dan Sutari, 2021).

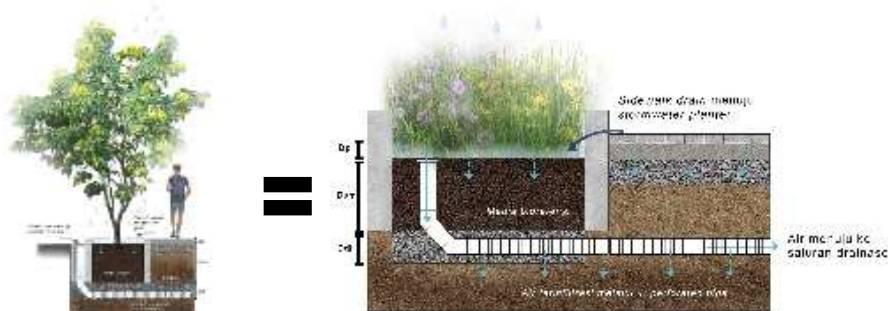


Figure 6. Illustration of Landscape Section

In more detail, measurements are taken to ensure sufficient distance between plants so that they do not hinder each other's growth, as well as the placement of vegetation based on soil type, climate, and light needs. For example, plants that require much sunlight will be placed in an open place, while plants that prefer shaded areas will be planted in a protected place. In addition, measurements also pay attention to functional aspects, such as the arrangement of plants as shade, space dividers, or elements that absorb air pollution. With careful vegetation arrangement and precise measurements, the park can not only create a beautiful atmosphere but also function optimally for visitors and the surrounding environment.

Implementation of problem solutions

Problem solutions are implemented by redesigning the existing park elements. One proposed solution is to increase the diversity of vegetation by adding various types of ornamental plants, pollution-absorbing plants, and flowering plants that not only beautify but also support the ecological diversity of the park. The selection of plants that have therapeutic benefits such as lavender or rosemary can provide a calming effect and help the patient's healing process.

In addition, the arrangement of wider and user-friendly paths will make it easier for visitors to walk comfortably. Improving accessibility for people with disabilities is also a priority by including paths that can be accessed using wheelchairs. Garden furniture, such as comfortable benches placed in shaded areas, will provide a place for visitors to rest and relax, improving the quality of time spent in the park.



Figure 7. Illustration of Park Path

Water elements such as small ponds or fountains are also recommended, as the sound of flowing water can have a calming effect and add visual appeal. Landscape designs that involve water elements can create a more relaxing atmosphere, which is much needed in a hospital environment that tends to be stressful. The design of water elements should consider sustainability and easy maintenance by ensuring that the water flow does not interfere with the comfort of visitors.



Figure 8. Illustration of a Small Pond

By combining these elements, the garden at Mokopido Hospital can be transformed into a green open space that is more useful and aesthetic and supports visitors' physical and mental health. An inclusive and environmentally friendly design will ensure that this park can be used by various groups and lasts in the long term.

Synthesis

The combination of ideas resulting from this study is to create a garden with a design that prioritizes comfort, aesthetics, and sustainability. Elements such as increasing vegetation, arranging user-friendly paths, adding comfortable furniture, and water elements such as ponds or fountains must be combined harmoniously (Rosyid *et al.*, 2022). All of these elements have a dual function, namely as a relaxation space for visitors and supporting healing for patients through a calming and calm atmosphere (Apriliyanti, Saptiyasari dan Puspa S, 2021), (Haryanto dan Komala, 2023).



Figure 9. Landscape Architecture Design

In addition, it is important to adopt the principles of therapeutic garden design that have been proven to improve the quality of life and accelerate the healing process of patients (Ricardo dan Solikhah, 2023). The use of plants that can absorb air pollution, create shade, and provide a calming effect will help create a garden that is not only beautiful but also functional. Plant diversity, easy maintenance, and environmentally friendly materials should also be a priority in the design of this garden (Lesu, Alfian dan Setyabudi, 2022), (Pradana, M. Nelza Mulki Iqbal dan Komang Ayu Laksmi Harshinta Sari, 2023).

With a holistic design approach and considering various physical, biological, and psychological aspects of visitors, the garden at Mokopido Hospital can be a green open space that not only provides comfort but also makes a positive contribution to the health and well-being of visitors and hospital patients (Krisnanik, Rahayu dan Tobing, 2020), (Manikam dan Noorwatha, 2021).

CONCLUSION

This study successfully shows how important aesthetic and functional garden design is in improving visitor comfort. The applied landscape architecture concept can positively impact the quality of green open space in the hospital. The subsequent development of the landscape architecture concept is to integrate innovative garden technology that can provide an interactive experience for visitors and pay attention to aspects of sustainability and responsiveness to climate change.

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