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Analysis of the comfort level of green open space (case study: Banjarsari ‘45 Monument Park, Surakarta)

Ariansyah Widi Widagdo[1*], Galuh Masyithoh[2], Malihatun Nufus[2]

[1] Undergraduate Program of Forest Management, Faculty of Agriculture, Universitas Sebelas Maret, Surakarta, 57126, Indonesia
[2] Department of Forest Management, Faculty of Agriculture, Universitas Sebelas Maret, Surakarta, 57126, Indonesia
[*]Corresponding Author: ariansyahwidi24@gmail.com

Abstract

Banjarsari ‘45 Monument (Monjari) Park is a green open space (RTH) that plays an essential role in improving the environmental quality of Surakarta City. Vegetation in this park helps to improve the microclimate and create comfort for the community. This study aims to determine the level of comfort based on microclimate and visitor perception. Microclimate data were obtained by measuring air temperature and humidity, which were then analysed using the Temperature Humidity Index (THI) method. Meanwhile, visitor perception data was collected through interviews. The results showed that the THI value in the park area (27.76) was lower than the area outside the park (28.15). Although the THI value is classified as uncomfortable because >26, the average temperature in the park (29.47-30.68°C) is lower than the average temperature of Surakarta City (34.91°C), indicating that the presence of vegetation in the park can reduce the temperature and create a cooler microclimate. Visitors also rated the park as comfortable regarding climate, circulation, aroma, and security. However, visitors expect improvements in cleanliness, beauty, noise, and facility conditions to improve the quality of the park as a public space.

Keywords: Air humidity, Air temperature, Microclimate, Temperature Humidity Index (THI), Visitor perception

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1. Introduction

The growth of urban areas continues to experience significant development every year, but this development also brings various problems. One of the main problems is the increase in the number of people living and doing activities in urban areas. Based on data from the Surakarta City Statistics Agency (BPS), the total population of Surakarta City in 2023 will reach 523,008 people. This figure makes Surakarta one of the most densely populated cities in Central Java Province, with a density of 11,277 people/km² (BPS, 2023).

The increasing population density encourages increased activities, thus increasing the need for land, facilities, and supporting infrastructure. The existence of infrastructure development can disrupt the balance of the environment due to the reduction of green open land in Surakarta City. Based on data from the Surakarta City Environment Agency (DLH) in 2019-2020, the area of public green open space (RTH) reached 372.94 hectares (7.98%). However, in 2021 it shrank to 355.23 hectares (7.60%) of the total area of Surakarta City, 46.72 km². Meanwhile, the area of private green spaces in 2019-2021 remained the same at 442.41 hectares (9.47%). This shows that the area of green space in Surakarta City is not only shrinking, but also has not fulfilled the provisions of the Minister of Public Works Regulation Number 5 of 2008 which requires each city area to provide green space of 30% of its total area, consisting of 20% public green space and 10% private green space.

This condition seriously impacts environmental quality, such as affecting air and water quality, reducing biodiversity, and declining city aesthetics can decline and affect the quality of life of surrounding communities (Astriani, 2015). Therefore, strategic measures are needed to improve the carrying capacity and quality of the urban environment. One of them is by improving the quality and area of ideal green spaces to fulfill the needs of urban communities for a comfortable and healthy environment for activities.

According to Law of the Republic of Indonesia No. 26/2007, public green spaces are open areas owned and managed by the city government to benefit the community. The city park is one of the RTH areas with a significant role in the urban environment. City parks have an essential role in maintaining air quality in urban areas, absorbing water, improving the beauty of the environment, and becoming a place for pleasant social interaction. In addition, urban parks are expected to counter the negative impacts of urban activities. For example, the vegetation condition in green spaces can help improve the microclimate by directly reducing surface temperature, thus increasing the comfort of people's lives (Rasendriya & Herlina, 2022).

Banjarsari Sub-district is the largest sub-district in Surakarta City, located in the city center. With its strategic location, this area acts as a centre for trade and services and is home to several large offices and educational institutions. Based on data from the Regional Planning, Research and Development Agency of Surakarta City, 9 out of 17 Priority Development Points of Surakarta City are located in Banjarsari Sub-district. This shows how important the area is in the development and progress of the city as a

whole. However, the high level of infrastructure development in this area can potentially hurt the quality of the environment, which requires further attention. Green spaces around the area aim to create a balanced urban environment. Banjarsari sub-district has several green spaces, including the Manahan Stadium complex park, Balekambang Park, Solo Balapan Station Park, and Banjarsari '45 Monument (Monjari) park. In this context, it is essential to analyse the level of comfort of green spaces in the area to determine the state of the environment, so that we can maintain and improve environmental comfort for the surrounding community. Environmental comfort is one of the important aspects of sustainable urban planning, and it pays attention not only to physical aspects, but also visitors' perceptions of open space.

Monjari Park has a precise functional segmentation: sports arena, playground, fitness centre, and urban forest (Surakarta City Government, 2017). The park has excellent potential as a multifunctional public space and attracts public interest. However, research on the comfort level of green spaces in Monjari Park is still limited. Studies on how visitors feel thermal, visual, and spatial comfort in the park need to be conducted to better understand the effectiveness of RTH in supporting quality of life in urban areas. Therefore, this study aims to analyse the level of comfort felt by visitors in Monjari Park. Thus, this research is expected to contribute to developing future spatial and environmental policies to create a healthy and comfortable urban environment for the community.

2. Material and Methods

This research was conducted in September 2024 at Banjarsari '45 Monument Park, Surakarta, Central Java. This location was chosen because it is one of the public green open spaces (RTH) in the middle of the city and is visited by many people, so it is relevant to study microclimate comfort and visitor perceptions of park environmental conditions. The tools and materials used in this study include a thermohygrometer to measure temperature and relative air humidity, a questionnaire to collect data on visitor perceptions, a tally sheet to record observations, a camera for documentation, stationery, and a laptop for recording and processing data.

The population in this study was all residents of Banjarsari Sub-district. Samples were taken using a non-probability sampling method with a purposive sampling technique. Sugiyono (2019) states that purposive sampling is a method of determining samples based on certain considerations or criteria. The sample criteria in this study are individuals who visit the Banjarsari '45 Monument Park aged 17 years and over. This is done because these age conditions are considered capable of understanding the questionnaire given. The number of samples was determined using the Taro Yamane formula (Wahyudi et al., 2023) with a population of 171,645 people and an error rate of 10%, 100 respondents were obtained as a research sample.

In this study, two types of variables that affect comfort levels were used. The first variable is the thermal comfort index, which is calculated using the Temperature Humidity Index (THI) method, with the leading indicators being air temperature and humidity. The second variable is external factors that affect comfort, including climate or natural forces, air circulation, garden beauty, physical space, cleanliness, aroma, noise, and sense of security. Data collection was conducted through several methods. First, air temperature and humidity measurements were taken three times a day in the morning (07.00-08.00 a.m.), afternoon (00.00-01.00 p.m.), and evening (04.00-05.00 p.m.). Measurements were repeated 10 times to illustrate the real conditions (Choirunnisa et al., 2017). Air temperature and humidity measurements were taken at four location points representing different environmental conditions: grass cover area under shade (Rn), pavement cover area without shade (Ptn), grass cover area without shade (Rtn), and the outside area of the park (Lt). Second, data on tree characteristics in the park were collected using the census method to determine the type and number of constituent trees. Third, visitors' perceptions of comfort were collected through direct interviews using a questionnaire. The rating scale used in measuring visitor perceptions is a Likert scale with groupings divided into four categories, namely very good, good, bad, and very bad (Indrawan et al., 2017).

After all the data was collected, the next step was data processing. Temperature and humidity data were calculated using the following formula (Tjasyono & Harijono, 2008).

The average daily air temperature is calculated using Equation 1.

$$T = \frac{(2 \times T_{07.00} + T_{13.00} + T_{17.00})}{4} \quad \text{.....[1]}$$

Where $T_{07.00}$ = Air temperature measured at 07.00 a.m; $T_{13.00}$ = Air temperature measured at 01.00 p.m; $T_{17.00}$ = Air temperature measured at 05.00 p.m.

The average daily air humidity is calculated using Equation 2.

$$RH = \frac{(2 \times RH_{07.00} + RH_{13.00} + RH_{17.00})}{4} \quad \text{.....[2]}$$

Where $RH_{07.00}$ = Humidity measured at 07.00 a.m; $RH_{13.00}$ = Humidity measured at 01.00 p.m; $RH_{17.00}$ = Humidity measured at 05.00 p.m.

The value is then used to calculate the THI comfort index, using the formula from McGregor and Nieuwolt (1998) (Eq. 3).

$$THI = 0.8 \times T \frac{(RH \times T)}{500} \quad \text{.....[3]}$$

Where THI = Temperature Humidity Index; T = Average air temperature (˚ C); RH = Average air humidity (%).

The Temperature Humidity Index (THI) is an index that quantitatively shows an area's comfort level based on temperature and relative humidity values. This comfort level is divided into three criteria, presented in Table 1.

On the other hand, visitor perception data is processed using the percentage index formula to measure the extent of perceived comfort (Pranatawijaya et al., 2019) (Eq. 4).

$$index\ \% = \frac{Total\ Score}{(highest\ likert\ score \times number\ of\ respondents)} \times 100\% \quad \text{..... [4]}$$

If the percentage index of an object has been obtained, the determination of the interval and interpretation of the percentage needs to be done to know the value using the Equation 5.

$$Interval = \frac{100}{Total\ score\ (likert)} \quad \text{.....[5]}$$

The results of this index are then interpreted based on the categories in Table 2.

Table 1. Temperature Humidity Index Criteria

Criteria	Index Value (˚ C)
Comfortable	21-24
Fairly Comfortable	25-26
Uncomfortable	>26

Table 2. Interpretation of final score

Criteria	Interpretation
0-24.99	Very uncomfortable
25-49.99	Not comfortable
45-74.99	Comfortable
75-100	Very comfortable

3. Results and Discussion

Monjari Park in Surakarta is a 1.9-hectare green space that is recreational, educational, and social. The park is strategically located near Pasar Legi, Balapan Station, and Tirtonadi Terminal, making it easily accessible. Facilities available in the park include seating, a playground, a jogging track, toilets, and a prayer room. Monjari Park is open every day from 06.00 to 22.00 WIB and is often used for sports by visitors. A monument commemorates the Four Day General Attack in the center of the park, which is also a space for historical reflection.

Urban parks serve as a means of recreation, education, and social activity, and improve environmental quality through vegetation that provides oxygen, absorbs pollutants, and maintains ecosystem balance (Beninde et al., 2015). Improving ecological quality requires the presence of supportive constituent elements, such as vegetation. Monjari Park has 31 plant species with a total of 242 trees that play a role in improving air quality, providing shade, adding aesthetic value, and controlling moisture and water absorption (Table 3).

Stand density indicates the number of trees in a field and is vital in creating thermal comfort. Optimal vegetation density can reduce air temperature and improve environmental quality (Wibisono et al., 2023). Based on an area of 1.9 hectares, the stand density in Monjari Park is included in the tight class, which refers to Ridho et al. (2022).

Thermal comfort is a sense of comfort against the ambient temperature, influenced by environmental factors such as air temperature, humidity, wind speed, and individual factors such as clothing and activities. This study analyzed thermal comfort levels using the Thermal Humidity Index (THI), which combines temperature and relative air humidity. Air temperature is an essential factor in determining the comfort of an area. According to Ridwan (2022), normal or lower temperatures are considered comfortable, while higher temperatures make the area uncomfortable. In the four measurement locations (Fig. 2), the highest temperature was recorded in the afternoon (36.11°C) and the lowest in the morning (26.45°C), with a temperature pattern that increases during the day and decreases in the afternoon. This is influenced by the sun's more perpendicular position during the day (Maysitha & Ariffin, 2019).

Average daily temperature measurements in the four areas (Fig. 1) showed temperatures between 29.47˚ C - 30.68°C, which is lower than the average daily temperature of Surakarta City (34.91°C). This indicates that parks can reduce air temperature by around 4.23-5.44°C, in line with the findings of Cohen et al. (2012). Parks with vegetation tend to have lower temperatures than open areas, as trees can reduce direct heat from sunlight (Destriana & Zain, 2013).

Table 3. Species of trees that grow in Monjari Park

No	Tree Species		Total	Function
	Local name	Scientific name		
1	Akasia	*Acacia auriculiformis*	4	Pollutant absorber[5]
2	Angsana	*Pterocarpus indicus*	16	Pollutant absorber[1]
3	Asam Jawa	*Tamarindus indica*	3	Shade[2]
4	Asem Londo	*Pithecellobium dulce*	14	Dust filter[1]
5	Beringin	*Ficus benjamina*	1	Shade [3]
6	Bunut Bangkok	*Ficus virens* Aiton	3	Shade [3]
7	Bintaro	*Cerbera manghas*	4	Shade [4]
8	Bisbul	*Diospyros blancoi*	9	Pollutant absorber [6]
9	Bungur	*Langerstroemia speciosa*	13	Aesthetics[1]
10	Cemara laut	*Casuarina equisetifolia*	10	Water absorbent [1]
11	Dadap Merah	*Erythrina crista-galli*	5	Aesthetics [5]
12	Flamboyan	*Delonix regia*	8	Shade[4]
13	Glodokan Tiang	*Polyalthia longifolia*	25	Pollutant absorber [1]
14	Jambu Air	*Syzygium aqueum*	3	Pollutant absorber [5]
15	Ekaliptus	*Eucalyptus robusta*	3	Pollutant absorber [3]
16	Ketapang	*Terminalia catappa*	4	Pollutant absorber [1]
17	Kiacret	*Spathodea campanulata*	29	Aesthetics [5]
18	Mahoni	*Swietenia mahagoni*	15	Pollutant absorber [1]
19	Mahoni Daun lebar	*Swietenia macrophylla*	8	Pollutant absorber [1]
20	Mangga	*Mangifera indica*	33	Humidity controller [2]
21	Mangium	*Acacia mangium*	3	Pollutant absorber [5]
22	Mimba	*Azadirachta indica*	1	Shade [4]
23	Kanon	*Couroupita guianensis*	4	Humidity controller [4]
24	Pulai	*Alstonia scholaris*	2	Pollutant absorber [1]
25	Sawo Durian	*Chrysophyllum cainito*	7	Shade [4]
26	Sawo Kecik	*Manilkara kauki*	1	Shade [4]
27	Sukun	*Artocarpus altilis*	1	Water absorbent[7]
28	Tabebuya Kuning	*Handroanthus chrysotrichus*	3	Aesthetics [5]
29	Tabebuya Putih	*Tabebuia roseo-alba*	2	Aesthetics [5]
30	Tanjung	*Mimusops elengi*	3	Shade [4], Odour eliminator [8], Noise cancellation[8]
31	Trembesi	*Samanea saman*	5	Pollutant absorber [2]
	Total		242	
	Kerapatan (pohon/ha)		127.37	

Source: (1) Kurniawan and Alfian (2010); (2) Salatalohy et al. (2023); (3) Martuti et al. (2021); (4) Fazila (2023); (5) Prasetio et al. (2021); (6) Febrianti (2019); (7) BNPB (2021); (8) Government of the Republic of Indonesia (2008)

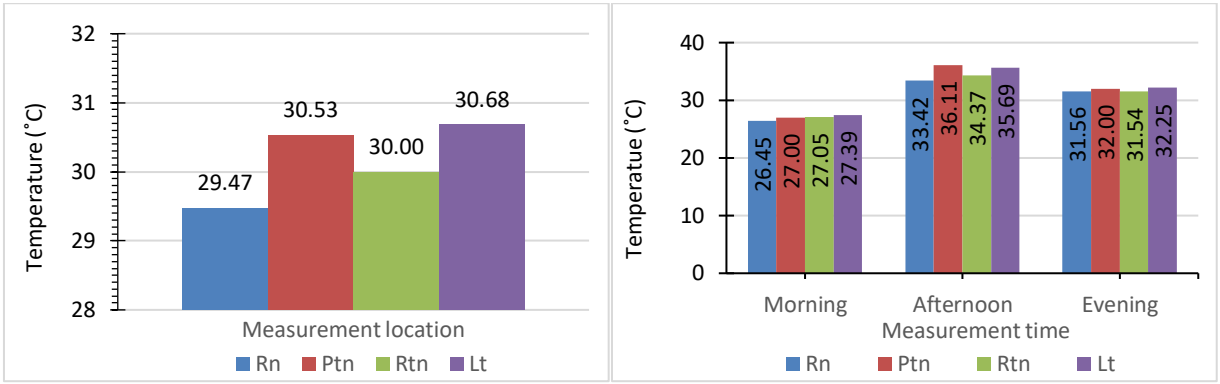

Figure 1. Average temperature at four measurement sites in Monjari Park

Temperatures in areas with hard surfaces, such as Ptn and Lt areas, are higher than Rtn areas, as the uneven grass surface scatters reflected sunlight (Mariski et al., 2017). In the morning and evening, the air temperature in Ptn was lower than in Lt, but higher during the day. This is due to the darker color of the surface cover of the Ptn area, which absorbs more heat. The gaps in the paving blocks in the Ptn area allow faster heat release, while the concrete Lt area without gaps releases heat slowly (Ibrahim et al., 2018; Paminto et al., 2021).

Relative air humidity is inversely proportional to temperature; the higher the temperature, the lower the humidity (Saputro et al., 2012). Conditions in Monjari Park show that the highest humidity occurs in the morning due to lower temperatures, while in the afternoon it decreases due to an increase in temperature (Fig.3). In the afternoon, humidity increases again because the temperature starts to drop. Air humidity levels are also influenced by various factors, such as the availability of vaporizing materials, air temperature, and solar radiation (Saputro et al., 2012).

Areas with vegetation, such as Rn, have the highest relative air humidity of 64.78% because vegetation reduces the air temperature around the ground surface and increases humidity (Prasetya et al., 2017). In contrast, the outer areas of the park, which are dominated by concrete and asphalt, have low humidity due to low water absorption, so the amount of water evaporating from the surface is reduced (Sumarsono et al., 2016). Although Rtn is an open area, grass cover stores and releases water gradually, making it more effective at increasing humidity than pavement. Meanwhile, Ptn areas that use pavement still have pretty high humidity because evaporating water pools add to the water vapor in the air, increasing humidity (Marni & Jumarang, 2016).

The THI index in Monjari Park in Figure 4 shows slight differences between areas, with the highest value in the Ptn area (28.17) and the lowest in the Rn area (27.39). The average THI inside the park is 27.76, while it is higher outside (28.15), signalling uncomfortable conditions. The Rn area, which has dense vegetation, shows higher comfort because the plants can reduce air temperature and create a cooler microclimate (Yulita, 2019). According to Neuwolt's THI formula (McGregor & Nieuwolt, 1998), thermal comfort is influenced by air temperature and humidity. If both increase, the THI value also increases, causing thermal comfort to decrease.

Monjari Park generally provides better thermal comfort than the area outside the park. However, the THI (Temperature-Humidity Index) value in the afternoon and evening still shows uncomfortable conditions due to increased air temperature. Areas outside the park that are more open have higher average daily THI values due to the lack of vegetation that can help reduce temperatures. Vegetation inside the park and extensive canopy trees are important in improving thermal conditions by providing shade (Putra et al., 2022).

All four observation areas show fairly comfortable thermal conditions only in the morning, when the intensity of sunlight is still low. However, during the day, the THI value increases as the temperature rises and the humidity decreases, which causes the environment to feel hot and uncomfortable (Sapariyanto et al., 2016). Although the THI value decreases slightly in the afternoon, the condition still does not reach comfort. However, the garden can still provide a cooler atmosphere than the surrounding area.

This thermal comfort also affects the level of visitation and visitors' perception of the park. The characteristics of the respondents show that visitors to Monjari Park consist of a balanced number of men and women, the majority aged 28-38 years, with the last high school education. Most are homemakers who come with their families to play with their children. Visitors generally live in Banjarsari Sub-district, but some come from outside Surakarta City, such as Boyolali, Sukoharjo, and surrounding areas, indicating the broad appeal of the park. Most visitors know this park independently (56%) because of its strategic location and popularity. As many as 60% of visitors have come ≥5 times, reflecting comfort and satisfaction with park facilities. The diversity of visitor origins shows that Monjari Park is a favourite open space for local residents and attracts people from outside the city.

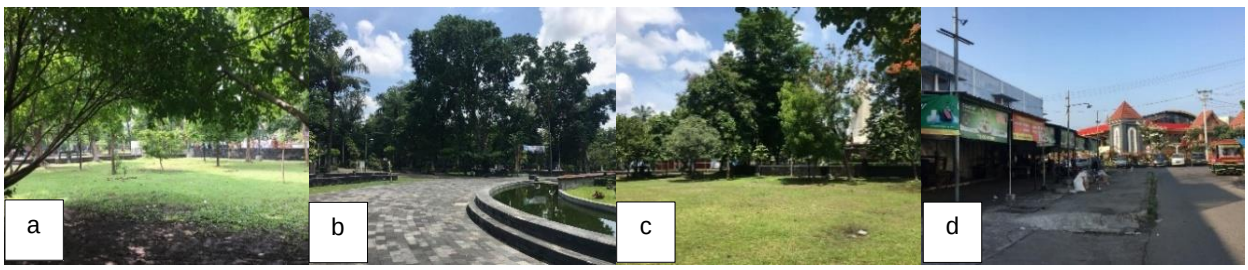

Figure 2. Measurement locations: (a) Rn/area of grass cover under shade; (b) Ptn/area of paving blocks without shade; (c) Rtn/area of grass without shade; (d) Lt/outside area of the garden.

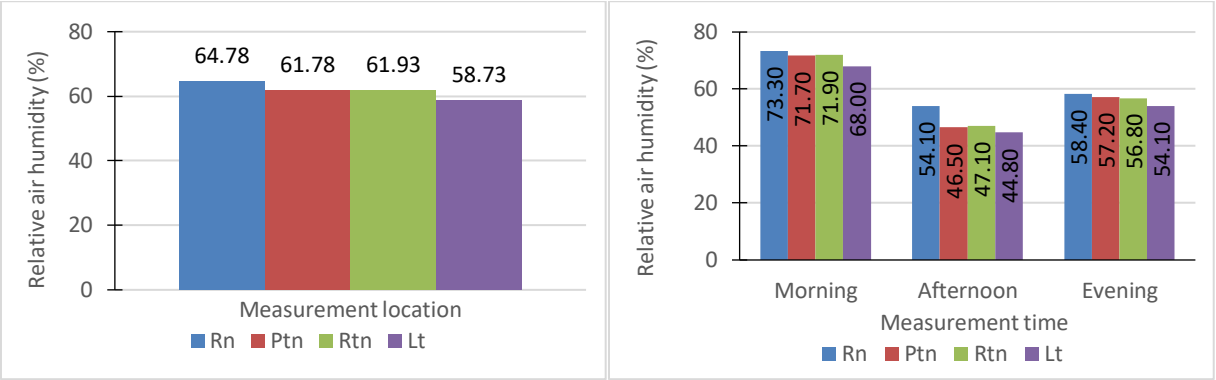

Figure 3. Average relative air humidity at four measurement sites in Monjari Park

The high level of visitation is inseparable from the comfort visitors feel. Monjari Park is a green open space that the community uses for recreation, sports, and relaxation. The comfort level of this park is an important aspect that affects the visitor experience. Comfort is assessed based on several parameters, such as climate, circulation, beauty, shape, cleanliness, aroma, noise, and safety. The results showed that Monjari Park is classified as very comfortable with a comfort level of 76.56%, almost equivalent to Taman Alun-Alun Merdeka in Malang, which has a comfort level of 77.03% based on research from Febiola et al. (2024). Climate, air circulation, aroma, and safety are the factors that most support comfort. However, beauty, shape, and cleanliness are only considered quite comfortable, so they must be improved to optimise the visitor experience. The analysis of these parameters based on visitor perceptions is as follows.

Climate parameters play an essential role in the comfort of Monjari Park, especially as a natural shade from the hot sun. Vegetation in green spaces helps filter sunlight, slow wind, and reduce rainfall, creating a more comfortable environment (Saroh & Krisdianto, 2020). The research results in Figure 5 show that the climate parameter reaches a value of 78% with very comfortable criteria. The score indicates these results on two factors, namely the level of garden coolness reaching 77.5% and wind flow 78.5%, both of which are in the very comfortable category. Although the average temperature of the park (29.47-30.5°C) is above the standard comfort zone according to SNI (20.5-27.1°C) visitors still feel comfortable. This is due to vegetation providing shade and lowering the temperature (Khairiyah, 2024). Vegetation that optimizes photosynthesis also produces large amounts of oxygen and creates coolness, thus improving environmental quality and visitor comfort (Saroh & Krisdianto, 2020).

In addition to climatic factors, ease of access or circulation to the park is important in upholding visitor comfort. Circulation includes easy access for vehicles and pedestrians to the park and connection with the surrounding area (Zabdi, 2016). Based on the study results, 82.25% of respondents rated the circulation in Monjari Park in the very comfortable category. The supporting factor is the park's strategic location - close to settlements and public facilities such as Pasar Legi, Balapan Station, offices, and schools. Its location on the road's edge also facilitates access for private vehicles. However, some visitors complain that there is no signposting or public transport, so public transport users must walk about 250 metres to reach the park.

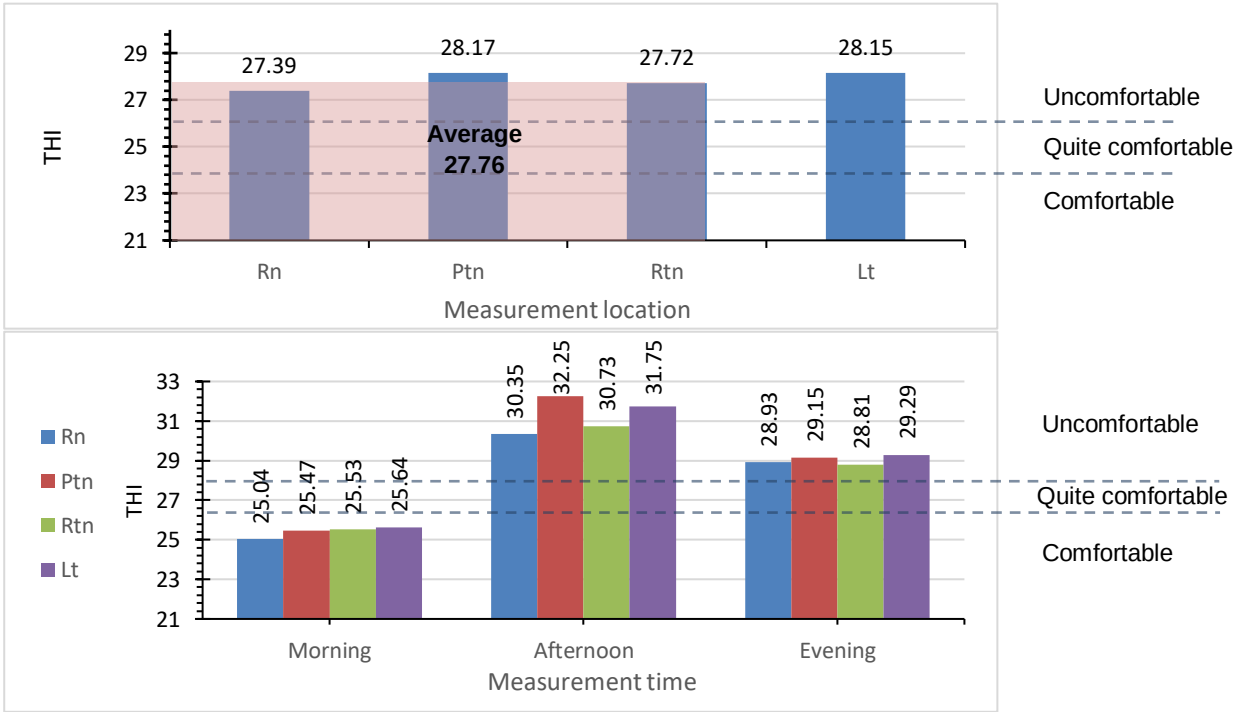

Figure 4. Average daily thermal comfort index (THI) values

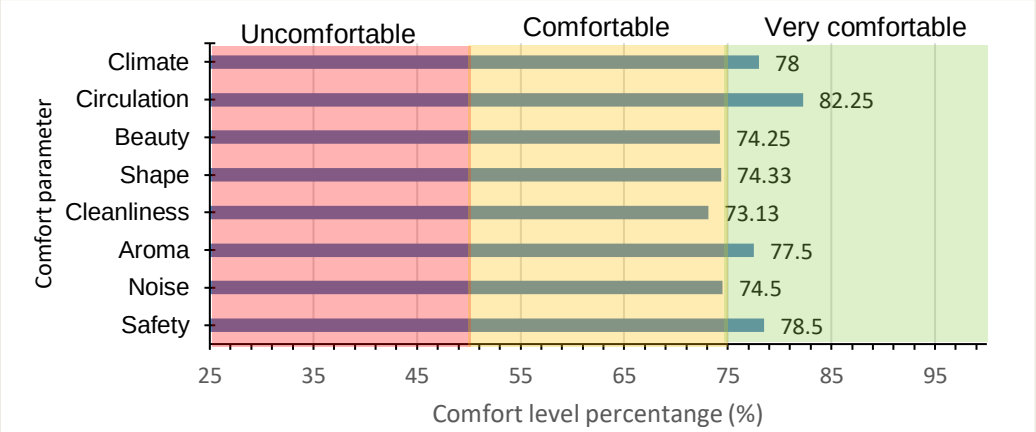

Figure 5. Percentage of comfort level of Monjari Park based on visitors' perception

Furthermore, the beauty aspect also contributes to visitors' comfort and experience. The beauty of green spaces strengthens the aesthetic value and improves visitor comfort and experience through elements such as shape, colour variation, and plant composition (Rohman, 2022). Attractive green spaces can create a refreshing atmosphere, increase a sense of happiness, and help relieve stress (Karim et al., 2021). Based on the assessment of 100 respondents, the beauty of Monjari Park scored 74.25% and was included in the comfortable category, although the variety of vegetation colours was considered not optimal. The park has a variety of flowering trees such as *Lagerstroemia speciosa*, *Erythrina crista-galli*, *Spathodea campanulata*, *Handroanthus chrysotrichus*, and *Tabebuia roseo-alba*, which show higher aesthetic potential. A planned and varied arrangement of vegetation, such as alternating arrangements and gradations in height, can avoid monotony and create a stronger visual harmony (Rochim & Syahbana, 2013).

Other supporting factors that influence visitor comfort are the diversity and condition of facilities in the park, including well-maintained vegetation. Facilities that are complete and in good condition allow visitors to carry out various activities freely, while limited or damaged facilities can reduce comfort. Based on the perceptions of 100 respondents, the form or facilities in Monjari Park obtained a score of 78% (very comfortable), with a sub-parameter score of 72.25% infrastructure condition, 78.25% facility diversity, and 72.5% plant condition. Available facilities such as play areas, jogging paths, seating, toilets, open areas, parking, and prayer rooms, including access for the disabled, show the park's support for diverse activities. However, some facilities, such as the bumpy jogging track and damaged seating, are considered to need further maintenance. Pratama and Aji (2022) state that well-maintained facilities and vegetation can improve park aesthetics and visitor comfort.

Park cleanliness is also important in creating a comfortable atmosphere and encouraging visitors to linger and return to visit. Based on the perceptions of 100 respondents, the cleanliness of Monjari Park scored 73.13%. It was classified as comfortable, with details of the condition of the cleanliness of the park area 70% (comfortable) and the availability of trash bins 76.25% (very comfortable). Good hygiene supports public health and environmental comfort (Ardansyah et al., 2024). Although routine cleaning is done twice daily, there are still unkempt spots, such as dry leaves and rubbish in the gutter. The availability of rubbish bins is considered adequate, but visitors' awareness of how to dispose of rubbish is still low. Educational efforts, such as information boards, have been made, but their effectiveness must be improved to maintain cleanliness.

In addition to air quality and aroma, noise level is also an aspect that significantly influences visitor comfort in the park. Based on the perceptions of 100 respondents, noise conditions in Monjari Park scored 74.5% and were classified as very comfortable. Although the park is near traffic, the sound of vehicles is not too disturbing, and the atmosphere is supported by natural sounds such as splashing water from the fountain. This atmosphere creates calmness for visitors. Efforts to reduce noise are carried out by planting sound-absorbing vegetation such as *Mimusops elengi*, and the use of other plants such as *Filicium decipiens, Acalypha* sp., *Hibiscus rosa-sinensis*, and *Bougainvillea* sp. as recommended by the Government of the Republic of Indonesia (2008).

Finally, the safety factor in the park is the main requirement so that visitors feel calm and enjoy various activities optimally. Based on the perceptions of 100 respondents, security in Monjari Park scored 78.5%, according to very comfortable criteria. Visitors feel safe thanks to the presence of parking attendants who help maintain order and prevent potential crime. In addition, there were no complaints regarding the presence of traders in the park area. These factors indicate that security management has gone well. According to Wati and Fatkhuroyan (2017), a sense of security is a key requirement in creating satisfaction and comfort in public spaces.

4. Conclusion

Banjarsari '45 Monument Park is considered uncomfortable according to the THI value (27.76). However, the average temperature inside the park (29.47 - 30.68˚C) is lower than the average temperature of Surakarta City (34.91˚C). Visitors feel comfortable, especially in shaded areas. Meanwhile, visitors to Monjari Park feel very comfortable thanks to the good aspects of the climate, circulation, aroma, and safety. However, some factors such as beauty, cleanliness, noise, and facility conditions still need to be improved to provide a more optimal experience.

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