



PLANNING MALAYSIA:

Journal of the Malaysian Institute of Planners

VOLUME 23 ISSUE 4 (2025), Page 855 – 872

EVALUATION OF SATISFACTION LEVEL TOWARDS URBAN PARKS PHYSICAL ATTRIBUTES IN TAMAN AMAN PARK, PETALING JAYA, SELANGOR, MALAYSIA

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Abstract

Urbanization causes people to experience mental health issues, but urban parks can help alleviate stress levels. Parks should have diverse physical attributes and greenery to support health, aesthetics, and ecology. Thus, evaluating user satisfaction levels is crucial to ensure that urban parks' physical attributes meet expectations and needs. A study was conducted to evaluate user satisfaction levels towards the performance and importance of Taman Aman Park's physical attributes. Using a qualitative descriptive approach, data were collected from 86 respondents obtained through the accidental sampling method. The variables used in this study cover aspects of accessibility, facilities, amenities, safety, and natural features. The collected data is analysed through Importance-performance analysis (IPA) to evaluate the level of importance and performance of 19 park physical attributes. The study result indicates that most respondents interpret the park's physical attributes in Taman Aman Park as being at a "fair" level. Subsequently, the IPA quadrant results are used to determine the priority of improving the park's physical attributes. The IPA analysis revealed that 9 park physical attributes are considered important and perform well, while 4 attributes are deemed important but have low performance and require improvement.

Keywords: Satisfaction Level, Urban Park, Physical Attributes, Importance-Performance Analysis (IPA)

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INTRODUCTION

By 2045, the world's urban population is projected to reach 6 billion, representing a 1.5-fold increase from the previous levels. In Malaysia, urbanization has risen from 36.8% in 1974 to 78.7% in 2023, growing at an average annual rate of 1.57%. However, rapid urbanization and increased population density have led to congestion, pollution, crime, and poor housing conditions, which can negatively influence people's mental and physical health (Mohd Shobri et al., 2021). Most employed urban residents face high stress due to workloads and long working hours (Hibrahim, 2021). Consequently, a healthy urban environment is crucial for their well-being. Numerous studies have shown that urban green spaces, notably parks, confer a range of mental health benefits. Park spaces can mitigate stress levels, improve physical health, alleviate anxiety and depression, provide restorative experiences, and foster social interactions (Mohd Shobri et al., 2021). Knowing Park users' satisfaction is a significant indicator of whether an urban park can meet community expectations and function as a safe and enjoyable public space.

Taman Aman Park is a notable recreational facility in Petaling Jaya City. The park provides various facilities for users' recreational activities, including social interaction, study and play areas, and promotes ecological balance. However, the functionality of the park is currently beset by various physical attribute damage that compromises the user experience and reduces the park's appeal as a comfortable and safe recreational space. Such damage includes damaged pathways, unsafe play facilities, inadequate lighting, and neglected landscaping. Therefore, it is important to conduct a study to evaluate the level of user satisfaction towards the park's physical attributes provided in Taman Aman Park based on their performance and importance. The objectives of the study are: i) to determine which attributes are deemed important and performance by users, and ii) to identify the park's physical attributes that necessitate prioritization for improvement. The findings of this study are expected to provide a valuable reference for future studies of the local authorities responsible for developing urban parks.

LITERATURE REVIEW

An urban park constitutes a green open space within a metropolitan area that functions as a green lung and helps break the concrete jungle monotony. They are equipped with physical attributes such as walking paths, benches, playgrounds, and sports fields to cater to both the active and passive recreational needs of urban residents (Melanira & Rudianto, 2023). The parks are classified into five categories: national parks, regional parks, town or local parks, neighborhood parks, and children's playgrounds. The physical attributes of a park are the most

important pillar in ensuring the park remains vibrant and active for users, encouraging them to revisit the park. Research has identified four main physical attributes that should be considered when designing and developing a park to create an inclusive, safe, and enjoyable environment for all park users. These attributes are accessibility, safety, natural features, amenities, and facilities:

Accessibility: Urban parks should be easily accessible, with locations near major roads and parking areas. It encourages people of all ages and abilities to visit the park. The park should be visible from afar or near and well-connected to its surrounding areas. To achieve this, accessible parking, paths, bike lanes, ramps, and entrances are necessary (Fatiah et al, 2021; Abd Majid et al., 2023).

Safety: Fear and insecurity can discourage visitors from enjoying even the most well-designed urban parks. By prioritizing safety features, urban parks can create a safe environment and promote the use and enjoyment of green spaces (Nada & Ischak, 2022). Attributes related to safety include adequate lighting at nighttime hours, fencing, signage, paths, surveillance cameras, and security personnel.

Amenities and facilities: Refers to any man-made structure explicitly designed to cater to the diverse needs of users, both active and passive. The amenities and facilities include picnic areas, playgrounds, sports fields, courts, fitness equipment, trails or walkways, seating, shelters, waste receptacles, drinking fountains, restrooms, food stalls, and parking. Wi-Fi and free internet access are increasingly important as they allow visitors to stay connected while enjoying outdoor spaces (Abd Majid et al., 2023).

Natural features: The presence of natural elements can enhance aesthetic appeal and comfort, provide opportunities for people to appreciate nature and observe wildlife (Nada & Ischak, 2022). These natural elements encompass green spaces, trees, shrubs, flowers, water features, and wildlife habitats.

The four main attributes of accessibility, amenities and facilities, safety, and natural features must meet the satisfaction of park users (Fatiah et al, 2021). Their satisfaction can help to improve the quality of urban parks. The Importance Performance Analysis (IPA) method is an effective instrument for evaluating a park's physical attributes' importance and performance (Alamri & İnceoglu, 2021). Involving Park users in development and decision-making fosters a sense of ownership and pride through their contributions.

RESEARCH METHODOLOGY

Study Area

The location studied is Taman Aman Park in Section 22, Petaling Jaya district in Selangor (Figure 1). Astronomically, Taman Aman Park is located at coordinates $3^{\circ}6'10.2564''\text{N}$ and $101^{\circ}37'31.9872''\text{E}$, spanning an area between 2 and 7.9 hectares. The park is managed by the Petaling Jaya City Council (PJCC) and has a history of being a disused tin-mining pool-turned recreational lake for the public's enjoyment. The park's characteristic is a recreational park surrounded by housing, schools, and commercial areas, providing recreational activities, sports, and social activities for all ages. Taman Aman Park offers various facilities to park users, including seating areas, playgrounds, jogging tracks, walking trails, courts, and a reflexology path. Landscape features include mature trees, a lake, benches, and shaded structures.

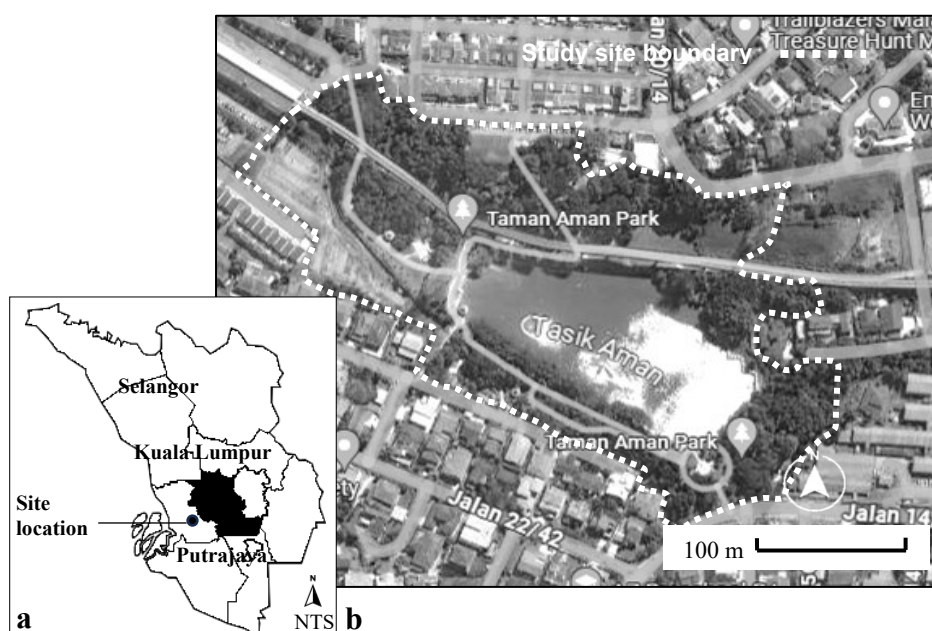


Figure 1: Location of the study area: (a) in the state of Selangor, and (b) Taman Aman Park

Source: Google Map (2024)

DATA COLLECTION

The study employed dual methods for data collection, encompassing both primary and secondary data. The primary data collection took place over a fortnight at the end of April 2024. Researchers observed and documented the

physical attributes present in the park to use as indicators/sub-variables for a questionnaire. Subsequently, a survey was conducted in mid-May 2024 through a direct questionnaire to gather information on park users' satisfaction levels regarding the performance and importance of existing physical attributes in Taman Aman Park. The data obtained will be quantitatively analyzed using the IPA method. The secondary data involved collecting information pertinent to specific study topics from sources such as research journals, articles, theses, books, and data on research sites.

Identification Variables & Indicators

To evaluate the satisfaction level of park users, a literature review was performed to determine the independent variable, which in this case is the urban physical attributes - accessibility, safety, natural features, and amenities & facilities. Thereafter, these attributes were identified as their respective indicator and sub-variables obtained from on-site observations (Table 1)

Table 1: The attributes 19 parameters in Taman Aman Park

Dependent variables	Independent variables/ Attribute	Indicators/sub variables
To evaluate the level of park user satisfaction towards urban park attributes provided in Taman Aman Park.	Accessibility	Gateway & parking condition
	Facilities and amenities	Badminton court, takraw court, skatepark, outdoor fitness gym, playground, reflexology path, jogging track/pathway, lavatory, signage, rubbish bin, gazebo, bench and table.
	Natural features	Vegetation and lake
	Safety	Lighting, bollards & CCTV

Source: Author (2024)

Development of Questionnaire

The study aims to gauge user satisfaction towards the physical attributes of public parks, necessitating the use of a close-ended survey questionnaire for data collection. The questionnaire, developed via Google Forms, comprises two sections. Section I gathers demographic variables of gender, age groups, and motives for visiting the park. Section II presents close-ended questions regarding users' satisfaction with the importance and performance of four main park physical attributes: accessibility, facilities & amenities, natural features, and safety. The questionnaire was disseminated randomly among users of Taman Aman Park. Park users were asked to evaluate the park's performance and importance by scanning a QR code provided by the researcher to access the questionnaire. They needed to select, on a Likert scale, from 1 (low importance) to 5 (very important/high importance) to evaluate the level of importance, and

from 1 (very dissatisfied) to 5 (very satisfied) to evaluate the level of performance (Table 2). Data from these park users will be further analysed using the IPA method.

Table 2: The Likert Scale: Level of Importance & Level of Performance

Level	Answer Criteria	Score	Level	Answer Criteria	Score
Importance	Very unimportant	1	Performance	Very dissatisfied	1
Level Score	Unimportant	2	Level Score	Dissatisfied	2
	Moderately	3		Neutral	3
	Importance	4		Satisfied	4
	Very Important	5		Very satisfied	5

Source: Author (2024)

Determination of Sample Size

The population in this study consisted of all park users of Taman Aman Park. The Time Linear Function Formula was employed to determine the sample size because the population size is not always the same, and there is uncertainty about the population size. This formula calculates the number of samples based on estimated time constraints as follows:

$$n = \frac{T-T_0}{T_1} \quad \text{Eq. 1}$$

Information:

n = number of samples,

T = time available for study (14 days x 24 hours = 336 hours)

T_0 = planned time in study/day (hours) (5 hours x 7 days = 35 hours)

T_1 = time used to fill out the questionnaire (hours) ($\frac{1}{2}$ hour/day x 7 days = 3.5 hours)

$n = \frac{336-35}{3.5} = 86 \text{ users/respondents}$

Based on Eq. 1, the sample size in this study was 86 users in Taman Aman Park. The sampling technique used was accidental sampling or convenience sampling. This technique entails the researcher distributing questionnaires to anyone who visits Taman Aman Park and is willing to answer.

Validity Test

A validity test measures the legitimacy of measuring instruments, such as questionnaires. The validity of user responses was analysed using SPSS Version 28.0 by comparing the R count (Pearson correlation value) with the R table (obtained from the R table). An indicator is considered valid if the R count > R table and invalid if R count < R table. This study used a significance level of 5% (0.05) and the number of samples (N)=86. The R table used was 0.212 (Muhammad Abdul Rohman, 2020).

Reliability Test

A measuring instrument is reliable if it produces consistent results even if the calculations are repeated multiple times. Reliability assessment requires validating the research instrument. If an instrument is invalid, there is no need to carry out a reliability test calculation. The study conducted a reliability test using Cronbach's Alpha analysis with a value >0.6, where an indicator value is reliable if > 0.60 or higher and vice versa (Aithal & Aithal, 2020).

Importance Performance Analysis (IPA)

The IPA method was first introduced by Martilla & James in 1977. This method was developed to measure customer satisfaction based on service performance in business and marketing. Presently, IPA is employed across diverse fields, including tourism, health services, green practices, and education (Alamri & İnceoglu, 2021). In this study, the IPA was used to evaluate the satisfaction level of park users. Satisfaction levels are obtained by comparing the average performance level with the average importance level (Martilla & James, 1977). The formula for determining the satisfaction level is as follows:

$$T_{ki} = \frac{X_i}{Y_i} \times 100\% \text{ Eq. 2}$$

Information:

T_{ki} = Satisfaction level, X_i = Performance level score, Y_i = Importance level score

Table 3: Interpretation for Satisfaction Level

Level Satisfaction	Interpretation (T_{ki})
0%-32%	Very Dissatisfied
33%-66%	Dissatisfied
67%-99%	Fair
100%	Satisfied
>100%	Very Satisfied

Source: Ramadhan et al. (2020)

After determining the level of satisfaction, a Cartesian diagram with four quadrants is to be plotted. This diagram is used to group and prioritize the indicators that can influence user satisfaction. The x-axis denotes performance value, and the y-axis denotes importance value. Each quadrant will be populated with indicators using the following formula:

Faridatul Akma Ab Latif, Muhammad Haziq Hanizan, Mohamed Ikhwan Nasir Mohamed Anuar, Amalina Mohd Fauzi, Salina Mohamed Ali
Evaluation Of Satisfaction Level Towards Urban Parks Physical Attributes in Taman Aman Park, Petaling Jaya, Selangor, Malaysia

$$\bar{X} = \frac{\sum Xi}{n} \text{ Eq. 3}$$

$$\bar{Y} = \frac{\sum Yi}{n} \text{ Eq. 4}$$

Information:

n = Number of users, Xi = Average score of performance level

Yi = Average score of importance level

A Cartesian diagram consists of four quadrants that are divided by two perpendicular lines intersecting at the point $(\bar{\bar{X}}, \bar{\bar{Y}})$ (Figure 2). The intersection point is determined by the following formula:

$$\bar{\bar{X}} = \frac{\sum_{i=1}^N \bar{X}_i}{k} \text{ Eq. 5}$$

$$\bar{\bar{Y}} = \frac{\sum_{i=1}^N \bar{Y}_i}{k} \text{ Eq. 6}$$

Information:

$\bar{\bar{X}} = X - \text{Axis limit (performance level)}$, $\bar{\bar{Y}} = Y - \text{Axis limit (importance level)}$

k = Number of indicators studied

Quadrant 1 (Concentrate Here): This quadrant contains indicators with high importance but low performance. The variables in this quadrant require immediate attention for improvement.

Quadrant II (Keep Up the Good Work): This quadrant contains indicators with high importance and high performance. The variables in this quadrant are major strengths that must be continuously maintained.

Quadrant III (Low Priority): This quadrant contains indicators with low importance and low performance. The variables in this quadrant do not require additional effort.

Quadrant IV (Possible Overkill): This quadrant contains indicators with low importance but high performance. The variables in this quadrant must be maintained to remain of good quality.

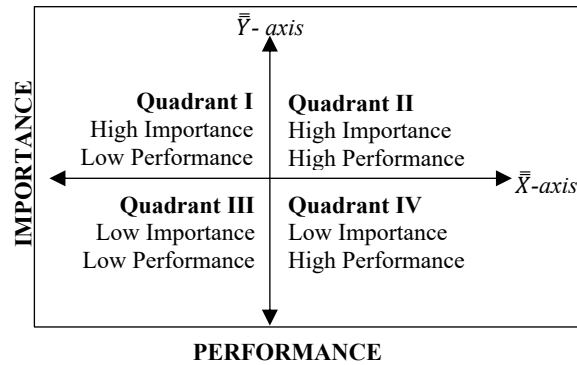


Figure 2: Cartesian Diagram IPA

Source: Martilla & James (1977)

ANALYSIS AND DISCUSSION

Result of the Field Analysis

The availability of physical attributes of Taman Aman Park was assessed through on-site observations, and the results are presented in Table 4. Each indicator is coded to facilitate data analysis.

These indicators serve various functions, including sports, recreation, and education.

Table 4: Availability of park physical attributes

No	Indicator	Total	Photo	No	Indicator	Total	Photo
Accessibility				Facilities and Amenities			
A1	Parking condition	6772.28 m		F3	Basketball court	1 (480 m ²)	
A2	Archway	2 nos		F4	Takraw court	1 (81.74 m ²)	
F5	Skatepark	206.79 m ²		F13	Gazebo	12 nos	

Faridatul Akma Ab Latif, Muhammad Haziq Hanizan, Mohamed Ikhwan Nasir Mohamed Anuar, Amalina Mohd Fauzi, Salina Mohamed Ali
 Evaluation Of Satisfaction Level Towards Urban Parks Physical Attributes in Taman Aman Park, Petaling Jaya, Selangor, Malaysia

No	Indicator	Total	Photo
F6	Outdoor fitness gym	26 nos	
F7	Integrated playground	796.74 m ²	
F8	Reflexology foot path	93.19 m ²	
F9	Jogging track/ pathway	3433 m ²	
F10	Lavatory	2 nos	
F11	Signage	19 nos	
F12	Rubbish bin	30 nos	

No	Indicator	Total	Photo
F14	Benches and picnic table	15 nos	
Natural Features			
N15	Variety of vegetation (trees, shrubs, g/covers)	38116.99 m ²	
N16	Water features (lake)	22,300.54 m ²	
Safety			
S17	Park lighting	30 nos	
S18	Bollards	74 nos	
S19	CCTV	6 nos	

Source: Author's Inventory (2024)

Results of the Survey

To determine the respondents' background, user profiles were analysed, including gender, age group, and motive to park (Table 5). In terms of gender, 51.2% of respondents were male, and the remaining 48.8% were female. The age

group of 21 to 30 years (50%) and under 20 years (17.4%) frequented Taman Aman Park, with the remaining 32.6% between 31 and 60 years of age. Meanwhile, for the purpose of visiting the park, most respondents mentioned sightseeing or reducing stress at 34.0%, playing sports at 29.0%, jogging or running at 17.4%, and 15.0% socializing with family or friends. The rest mentioned fishing (2.3%), and it being the best and closest place to their home (2.3%). These results indicate that sightseeing or reducing stress, and sports are the main purposes for visiting the park.

Table 5: User Profile (n=86)

Item/Variable	Frequency	Percentage
Gender		
Male	44	51.2%
Female	42	48.8%
Age Group		
Below 20	15	17.4%
21 – 30	43	50.0%
31 – 40	14	16.3%
41 – 50	9	10.5%
51 – 60	5	5.8%
61 and above	0	0
Motive/purpose to park		
Jogging/running	15	17.4%
Playing sports (skate, basketball, and badminton)	25	29.0%
Fishing	2	2.3%
To sightseeing/reduce stress	29	34.0%
To socialise with family or friends	13	15.0%
It's the best and closest place to my home	2	2.3%

Source: Author (2024)

Validity Test

Calculations carried out with SPSS software revealed that all 19 indicators of the performance level and importance level had an R count > R table, indicating that all indicators are valid. Therefore, the reliability test can be conducted.

Reliability Test

Based on Table 6, the reliability test results indicate an r alpha value of 1.007 for the performance and 0.978 for the importance, which is considered reliable as it is greater than the standard r alpha value of 0.6. The data analysis can proceed to the next step.

Table 6: Reliability test

Variable	Cronbach alpha coefficient	No of indicators	Test
Performance level	1.007	19	Reliable
Importance level	0.978	19	Reliable

Source: Author's Calculation (2024)

Importance Performance Analysis (IPA)

The satisfaction level towards Taman Aman Park is obtained by comparing the average score of the performance level ($\bar{X}$) and importance level ($\bar{Y}$) using IPA. Both levels can be calculated using Eq. 3 and Eq. 4, with satisfaction level calculated using Eq. 2. Below is an example calculation using these formulas for the parking condition indicator.

$$\bar{X} = \frac{\sum Xi}{n} \quad \bar{Y} = \frac{\sum Yi}{n} \quad T_{ki} = \frac{Xi}{Yi} \times 100\%$$

$$\bar{X} = \frac{343}{86} = 3.98 \quad \bar{Y} = \frac{347}{86} = 4.03 \quad T_{ki} = \frac{3.98}{4.03} \times 100\% = 98\%$$

Next, to calculate the total average for the level of importance and performance, use Eq. 5 and Eq. 6 as shown below.

$$\bar{\bar{X}} = \frac{\sum_{i=1}^N \bar{X}_i}{N} \quad \bar{\bar{Y}} = \frac{\sum_{i=1}^N \bar{Y}_i}{N}$$

$$\bar{\bar{X}} = \frac{69.7}{19} = 3.67 \quad \bar{\bar{Y}} = \frac{75.9}{19} = 3.99$$

These two total averages are also used to determine the intersection points $\bar{\bar{X}}$ and $\bar{\bar{Y}}$ in the IPA Cartesian diagram (Figure 3).

Table 7 indicates the highest score for the satisfaction level was 113%, attained by indicator A2 (gateway), which falls under the "very satisfied" category. Conversely, indicator S19 (CCTV) received the lowest satisfaction level score of 77%, categorized as "fair." Overall, the satisfaction level for Taman Alam Park users across 19 park indicators averages 92%, which is categorized as "fair." Therefore, to achieve an overall "very satisfaction" level, attention should be focused on improving several park physical attribute indicators. The Cartesian diagram IPA (Figure 3) displays of performance and importance level of Taman Alam Park.

Table 7: The satisfaction level (T_{ki}) of the Performance level and importance level

No	Indicator	X_i	Y_i	n	$\bar{X}$	$\bar{Y}$	T_{ki}	Interpretation
Accessibility								
A1	Parking condition	343	347	86	3.98	4.03	98%	Fair
A2	Gateway	309	274	86	3.59	3.18	113%	Very satisfied
Facilities & amenities								
F3	Basketball court	311	312	86	3.61	3.62	100%	Satisfied
F4	Takraw court	299	295	86	3.47	3.43	101%	Very satisfied
F5	Skatepark	293	291	86	3.40	3.38	101%	Very satisfied
F6	Outdoor fitness gym	321	336	86	3.73	3.91	96%	Fair
F7	Playground	333	359	86	3.87	4.17	93%	Fair
F8	Reflexology path	322	351	86	3.74	4.08	92%	Fair
F9	Pathway/jogging track	323	360	86	3.76	4.19	90%	Fair
F10	Lavatory	299	364	86	3.48	4.23	82%	Fair
F11	Signage	315	349	86	3.66	4.05	90%	Fair
F12	Rubbish bin	327	362	86	3.80	4.21	90%	Fair
F13	Gazebo	319	339	86	3.70	3.71	94%	Fair
F14	Bench & table	327	361	86	3.80	4.20	91%	Fair
Natural elements								
N15	Vegetation	343	392	86	3.98	4.56	88%	Fair
N16	Lake	318	360	86	3.69	4.19	88%	Fair
Safety								
S17	Bollard	318	395	86	3.70	4.59	81%	Fair
S18	Lighting	303	345	86	3.52	4.01	88%	Fair
S19	CCTV	277	358	86	3.22	4.16	77%	Fair
Total					69.7	75.9	92%	Fair
Total average					3.67	3.99		

Source: Author's Calculation (2024)

Information:

X_i = Performance level score

Y_i = Importance level score

n = Number of users

$\bar{X}$ = Average score of performance level

$\bar{Y}$ = Average score of importance level

T_{ki} = Satisfaction level

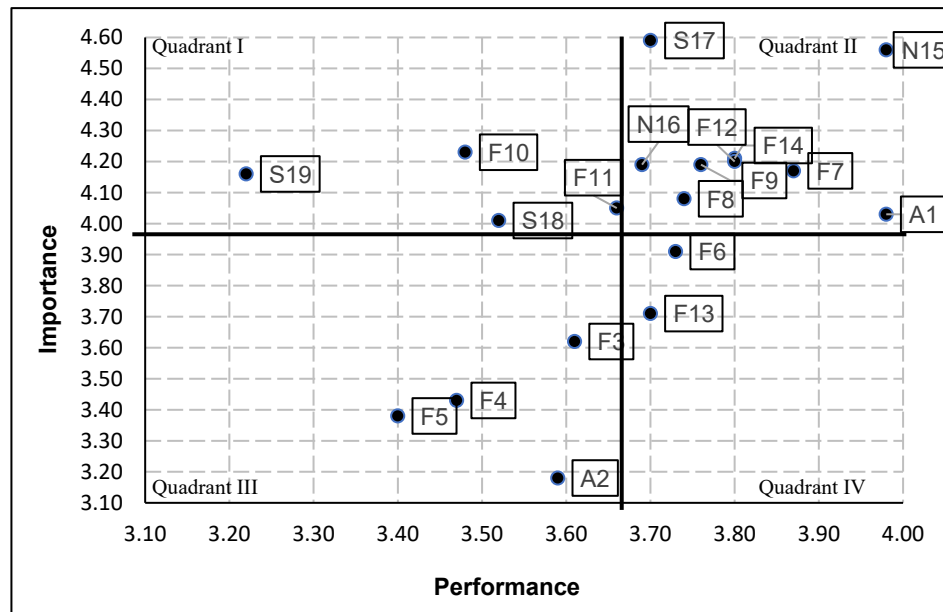


Figure 3: Cartesian Diagram IPA of park's physical attributes at Taman Aman Park
 Source: Author's calculation (2024)

Based on the IPA results (Figure 3), nineteen physical attributes of the park are categorized into four Quadrants.

Quadrant I (Concentrate Here): This quadrant is an indicator recognized as very important by users, yet its performance level is relatively low. The indicators encompass lavatory F10, signage F11, lighting S18, and CCTV S19, all of which face various maintenance issues that need to be addressed immediately. Therefore, enhancement strategies will focus on these indicators to improve user experience and ensure sustainable park management.

Quadrant II (Keep Up the Good Work): This quadrant contains indicators that park users consider highly important and perform well, including parking condition A1, playground F7, reflexology path F8, pathway or jogging track F9, rubbish bin F12, bench and table F14, vegetation N15, and lake N16. Maintaining these indicators through regular inspection, cleaning, and enhancement is crucial to upholding their status as key attractions and enhancing the park's overall appeal.

Quadrant III (Low Priority): This quadrant shows indicators that are considered of low importance and performance by park users, including gateway A2,

basketball court F3, takraw court F4, and skatepark F5. Indirectly means that park users do not prioritize these indicators. As these indicators are in Quadrant III, no improvement measures are necessary. However, ongoing monitoring and maintenance are essential to ensure that the overall quality of the park's physical attributes meets user satisfaction.

Quadrant IV (Possible Overkill): This quadrant shows that indicators such as outdoor fitness gyms F6 and gazebos F13 are perceived as low importance by park users, even though they are of high performance in terms of quality and functionality. This discrepancy indicates a possible misunderstanding between users' expectations, the actual usefulness of these indicators, and the prioritization of other park indicators by users. Even though they are perceived as of low importance, they still contribute to the overall park experience and should be maintained at a good standard to ensure park user satisfaction.

Table 8: Recommendations for improving the physical attributes of Taman Alam Park

Quadrant	Independent variable	Indicator/ park's physical attribute	Existing condition	Recommendation
Quadrant I (Concentrate Here)	Facilities and amenities	Lavatory	• Plumbing problems occur, such as pipe leaks, low water pressure, and slow drainage due to the valve not being repaired • Clogged toilets and drains • The lavatory floor is slippery/dirty, with leakage in the ceiling and roof damage	• Improved lavatory facilities maintenance to address all pertinent issues. • Implemented better management practices through regular inspections. • Promote sustainable lavatory practices by incorporating water-efficient features such as dual-flush toilets and sensor-based water faucets to reduce water usage.
		Signage	• Lack of signage at the entrances/exits. • Many signs are damaged, with unclear and rusty writing. They appear dirty or mossy and are not well-maintained.	• Added signage in areas where there is currently none to reduce users' confusion, improve safety, and enhance the park's image. • Replaced the regularly maintained signage to keep it clean, in good condition, and legible. This includes cleaning, minor repairs, repainting, and replacement if necessary. • Designed accessible and inclusive signage with braille/pictograms, to ensure that all users, including those with disabilities, can navigate the park independently and safely.

Faridatul Akma Ab Latif, Muhammad Haziq Hanizan, Mohamed Ikhwan Nasir Mohamed Anuar, Amalina Mohd Fauzi, Salina Mohamed Ali
Evaluation Of Satisfaction Level Towards Urban Parks Physical Attributes in Taman Aman Park, Petaling Jaya, Selangor, Malaysia

Quadrant	Independent variable	Indicator/ park's physical attribute	Existing condition	Recommendation
	Safety	Lighting	- Numerous lights sustained damage. - Dim lighting at night with an insufficient number of lights poses a safety and security threat to park users.	- Repairs/replacements of the damaged lights should be done as soon as possible. - Additional lighting is placed along pathways and parking areas to ensure safety and security for users during nighttime hours. - Implement a regular maintenance schedule to ensure existing lights are properly maintained and functional. - Upgrade the lighting with an outdoor solar lighting system to contribute to environmental stewardship and community well-being.
		CCTV	Several CCTVs are not functioning properly.	- Replaced damaged and outdated CCTVs with the latest generation models, higher resolution, larger storage, and equipped with AI analysis to improve surveillance capabilities in the park. - Implement a regular maintenance schedule to ensure all CCTVs are in optimal working condition.

Source: Author's analysis (2024)

CONCLUSION

The evaluation of user satisfaction with the physical attributes of Taman Aman Park was conducted based on four independent variables: accessibility, facilities and amenities, natural elements, and safety. The analysis revealed that the overall user satisfaction level towards the urban park attributes in Taman Aman Park is categorized as "fair," with an average satisfaction level of 92%. Attributes such as parking conditions, playgrounds, reflexology paths, pathways or jogging tracks, rubbish bins, benches and tables, vegetation, and lakes are considered important and perform well. These attributes were identified as key strengths under Quadrant II, serving as the primary attractions to park users in the future. Conversely, park physical attributes like lavatories, signage, lighting, and CCTV- despite being regarded as important-exhibit low performance and are in Quadrant I. Therefore, to achieve a "very satisfaction" level from park users, the park's physical attributes in Quadrant 1 should be prioritized for improvement efforts.

A useful comparison can be drawn with the Titiwangsa Lake Gardens in Kuala Lumpur. A study conducted on the level of liveability assessments of park spaces found that the park achieved strong levels of user satisfaction. Most

of the park's physical attributes enhance user satisfaction, particularly comfort and visual aesthetics, which are the primary influencing factors (Iman 2021). In contrast, for Taman Aman Park to raise its satisfaction level from “fair” to “very satisfied,” priority should be given to improving lavatories, signage, lighting, and CCTV, which will enhance functionality, safety, comfort, and enjoyment. These findings highlight the value of using successful models, such as Titiwangsa Lake Gardens, as benchmarks in future comparative studies of Malaysian urban parks. Such an approach will provide valuable insights into best practices for outdoor recreational space design and management, guiding urban planners and policymakers in fostering sustainable, inclusive, and user-centered urban park development.

ACKNOWLEDGEMENT

The author gratefully acknowledges Universiti Teknologi MARA (UiTM) for permitting research facilities, data, advice, guidance, and support for this study.

ETHICAL STATEMENT

This research was approved by the UiTM Research Ethics Committee (REC) Guidelines (Revision 2025). All participants provided informed consent before starting the interviews, including understanding data confidentiality, anonymity, and the use of information for research publication purposes.

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Received: 2nd May 2025. Accepted: 10th September 2025