

UNDERSTANDING THE MULTI-FUNCTIONAL NATURE OF PUBLIC OPEN SPACE, A CASE STUDY AT KLCC PARK, KUALA LUMPUR, MALAYSIA

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ABSTRACT

Public open spaces are essential in urban areas, performing various functions and services that benefit individuals and communities. This paper examines the multi-functionality of his KLCC Park public open space in Kuala Lumpur, Malaysia. KLCC Park is a vast, well-kept park in the heart of Kuala Lumpur. Recreational facilities within the park include playgrounds, jogging trails, and lakes. Picnics, family gatherings and cultural activities are also common here. This study aims to delve into the multi-functional nature of public open spaces and elucidate the importance of nature in creating a harmonious relationship between humans and their environment. The main objective is to investigate the relationship between public open space and the multi-functionality of nature; the second is to comprehend nature's significance in public open spaces and its impact on human well-being; and finally, the third objective is to suggest the incorporation of nature elements in the design and planning of public open spaces to optimise their functionality and enhancing user's overall satisfaction. The research results will help develop a more evidence-based urban planning and design approach. The article argues that public spaces should be constructed and managed to benefit individuals and communities maximum. Additionally, this contribution emphasises the importance of incorporating natural elements into the design and planning of public open spaces.

Keywords: Public Open Spaces, Multi-functionality, Nature, KLCC Park, Health

1.0 INTRODUCTION

Public open spaces play a pivotal role in urban environments, offering a range of functions and services that contribute to the well-being of individuals and communities. Among these spaces, KLCC Park in Kuala Lumpur, Malaysia, is a significant example of a public open space that has become an integral part of the city's landscape. Green open space is vital for the city because it functions as an ecological balancer and a space provider for the community to socialise (Caesarina & Saubari, 2019). This paper aims to delve into the multifunctional nature of public open spaces, explicitly focusing on KLCC Park, and elucidate the importance of nature in creating a harmonious relationship between humans and their environment.

Understanding the value and preferences urban residents have for urban greenspace attributes can contribute to planning decisions in urban landscapes to benefit both people and the environment (Roberts et al., 2022). KLCC Park, situated in the heart of Kuala Lumpur,

holds a rich heritage and cultural significance for the local community. By exploring the historical evolution of public open spaces, this paper will shed light on how these spaces have evolved and how KLCC Park, as a contemporary example, embraces and reflects the city's cultural identity.

Urban planners, designers, and policymakers must identify and understand the relationships between public open spaces and their multifunctionality. Research demonstrates a positive relationship between access to nature and natural processes of human health and well-being, as well as the role of nature in restoring cognitive processes in people (Jimenez, 2021). Recognising the diverse roles of these spaces, such as recreational, social, environmental, and cultural functions, allows for developing strategies that optimise the potential of public open spaces. By examining KLCC Park's multifunctional nature, this paper aims to uncover the intricate web of connections between various aspects and attributes of the park, providing valuable insights for the design and management of similar spaces.

The main objectives are: 1) to investigate the relationship between public open spaces, notably KLCC Park, and the multifunctionality of nature. These public open spaces support human nature, urban sustainability, environmental quality, health, and well-being (Anastasiou & Manika, 2020; Marques et al., 2020). By analysing the park's design, layout, and ecological features, the paper seeks to explore how the integration of nature contributes to the overall functioning and usability of the space. Understanding this relationship will aid in fostering sustainable urban development, enhancing the quality of life, and promoting the well-being of individuals and communities.

The second objective of this paper is 2) to comprehend nature's significance in public open spaces and its impact on human well-being. By analysing the experiences and perceptions of park visitors, this study seeks to uncover the role of nature in creating a positive and meaningful experience within KLCC Park. Connection to nature, such as that provided by urban greenspaces, directly impacts human well-being (Grilli et al., 2020), and an absence of nature within urban areas reduces access to these services (Apfelbeck et al., 2020). The findings will highlight the final objective of 3) suggestions in incorporating natural elements in the design and planning of public open spaces to optimise their functionality and enhance users' overall satisfaction.

A comprehensive research methodology will be employed to achieve the objectives:

1. Simple observational techniques will be utilised to study the patterns of park usage, human-nature interactions, and spatial arrangements within KLCC Park.
2. A survey will be conducted among park visitors to collect data regarding their experiences, preferences, and perceptions of the park's multifunctional nature.
3. Simple interviews were conducted with park users to gain insights into creating a harmonious relationship between nature and public open spaces.

Only survey data will be analysed using the Statistical Package for the Social Sciences (SPSS) software. This statistical analysis will facilitate the identification of patterns, trends, and correlations within the data, providing a quantitative understanding of KLCC Park's multifunctional nature. The results will contribute to a more evidence-based approach to urban planning and design, ensuring the public's openness.

2.0 LITERATURE REVIEW

Public open spaces are essential components of urban landscapes, serving a variety of tasks and providing several benefits to the community. Understanding the multifunctionality of public open spaces is becoming increasingly crucial for effective urban planning, community participation, and improving inhabitants' general well-being as cities get denser and more complex. This literature study investigates the multifunctionality of public open spaces, mainly focusing on KLCC Park in Kuala Lumpur. The evaluation will look at urban planning, community participation, recreational activities, social interaction, health and well-being, green infrastructure, biodiversity, and the impact of the COVID-19 epidemic on contemporary trends in public open spaces.

2.1 Benefits of Multifunctionality in Public Open Spaces

The multifunctionality of public open spaces delivers several benefits to urban communities that enhance the quality of urban life and promote sustainable development. According to Anastasiou and Manika (2020) and Apfelbeck et al. (2020), among the main advantages are that social interaction and community engagement serve as venues for cultural events, social activities, and community participation, essential for building social cohesion and fostering a sense of belonging among urban residents. KLCC Park offers ample opportunities for recreation, relaxation, and social interaction, with a significant proportion of respondents acknowledging its role in enhancing community life. Similarly, multifunctional spaces contribute to environmental sustainability by incorporating green infrastructure, promoting biodiversity, and strengthening the urban ecosystem. Exposure to nature in multifunctional public spaces has been linked to improved mental health and well-being, resilience, and adaptability. KLCC Park, for example, integrates natural elements such as greenery and water features, which not only improve the aesthetic appeal and create a calming and restorative environment that helps reduce stress but also support environmental sustainability and biodiversity and can adapt to changing needs during the pandemic times (Caesarina & Saubari, 2019; Grilli et al., 2020; Jimenez, 2021; Labuz, 2019; Li et al., 2020; Wang & Banzhaf, 2019).

2.2 Urban Planning and Design

The concepts of urban open space planning and design give a foundation for developing dynamic and functioning public areas. Understanding the connection between public open spaces and urban form is critical for influencing the cityscape. According to Labuz (2019), sustainable urban growth, focusing on retaining a coherent structure of natural features, is a crucial guideline in their growth strategy. Multifunctionality approaches in urban design emphasise integrating various activities and facilities within public areas. Understanding the value and preferences of urban residents for urban greenspace qualities can thus contribute to urban landscape planning decisions that benefit both people and the environment. Multifunctional approaches in urban design, such as those employed in the development of KLCC Park in Kuala Lumpur, focus on combining various activities and amenities within public spaces, thereby enhancing their usability and appeal to a broad range of users (Roberts et al., 2022).

2.3 Community Participation and Social Interaction

Public open spaces are essential in fostering social cohesiveness and community engagement. Urban public open spaces also allow individuals to walk outside and interact with nature and

others in ways that would not be possible in other settings (Jennings & Bamkole, 2019). Small distances from permanent residences may make the areas mentioned above more accessible to the elderly, crippled, or parents with children (Labuz, 2019). Understanding social behaviour and dynamics in public open spaces can help designers make design decisions that promote beneficial interactions. As more individuals spend the bulk of their time indoors and suffer from "nature deficits," limiting access to urban public open spaces may reduce opportunities for social engagement and the possibility of social cohesiveness (Jennings & Bamkole, 2019).

2.4 Environmental Sustainability and Green Infrastructure

The ecological benefits of public open spaces contribute to environmental sustainability. They promote urban ecosystems and biodiversity by acting as green infrastructure. Strategies such as incorporating natural plants, using sustainable materials, and installing efficient water management systems are examples of sustainable design concepts for public open spaces (Wang et al., 2019). Biodiversity (for example, birds) may also play a role. According to a recent meta-analysis, tree canopy is more beneficial to biodiversity than open grasslands (Prevedello et al., 2018). Climate resilience and adaptation methods are critical factors for ensuring open space sustainability in the face of climate change (Jennings & Bamkole, 2019).

2.5 Health and Well-being

According to the World Health Organization's Mental Health Action Plan 2013-2020 preface by Margaret Chan, MD, "good mental health enables people to realise their potential, cope with the normal stresses of life, work productively, and contribute to their communities." According to research, exposure to outdoor greenery near people's houses is linked to and plays a significant influence on their mental health and well-being (van den Bosch & Meyer-Lindenberg, 2019). Some research in Australia, for example, reveals that humans prefer higher density and moderate vegetation complexity, indicative of tree canopy over relatively simple open landscapes that are more equivalent to extensive tracts of grass (Harris et al., 2018). Design considerations such as walkability, provision of recreational amenities, and incorporation of natural elements contribute to improving health outcomes.

2.6 Economic and Cultural Perspectives

Individuals' social and economic profiles and connections created from previous cultural surroundings and situations influence their appreciation of urban open spaces (Diener et al., 2018). They draw tourists, help local businesses, and raise property values. Furthermore, increased "consumption of public goods" reflects people's desire for public amenities (Lu, 2020). Furthermore, open areas have cultural significance and contribute to a place's character. Cultural integration can be accomplished in public open spaces through creative installations, cultural events, and programmes that represent the local heritage.

2.7 Policy and Governance

Policy frameworks and norms are essential for public open space planning, management, and upkeep. Local governments ensure open spaces' availability and equal distribution. By 2020, Malaysia's National Urbanisation Policy (NUP) has set a standard to achieve two hectares of green areas for every 1000 people (Wan et al., 2023). Many locations in poorer neighbourhoods have no street trees at all. As a result, inhabitants in poorer areas are more dissatisfied with the inadequate provision and quality of public green infrastructure than

those in more affluent areas (Shackleton et al., 2018). Long-term open space sustainability requires funding approaches and policies. In China, Li et al. (2020) investigated patterns across 289 cities and discovered a positive relationship between the availability of public green infrastructure and per capita GDP. Considering more significant socioeconomic development problems, it is frequently difficult for the government to dedicate cash to urban greening efforts. However, as mentioned in the Sustainable Development Goals, there is enough data to show that the ecosystem services provided by green infrastructure are critical for socioeconomic development and overall human well-being (Venter et al., 2020).

2.8 Current Trend in Public Open Spaces: COVID-19

The epidemic of COVID-19 has had an impact on the design and use of public open spaces. Parks and public open spaces are gaining attention again because of their significant and irreplaceable roles, such as providing places for healthful outdoor leisure (Rice & Pan, 2020; Samuelsson et al., 2020). Throughout the epidemic, public open spaces have been crucial for maintaining physical and mental well-being, underlining the need for adaptable and resilient designs that can meet changing needs while also assuring user safety. Parks provide essential environmental services that alleviate some of the stress associated with COVID-19 while also ensuring humans' emotional and physical wellness.

With an emphasis on the attributes of the multipurpose public areas in KLCC Park. By examining the areas of urban planning and design, social interactions and community engagement, environmental sustainability and green infrastructure, health and well-being, economic and cultural perspectives, policy and governance, and the effect of the COVID-19 pandemic, this review offers an in-depth understanding of the factors that shape public open spaces. Combining knowledge from several fields contributes to developing impermeable standards and methods for building vibrant, long-lasting public open spaces that meet the requirements of individuals and communities.

3.0 METHODOLOGY

This section describes the approach to exploring the multifunctional character of public open spaces at Kuala Lumpur's KLCC Park. The study collects the data using a combination of surveys, simple observations, and interviews. Park users who agreed to be interviewed and surveyed were those approached at the site. SPSS analysis and descriptive statistics are used. This technique thoroughly examines the characteristics, usage patterns, and spatial distribution of public open spaces in KLCC Park.

3.1 Survey

A structured survey was distributed to park visitors to gather information about their perspectives and experiences with KLCC Park. The survey collected data on the park's functions, such as usage patterns, amenities and facilities, cultural events, and environmental issues (as presented in Table 1 below). Question topics will include park utilisation patterns, amenities used, visitor satisfaction, and suggestions for improvement. The survey will use closed-ended and open-ended questions to collect quantitative and qualitative data.

Table 1: List of survey questions

Description	Items	Variables
Section A	Multi-functionality and Experiences	<p>KLCC Park have a various functions or purposes for the communities?</p> <p>How often you participated in any cultural events or social activities within the park?</p> <p>KLCC Park does provides opportunities for recreation, relaxation, and social interaction.</p>
Section B	Urban Planning and Design	<p>The design elements of KLCC Park, such as greenery, water features, and seating areas, enhance its aesthetic appeal.</p> <p>The layout and arrangement of amenities within KLCC Park promote ease of navigation and accessibility.</p> <p>KLCC Park effectively integrates diverse activities and functions within its design.</p>
Section C	Community Participation	<p>KLCC Park provides opportunities for community participation and social interaction.</p> <p>The availability of platforms for community feedback and engagement in shaping the future of KLCC Park enhances its overall quality and relevance.</p> <p>I believe that community involvement in the planning and design of public open spaces leads to better outcomes.</p>
Section D	Environmental Sustainability and Green Infrastructure	<p>The presence of greenery and vegetation in KLCC Park enhances its environmental sustainability.</p> <p>KLCC Park contributes to the overall urban ecosystem and supports biodiversity.</p> <p>I perceive KLCC Park as a sustainable and environmentally friendly public space.</p>
Section E	Health and Well-being	<p>Visiting KLCC Park improves my overall well-being and reduces stress.</p> <p>KLCC Park provides opportunities for physical activity and active living.</p> <p>The natural elements within KLCC Park contribute to a calming and restorative environment.</p>
Section F	Economic and Cultural Perspectives	<p>KLCC Park has economic value and contributes to the local economy.</p> <p>The cultural events and activities held in KLCC Park enhance its cultural significance and identity.</p> <p>KLCC Park attracts tourists and promotes cultural exchange.</p>
Section G	Policy and Governance	<p>I am aware of the policies and guidelines governing the planning and management of public open spaces in Kuala Lumpur.</p> <p>Local government authorities effectively manage and maintain KLCC Park.</p> <p>KLCC Park's design and management align with the policies and regulations related to public open spaces.</p>
Section H	Current Trend in Public Open Spaces: COVID-19	<p>KLCC Park provides a safe outdoor environment for physical distancing during the COVID-19 pandemic.</p> <p>The COVID-19 pandemic has increased my appreciation for the availability of public open spaces like KLCC Park.</p> <p>KLCC Park has adapted well to the changing needs and requirements during the COVID-19 pandemic.</p>
Section I	Demographic Information	<p>Age</p> <p>Gender</p> <p>Occupation</p> <p>Residence</p>

The collected data will be analysed using SPSS software, employing descriptive statistics and spatial analysis techniques. Descriptive statistics will be used to calculate measures such as means, frequencies, and percentages to describe the characteristics of public open spaces within KLCC Park. This analysis will include park size, amenities, and usage patterns. Spatial analysis using GIS will enable the examination of spatial patterns, including the distribution of public open spaces within the park, their accessibility, and proximity to other amenities. Mapping and spatial visualisation techniques will illustrate these patterns and relationships.

4.0 RESULTS

This study's participants were park visitors or people who had visited KLCC Park. It included 46 park users from the study region (as presented in Table 2 below).

Table 2: Results of Demographic Section

Description	Variables	KLCC PARK N (%)
Age	13-17 years old	5(10.9)
	18-29 years old	22(47.8)
	30-45 years old	15(32.6)
	46-59 years old	3(6.5)
	> 60 years old	1(2.2)
Gender	Male	28(60.9)
	Female	18(39.1)
Occupation	Students	19(41.3)
	Office workers	13(28.3)
	Industrial workers	11(23.9)
	Institutional workers	1(2.2)
	None	2(4.3)
Residence	Johor Bahru	1(2.2)
	Kuala Lumpur	20(43.5)
	Pahang	4(8.7)
	Selangor	21(45.7)

The demographic data analysis provides valuable insights into the characteristics of respondents who participated in the study on the multifunctional nature of Suria KLCC Park in Kuala Lumpur. Most participants were between 18 and 29, with a slightly higher representation of men. Students were the most numerous occupational groups, followed by office and industrial workers. Kuala Lumpur and Selangor accounted for most of the respondents. The diverse representation of age, gender, occupation, and place of residence ensures a thorough understanding of public perceptions and utilisation of KLCC Park, laying the groundwork for interpreting research findings and drawing meaningful conclusions about its multi-functional aspects.

According to Table 3, many respondents (36 out of 46) believed that KLCC Park serves a range of community roles or goals. Most participants also agreed that the park allows recreation, relaxation, and social connection. However, fewer responders (7 out of 46) disagreed with the park's functionality. 69.6% of respondents agreed that KLCC Park is a recreation, relaxation, and social contact location. This implies that the park is mainly used for passive activities like walking, sitting, and people-watching.

Table 3: Results of Multi-functionality and Experiences Section

Description	Variables	Strongly Disagree n (%)	Disagree n (%)	Neutral n (%)	Agree n (%)	Strongly Agree n (%)
Section A	KLCC Park have a various functions or purposes for the communities?	4(8.7)	3(6.5)	3(6.5)	10(21.7)	26(56.5)
	How often you participated in any cultural events or social activities within the park?	3(6.5)	5(10.9)	6(13)	9(19.6)	23(50)
	KLCC Park does provides opportunities for recreation, relaxation, and social interaction.	2(4.3)	3(6.5)	3(6.5)	11(23.9)	27(58.7)

Overall, the study's findings indicate that KLCC Park is a well-liked and well-utilized park that offers a variety of options for recreation, relaxation, and social contact. The Park, on the other hand, might do more to promote cultural events and social activities.

Table 4: Results of Urban Planning and Design Section

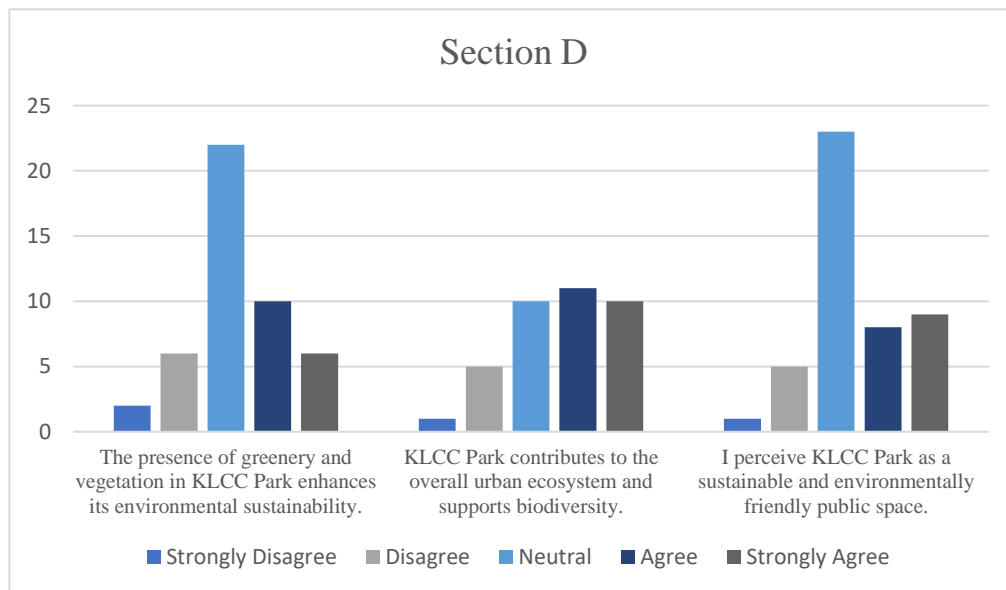
Description	Variables	Strongly Disagree n (%)	Disagree n (%)	Neutral n (%)	Agree n (%)	Strongly Agree n (%)
Section B	The design elements of KLCC Park, such as greenery, water features, and seating areas, enhance its aesthetic appeal.	3 (6.5)	2 (4.3)	0 (0)	23 (50)	18 (39.1)
	The layout and arrangement of amenities within KLCC Park promote ease of navigation and accessibility.	2 (4.3)	3 (6.5)	4 (8.7)	20 (43.5)	17 (37)
	KLCC Park effectively integrates diverse activities and functions within its design.	2 (4.3)	3 (6.5)	4 (8.7)	21 (45.7)	16 (34.8)

Tables 4 and 5 reveal that many respondents supported all three statements. Only 10.8% of respondents disagreed with the first statement, while 89.1% strongly agreed. 8.7% of respondents remained neutral with the second statement, compared to 82.5% who approved. 10.8% of respondents disagreed or strongly disagreed with the third statement that the design incorporates various activities and functions, compared to 80.5% who agreed or strongly agreed. It implies that respondents were largely pleased with KLCC Park's urban architecture and planning. They thought the park's design and characteristics were attractive, simple, and ideal for various activities.

Table 5: Results of the Community Participation Section

Description	Variables	Strongly Disagree n (%)	Disagree n (%)	Neutral n (%)	Agree N (%)	Strongly Agree n (%)
Section C	KLCC Park provides opportunities for community participation and social interaction.	2 (4.3)	4 (8.7)	6 (13)	24 (52.2)	10 (21.7)
	The availability of platforms for community feedback and engagement in shaping the future of KLCC Park enhances its overall quality and relevance.	3 (6.5)	2 (4.3)	8 (17.4)	26 (56.5)	7 (15.2)
	I believe that community involvement in the planning and design of public open spaces leads to better outcomes.	2 (4.3)	2 (4.3)	9 (19.6)	26 (56.5)	7 (15.2)

The survey results provide information about community engagement and social interaction in KLCC Park. While most respondents (73.9%) agreed that the park offers possibilities for community interaction, a significant number (13%) expressed indifferent or unfavourable views (4.3% disagreed, 8.7% strongly disagreed). Similarly, most participants believed that community feedback systems had a

**Figure 1: Results of Environmental Sustainability and Green Infrastructure Section**

beneficial impact on the park's quality and relevance (56.5% agreed, 15.2% strongly agreed). However, 23.9% remained neutral, while the remainder disagreed.

Furthermore, while the majority (56.5% agreed, 15.2% strongly agreed) favoured community involvement in public open space planning, 23.9% indicated ambiguity or disagreement. Authorities might focus on improving communication, giving more apparent feedback

opportunities, and highlighting the good outcomes of community involvement in park planning and design to strengthen community engagement and address concerns.

According to the study on the environmental sustainability of KLCC Park (as presented in Figure 1 above), most respondents strongly agreed (47.8%) or (21.7%) that the presence of greenery and vegetation improves the park's environmental sustainability. However, some respondents (17.3%) were neutral or disagreed (4.3% and 13%, respectively). When asked about the park's impact on biodiversity and the urban ecosystem, 23.9% agreed, 21.7% strongly agreed, and 10.9% disagreed. Regarding KLCC Park's perception as a sustainable and environmentally friendly location, 50% were neutral, 19.6% agreed, and 13% strongly agreed. These findings show that the park's beneficial environmental features are widely recognised, but more work is needed to raise public understanding and perception of its sustainability programmes.

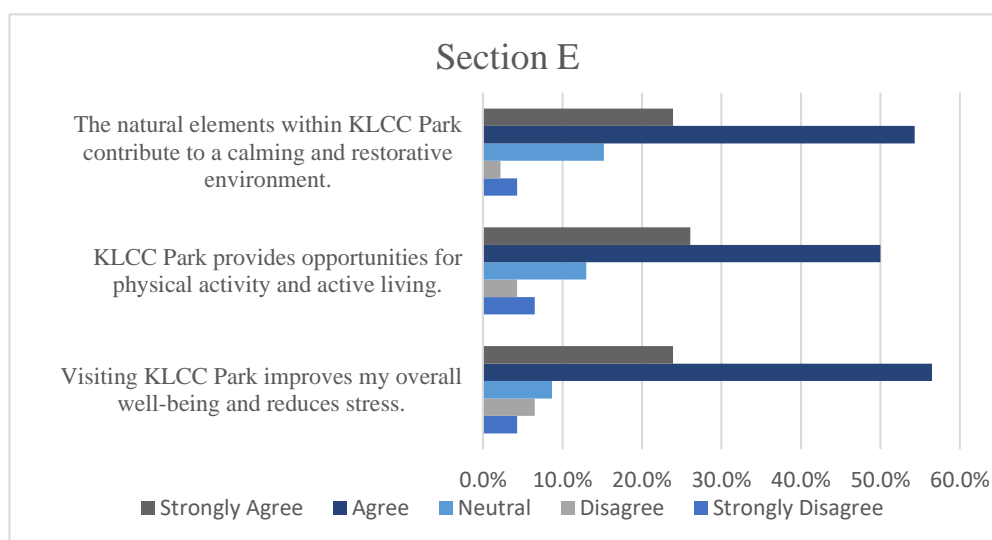


Figure 2: Results of the Health and Well-being Section

According to the study on the environmental sustainability of KLCC Park, most respondents strongly agreed (47.8%) or (21.7%) that the presence of greenery and vegetation improves the park's environmental sustainability. However, some respondents (17.3%) were neutral or disagreed (4.3% and 13%, respectively). When asked about the park's impact on biodiversity and the urban ecosystem, 23.9% agreed, 21.7% strongly agreed, and 10.9% disagreed. Regarding KLCC Park's perception as a sustainable and environmentally friendly location, 50% were neutral, 19.6% agreed, and 13% strongly agreed. These findings show that the park's beneficial environmental features are widely recognised. Still, more work is needed to raise public understanding and perception of its sustainability programmes, as presented in Figure 2 above.

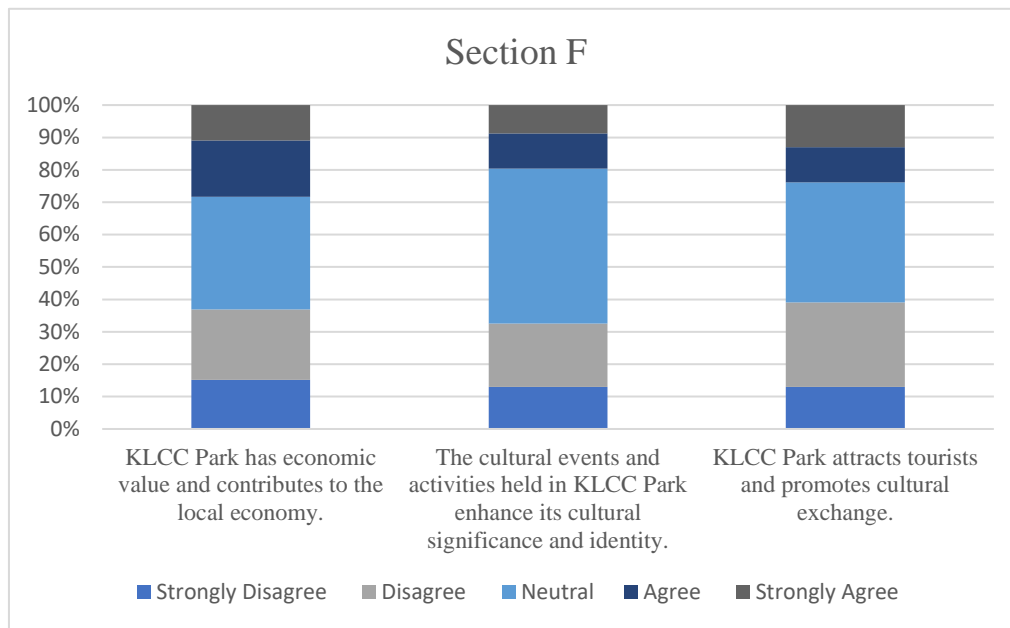


Figure 3: Results of Economic and Cultural Perspectives Section

The survey data on the economic, cultural, and tourism components of KLCC Park provides valuable insights into public perceptions (as presented in Figure 3 above). Concerning the park's economic importance and contribution to the local economy, 17.4% agreed, with 10.9% strongly agreeing. However, a sizable proportion of respondents (34.8%) expressed indifferent views, while 15.2% disagreed and 21.7% strongly disagreed with this assertion. Regarding the cultural events and activities held in KLCC Park, 10.9% agreed, and 8.7% strongly agreed, that they contribute to the park's cultural relevance and character. Meanwhile, 47.8% were undecided, 13% disagreed, and 19.6% strongly disagreed. Furthermore, in terms of attracting tourists and boosting cultural exchange, 10.9% agreed and 13% strongly agreed, whereas 37% were neutral, 13% disagreed, and 26.1% strongly opposed.

Table 6: Results of Policy and Governance Section

Description	Variables	Strongly Disagree n (%)	Disagree n (%)	Neutral n (%)	Agree n (%)	Strongly Agree n (%)
Section G	I am aware of the policies and guidelines governing the planning and management of public open spaces in Kuala Lumpur.	3 (6.5)	4 (8.7)	34 (73.9)	3 (6.5)	2 (4.3)
	Local government authorities effectively manage and maintain KLCC Park.	3 (6.5)	1 (2.2)	7 (15.2)	9 (19.6)	27 (58.7)
	KLCC Park's design and management align with the policies and regulations related to public open spaces.	3 (6.5)	4 (8.7)	35 (76.1)	3 (6.5)	1 (2.2)

Based on survey data on KLCC Park's policies, management, and compliance with regulations (see Table 6 above), most respondents (73.9%) needed clarification or were ambivalent about their awareness of the governing policies and the park's design and management compliance with rules (76.1%). Most respondents (58.7%) agreed that the local government effectively manages and maintains the park. However, some were doubtful (15.2%) or disagreed (2.2%). Efforts should be undertaken to raise public awareness and understanding of the park's policies to improve public perception. Furthermore, addressing management concerns and establishing apparent compliance with legislation will boost confidence in KLCC Park's governance and build public trust in its management.

Table 7: Results of Current Trend in Public Open Spaces: COVID-19 Section

Description	Variables	Strongly Disagree n (%)	Disagree n (%)	Neutral n (%)	Agree n (%)	Strongly Agree n (%)
Section H	KLCC Park provides a safe outdoor environment for physical distancing during the COVID-19 pandemic.	2(4.3)	1(2.2)	7(15.2)	9 (19.6)	27(58.7)
	The COVID-19 pandemic has increased my appreciation for the availability of public open spaces like KLCC Park.	2(4.3)	2(4.3)	6(13)	10 (21.7)	26(56.5)
	KLCC Park has adapted well to the changing needs and requirements during the COVID-19 pandemic.	2(4.3)	2(4.3)	7(15.2)	9 (19.6)	26(56.5)

According to survey data on KLCC Park's (as presented in Table 7 above) response to the COVID-19 pandemic, a sizable proportion of respondents (58.7%) strongly agreed, and 19.6% agreed that the park provides a safe outside area for physical separation during the pandemic. Meanwhile, a lesser fraction (2.2%) disagreed or was undecided (15.2%). Furthermore, the pandemic has increased appreciation for public open areas such as KLCC Park, with 56.5% strongly agreeing and 21.7% agreeing. Only 4.3% agreed or strongly agreed, with 13% remaining neutral. Regarding the park's ability to adapt throughout the epidemic, 56.5% strongly agreed, and 19.6% agreed. A smaller proportion (4.3%) disagreed or was undecided (15.2%). These data, as well as through observation, imply that throughout the epidemic, most respondents saw KLCC Park as a safe outdoor location for physical distance and that the crisis has increased their respect for such public spaces. Moreover, many respondents felt the park reacted well to shifting needs and requirements during these difficult times.

5.0 DISCUSSIONS

The study on the multifunctional nature of Kuala Lumpur's Suria KLCC Park provided valuable insights into public perceptions and usage of the park. The demographic data analysis revealed that a big part of the participants was between 18 and 29 years old, with men having a slightly higher representation. The most numerous occupational groups were students and office and industrial workers. The survey included participants from Kuala Lumpur and Selangor, representing a diverse range of ages, gender, occupation, and place of residence among a big part of the respondents. According to the study's findings, KLCC Park is well-liked

and well-utilised, with many respondents recognising its multifunctional roles, which include recreation, relaxation, and social connection. Multi-functionality approaches in urban design emphasise integrating various activities and facilities within public areas. Where the users and functions are filtered, divided, and isolated in public places, disturbing public life (Androulaki et al., 2020); some respondents, however, expressed concerns about its functionality, indicating potential areas for improvement. Urban public open spaces should allow and enhance the individual's choices to walk outside and interact with nature and others in ways that would not be possible in other settings (Labuz, 2019).

Through simple interviews and observations, respondents overwhelmingly praised the urban architecture and planning of KLCC Park, with the vast majority strongly agreeing that the design incorporated various activities and functions. The well-designed layout and features of the park contribute to its multi-functionality and appeal, catering to a wide range of user groups. According to Roberts et al. (2022), the value and preferences of urban residents for urban greenspace qualities can thus contribute to urban landscape planning decisions that benefit both people and the environment. Community engagement and social interaction in the park elicited conflicting responses, with many agreeing that the park facilitates community interaction and others expressing indifference or disagreement. Improving communication and feedback systems can increase community engagement and effectively address concerns. Respondents recognised the park's environmental sustainability and positive impact on biodiversity and the urban ecosystem. Climate resilience and adaptation methods are critical factors in ensuring the sustainability of open spaces in the face of climate change. (Jennings & Bamkole, 2019).

The survey data on economic, cultural, and touristic aspects revealed a range of responses. While some acknowledged the park's economic and cultural significance, others disagreed. Promotional efforts can be directed towards increasing the park's cultural significance, attracting tourists, and expanding its economic significance. According to Lu (2020), People's desire for public amenities is reflected in increased "consumption of public goods". The study also stressed the significance of park policies and management. Many respondents needed clarification or were ambivalent about their understanding of governing policies and their ability to comply with regulations. According to Kim and Song (2019), local governments are responsible for ensuring the availability of open spaces and equal distribution. Clear policy communication and improved management practices will instil confidence in the park's governance and foster public trust. The park's positive reaction to the COVID-19 pandemic was well received, emphasising its role as a safe outdoor space and its ability to adapt to changing needs during crises, such as the key and irreplaceable roles, such as providing places for healthful outdoor leisure (Geng et al., 2021; Rice & Pan, 2020; Samuelsson et al., 2020).

6.0 CONCLUSION

In conclusion, KLCC Park is undoubtedly a well-liked and well-utilised public open space with considerable potential for enhancing social, economic, and environmental sustainability. The study highlights the significance of community engagement, sustainability initiatives, and cultural promotion in optimising the park's multi-functionality and overall impact. As urban planners and policymakers, it is imperative to heed these findings and strive to create vibrant and inclusive public open spaces that cater to the diverse needs and preferences of the public, ensuring a harmonious relationship between humans and their urban environment. Based on the key findings discussed in this study, here are some specific recommendations that could be implemented to address the identified issues and enhance the effectiveness of public open

spaces in Malaysia. The first is to implement targeted urban greening initiatives in underserved areas, particularly in poorer neighbourhoods that lack adequate public open spaces. Local governments should prioritise these areas for new green infrastructure projects, such as parks, street trees, and community gardens.

Additionally, creating incentives for private sector investment in green spaces within these neighbourhoods could help bridge the gap in accessibility and improve the overall quality of life for residents. The second is establishing a dedicated funding mechanism for maintaining and expanding public open spaces. This could include setting up a "Green Infrastructure Fund" financed through public-private partnerships, municipal budgets, and community contributions. The fund should be specifically earmarked to keep existing parks, develop new spaces, and integrate sustainable practices such as rainwater harvesting and native plant landscaping. Third, to strengthen governance frameworks by fostering collaboration between different levels of government, non-governmental organisations (NGOs), and community groups. This can be achieved by creating local "Urban Green Councils" that unite stakeholders to oversee public open spaces' planning, implementation, and management. These councils should be empowered to make decisions that reflect the community's needs while adhering to sustainability principles.

Next, encourage greater community involvement in planning and maintaining public open spaces through participatory design processes and volunteer programs. Local governments could organise workshops, surveys, and public meetings to gather input from residents on the types of amenities and activities they would like to see in their public spaces. Additionally, establishing "Adopt-a-Park" programs could involve local businesses and residents in the stewardship of green spaces, fostering a sense of ownership and responsibility. Hence, a comprehensive monitoring and evaluation framework should be developed to assess the effectiveness of public open spaces in meeting community needs and sustainability goals. This could involve regular surveys to gather user feedback, environmental impact assessments to measure the ecological benefits of green spaces, and economic analysis to evaluate the contribution of these spaces to local economies. The data collected should inform policy adjustments and improve the design and management of public open spaces over time.

Finally, green infrastructure planning should be integrated into broader urban development strategies to ensure public open spaces are preserved and enhanced as cities grow. This could involve revising zoning laws to require a minimum percentage of green space in new developments, promoting green roofs and walls in urban areas, and connecting existing green spaces through green corridors that enhance biodiversity and provide continuous recreational opportunities. Considering these insights, we can shape a brighter, more sustainable future for KLCC Park and similar public spaces worldwide and ensure that public open spaces are more equitable, sustainable, and responsive to the needs of all urban residents.

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