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ENHANCING QUALITY OF LIFE: THE IMPACT OF PUBLIC PARKS AND OPEN SPACE ON THE PUBLIC PERCEPTION IN SUNGAI PETANI, KEDAH.

Zikril Ikhwan Zakrullah¹, Zulkefle Ayob²
*Zulkefle Ayob

^{1,2}Department of Built Environment and Technology
Universiti Teknologi MARA Perak Branch, Seri Iskandar Campus,
32610, Perak, Malaysia

¹zikrilzakrul@gmail.com , ²zulke191@uitm.edu.my

ABSTRACT

This study aims to determine the connection between public open spaces (POS) and quality of life (QOL) in Sungai Petani, Malaysia, among other urban environment issues in a growing country that affect the decline of POS quality and quantity. The challenges and context of the study include the growing urbanisation of metropolitan areas, which has sped up city growth and created a need for more green spaces. The study aims to determine how public parks and open spaces affect urban residents' quality of life by looking at aspects of their physical and mental health, social interactions, and sense of community while also identifying design elements and management strategies that increase the effectiveness of public parks and open spaces in enhancing QOL and fostering sustainable development. The degree of satisfaction with the POS and QOL components was used to obtain community perception using the 1–5 Likert scale. According to the study, the 'function' aspect has the most impact on how consumers perceive POS. The most important aspect influencing people's physical QOL is 'health'. Finding shows a considerable link between POS and physical QOL.

Keywords: Public Parks & Open Spaces, Quality of life, Liveable City, Sustainable Urban Planning, Urban Environment

1.0 INTRODUCTION

Public open space is a free place for people to be accessed. Everybody is free to do many various activities at the place. The physical elements and activities at public open space offer many benefits to quality of life: health, social interaction and economic value. With such significant benefits to quality of life, now public open space in urban space over the world has to face some problems, such as the increasing of urban environments changing and the decreasing of public open space's function. Typical with others Sungai Petani tends to increase in population due to its strategic location as an economic growth centre of state. As an illustration, all types of residential use including major housing schemes and informal housing such as village settlements has a total land use of 2758 ha and several new housing projects to be built-up.

Meanwhile, recreational use such as parks and other recreational amenity open spaces account for only 103 ha. The residential area is significantly larger in size compared to the recreational area, indicating a potential lack of sufficient recreational spaces relative to the residential needs. Among these challenges, the provision of public parks and open spaces in urban areas becomes crucial for supporting sustainable and liveable cities (Jiao et al., 2020; Niemelä et al., 2011).

Generally, there is no special concern in Northern Malaysian cities to enhance public open space quality among many other development programs priority. In this situation, it is interesting to study whether the 'poor' public open space relate to community quality of life. Is there any similarity or difference between 'quality standard' of public open space from the user's perception compare to those are in the developed country? How intensive do people use the public open space? What is the dominant factor of public open space that people perceived? Does public open space still relate to their quality of life?

Urban growth is one of the most critical types of constant change faced by cities worldwide. Most are experiencing an increase in population and the demand for infrastructure development. These increase in urban development preceded many changes in people's daily activities of the urban populace within an affected area (Mohd et al., Nur. 2017). According to Siu (2008), there are changes in how people in developing countries view their needs. In many Asian cities people more prefer the privatized public space – malls, theme parks, many other consumptive amusement centres – as a more comfortable public space. The study aims to investigate whether people still need public open space to maintain their quality of life. The study result can contribute to

formulating a suitable policy in urban planning, especially in public open space concerns, as a part of development in achieving quality of life for urban people.

2.0 LITERATURE REVIEW

Public parks and open spaces are vital in developing urban areas, providing green spaces for recreation, community activities and environmental sustainability. In recent years, research on the significance of public parks and open spaces in developing areas has increased, particularly in rapid urbanisation and population growth. Several key themes in this literature need to be addressed regarding the importance of having a public park and open spaces in developing urban areas. These themes provide a comprehensive understanding of public parks various aspects and implication in urban development.

2.1 Public Parks and Open Space and Quality of Life

The urban quality of life is influenced by the interaction between individuals and the urban environment (Das, 2008). Pfeiffer and Cloutier (2016) highlight the importance of visible and accessible green spaces in urban neighbourhoods, as they can reduce mental fatigue and facilitate attention restoration, ultimately contributing to life satisfaction. Xie (2020) suggests that urban public open spaces (POS) provide opportunities for outdoor activities and can reduce health issues, thus improving life satisfaction. Therefore, the satisfaction level with public open spaces can serve as an indicator of satisfaction with the urban environment, subsequently affecting people's quality of life.

The availability and adequacy of natural amenities, particularly visible and accessible green spaces, are considered crucial aspects of the urban built environment that shape residents' life satisfaction (Guo et al., 2021). Exposure to urban green spaces provides health benefits through various biopsychological pathways (Markavych et al., 2017), which, in turn, can contribute positively to life satisfaction. Urban green spaces serve as accessible and attractive venues that encourage and enable various physical activities, aiding in the prevention and management of health conditions such as coronary heart disease, diabetes, adiposity, and mental health issues (Dadvand et al., 2016). Lastly, contact with green spaces directly improves mental health by promoting cognitive and emotional restoration and attention restoration (Van den Berg, Jorgensen, & Wilson, 2014).

2.2 Enhancement of Social Interaction

The design of outdoor spaces plays a significant role in promoting social interaction and community cohesion (Uslu, 2010). Urban greenspaces, such as parks, provide settings for contact with neighbors, contributing to community attachment and social cohesion (Jennings & Bamkole, 2019). Parks not only allow people to connect with nature but also facilitate social and cultural communication (Kara, 2011).

Park managers often face limitations in managing vegetation and addressing visitor behaviors (Palliwoda, 2017). Urban recreational areas experience more pressure than rural areas due to year-round usage, compact space, pollution concerns, and high demand from growing populations (Chan et al., 2015). The concept of co-creation, involving citizens and stakeholders in the planning and maintenance of green areas, has gained interest (He et al., 2021). Previous studies have explored visitor experiences in urban parks and provided management strategies and planning recommendations (Morzillo et al., 2016; Church, 2018).

By effectively managing park infrastructure, maintenance, design, and vegetation, park managers can establish strong social connections among stakeholders and communities, while also maintaining ecological function and quality (Morzillo et al., 2016; Church, 2018).

2.3 Public Parks and Open Spaces as Roles in Green Infrastructure

Urban green spaces, such as public parks and open spaces, provide a range of benefits to urban residents. These spaces improve physical and mental health, promote social interaction and cohesion, and mitigate environmental issues such as air pollution and the urban heat island effect (Soga et al., 2021). Urban vegetation plays a direct role in reducing noise, removing air pollutants, and mitigating heat stress, thereby improving public health (Mouratidis, 2021). Studies have shown that the size and composition of parks affect their cooling benefits, with smaller parks and those with a combination of forest and wetland areas providing greater cooling benefits (C. Shu-Yi, 2023). Creating a system of urban green spaces is crucial for establishing urban carbon sinks, reducing carbon emissions, and mitigating the heat island effect.

At a broader level, natural land surfaces, such as green spaces and bodies of water, have lower surface temperatures compared to built-up land (K. Li, 2002). The proportion of green patches in the landscape is negatively correlated with land surface temperature (LST) (Z. Cai, 2021). Increasing the area of urban green patches effectively reduces surface temperatures (B. Li,

2018). At a more localized level, the configuration and layout of urban ecological and construction spaces influence the distribution of the heat island effect (H. Du, 2017). Factors such as the ratio of park perimeter to area, vegetation coverage, and green area significantly impact the temperature within a park (Y. Shi, 2018). Making reasonable adjustments to the size, perimeter, and shape of urban green spaces can alleviate the heat island effect (S. Cheng, 2019).

2.4 Factors influencing the provision and use of public parks and open spaces in urban areas

According to Crompton (2005), potential homebuyers are willing to pay a premium for properties that offer easy access to parks and green spaces. Lutzenhiser and Netusil (2001) found that natural park areas have a more positive property value impact than other park types. Additionally, Cho et al. (2009) discovered that larger parks have more significant value impacts than smaller parks. However, Anderson and West (2006) noted that in some instances, proximity to a park may have a negative effect on housing values. These findings of negative park proximity effects are primarily found in studies that examine potential variation across neighbourhoods.

Park "accessibility" refers to the presence of different barriers, which can be recognized at physical and psychological levels (Park, 2017). Higher accessibility to parks leads to higher park use (Zhang & Zhou, 2018). Feng et al. (2019) found that proximity to parks and other urban green spaces increases people's willingness to visit them. Accessibility should also include qualitative attributes such as convenience and transport availability (Larkin & Peters, 1983). Safety and opportunities for socialization are important factors positively related to the frequency of visits to urban parks (Leslie, Cerin & Kremer, 2010).

Kostrzewska (2017) conducted a study on the perception of design layout and effectiveness of public parks and open spaces in promoting physical activity in urban environments. The findings emphasized the importance of well-designed and aesthetically pleasing elements in park layouts to enhance attractiveness, usability, and enjoyment. Incorporating these elements can contribute to increased physical activity and well-being among individuals utilizing these spaces. Urban planners and designers should consider the incorporation of these elements to create effective and engaging public parks and open spaces, ultimately promoting a healthier and more active urban lifestyle.

In conclusion, the inclusion of public parks and open spaces in urban areas profoundly influences city residents' well-being. These spaces offer a multitude of benefits, such as improved physical and mental health, stronger social connections, and environmental sustainability. The accessibility and appropriateness of green areas are pivotal factors that shape residents' satisfaction and overall quality of life. Thoughtfully designed and well-maintained parks and open spaces play a crucial role in fostering social interaction, community cohesion, and physical activity. The initiative of involving citizens and stakeholders in the planning and upkeep of these spaces, known as co-creation, has emerged as an important approach to ensure effective management. Urban green spaces also contribute to environmental advantages, including temperature regulation, noise reduction, and carbon mitigation. Furthermore, the presence of green spaces positively impacts property values. The ease of access, safety, and convenience are significant factors influencing the frequency of visits to urban parks. Design elements that enhance appeal, usability, and enjoyment can encourage physical activity and promote a healthier and more active urban lifestyle. In summary, the provision and effective management of public parks and open spaces are essential for creating sustainable, liveable, and thriving urban environments.

3.0 METHODOLOGY

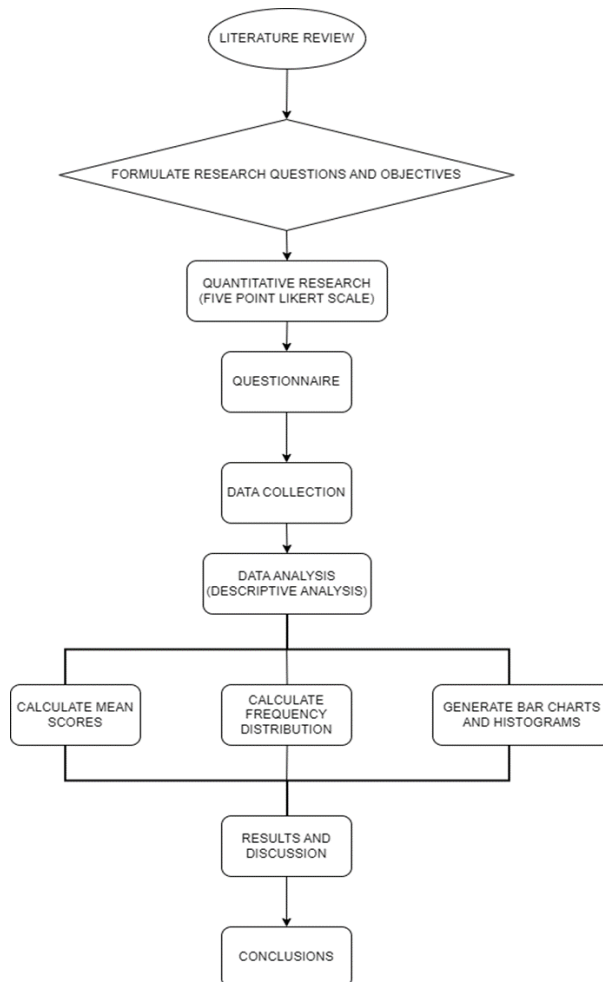
This research employed a quantitative method to learn the people's ideas and perceptions on the significance, advantages, accessibility, design, and effect of public parks and open spaces in urban settings. A quantitative technique was done by surveying the inhabitants of Sungai Petani Kedah in May 2023. The participants' opinions about public parks and open spaces were gathered using a Google form built around a survey. There were 63 responses, which were dispersed via Sungai Petani local Facebook groups and group conversations.

The questionnaire consists of several sections as follows: (1) the respondents' profile; (2) perception of public parks and open spaces in promoting a higher quality of life in urban areas; (3) public parks and open spaces contribute to improved physical health and well-being; (4) open spaces enhance social interaction and community cohesion in urban neighbourhoods; (5) effectiveness of public parks and open spaces in mitigating environmental issues; (6) perception on provision and quality of public parks and open spaces vary across different neighbourhoods; (7) accessibility of open spaces and public parks; (8) roles of green infrastructure for ensuring availability of high-quality public parks and open spaces; (9) design features of public parks and

open spaces influence their usage and effectiveness; (10) importance of fairly distributing open spaces and public parks to combat health issues; (11) perception of involvement of citizens and stakeholders in planning.

Questionnaires utilising the Likert scale enable respondents to express their degree of agreement rather than requiring them to adopt a definitive stance and take a stand on a specific topic (Heo, C. 2022). Therefore, the measuring of the level of satisfaction with public open space used a five-point Likert scale ranging from "1" for strongly agree, "2" for agree, "3" for neutral, "4" for disagree and "5" strongly disagree. Using the mean value of the scale, "3" is considered to be the midpoint. Thus, any value above "3" is considered somewhat dissatisfied but of the lower level. Similarly, any value below "3" is considered satisfied but of a higher level. The investigation looks at several elements relating to public parks and open spaces in cities and how they affect people's quality of life. In order to improve the quality of life in urban areas by offering high-quality, open-access, and inclusive public parks and open spaces, the research aims to provide insights into these locations to guide urban planning and policy decisions. The analysis used descriptive statistical analysis. Identifying the dominant factors of public open space from people's perception used the central tendency test and factors analysis. Finally, the analysis of the relationship between the perception of public open space and quality of life.

Figure 1 below showcases the research methodology employed and the flow of processes involved.



4.0 RESULT & DISCUSSION

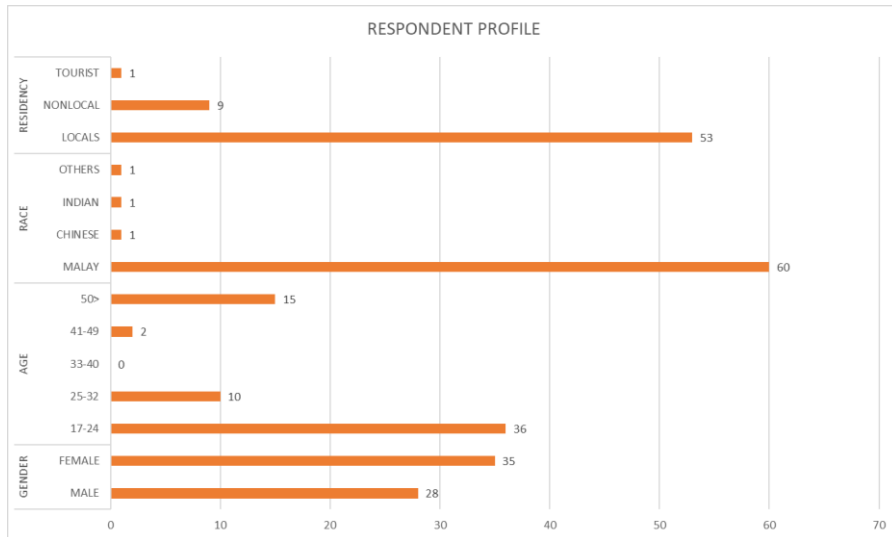


Figure 2: Respondent Profile Chart

The findings from the questionnaire provide valuable insights into the respondent profile and shed light on important demographic characteristics. The sample consisted of a diverse group of individuals, with 44.44% males and 55.56% females. This gender distribution indicates a relatively balanced representation within the sample.

In terms of age, the majority of respondents fell within the 17-24 age range, accounting for 57.14% of the sample. This suggests that the study primarily captured the perspectives and experiences of young adults. The 25-32 age group constituted 15.87% of the respondents, indicating a smaller but still significant representation. The older age categories, namely 41-49 and 50 years and above, accounted for 3.17% and 23.81% of the sample, respectively. These results indicate that the study had a broader age representation, including individuals from various life stages.

The racial distribution of the respondents revealed that the majority identified as Malay, comprising 95.24% of the sample. Chinese, Indian, and other ethnicities accounted for 1.59% of the respondents. This distribution suggests that the study primarily captured the perspectives of the Malay community, while also including a small representation of other ethnic groups.

Regarding residency status, the majority of respondents were locals, constituting 84.13% of the sample. Nonlocals accounted for 14.29% of the respondents, while tourists represented 1.59% of the sample. These results indicate that the study primarily focused on individuals residing in the local area, with a smaller proportion of nonlocals and tourists participating.

These findings provide important contextual information about the respondent profile and offer a glimpse into the diversity of the sample. Understanding the characteristics of the participants is crucial for interpreting the subsequent questionnaire responses and drawing meaningful conclusions. The demographic distribution reflects the study's scope and allows for a more nuanced analysis of the research findings.

It is important to note that these findings are based on the specific sample used in this study and may not be generalizable to the larger population. However, they provide a valuable starting point for understanding the perspectives and experiences of the respondents in relation to the research objectives.

Overall, the respondent profile indicates a diverse sample with varying demographic characteristics. The gender, age, race, and residency status distributions highlight the importance of considering these factors in the subsequent analysis and interpretation of the questionnaire responses.

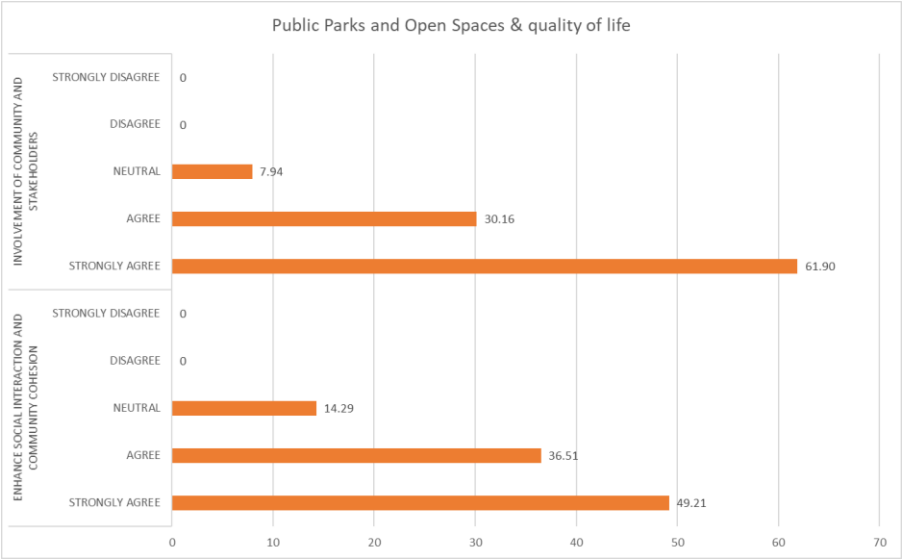


Figure 3: Public Parks and Open Spaces & Quality of Life Chart

The findings of the questionnaire on the relationship between public parks and open spaces and quality of life revealed some interesting patterns. One aspect that stood out was the strong agreement among participants regarding the role

of these spaces in enhancing social interaction and community cohesion. Nearly half of the respondents (49.21%) strongly agreed that public parks and open spaces contribute to strengthening social bonds and fostering a sense of community. Additionally, 36.51% agreed with this statement, further emphasising the positive impact of these spaces on social interactions within urban areas. This result suggests that public parks and open spaces serve as valuable venues for people to come together, connect, and build relationships.

Another noteworthy finding relates to the involvement of the community and stakeholders in the development and management of public parks and open spaces. The majority of participants (61.90%) strongly agreed that it is important to include the community and stakeholders in the decision-making processes and maintenance of these spaces. An additional 30.16% agreed with this statement, reaffirming the significance of community participation in shaping the design, functionality, and overall success of these areas. This result highlights the importance of considering the perspectives and needs of the local community when planning and managing public parks and open spaces.

These findings provide valuable insights into the perceptions and attitudes of urban residents regarding the role of public parks and open spaces in enhancing their quality of life. The strong agreement among participants regarding the positive impact on social interaction and community cohesion suggests that these spaces play a crucial role in fostering a sense of belonging and togetherness within urban communities. Similarly, the overwhelming support for community involvement underscores the importance of participatory approaches in creating and maintaining public parks and open spaces.

The results align with previous research that has emphasised the social benefits of public parks and open spaces. The findings support the notion that these spaces serve as important gathering places that facilitate social connections and community engagement. Moreover, they underscore the need for inclusive and collaborative approaches that involve community members and stakeholders in the decision-making processes, ensuring that the design and management of public parks and open spaces align with the needs and aspirations of the local population.

It is important to acknowledge some limitations of this study. The sample size and characteristics of the participants may not fully represent the diversity of urban residents, which could affect the generalizability of the findings. Additionally, the study relied on self-reported data, which may be subject to response bias. Despite these limitations, the results provide valuable insights into the perceptions and attitudes towards public parks and open spaces, contributing to our understanding of their role in enhancing the quality of life in urban areas.

In conclusion, the findings of this questionnaire demonstrate the significant impact of public parks and open spaces on social interaction and community cohesion. The results indicate strong agreement among participants regarding the positive influence of these spaces in fostering social connections within urban communities. The study also highlights the importance of community involvement in developing and managing public parks and open spaces. These findings contribute to the growing body of research emphasising the social benefits of these spaces and provide practical implications for urban planners and policymakers in promoting inclusive and vibrant public parks and open spaces that enhance the quality of life for urban residents.

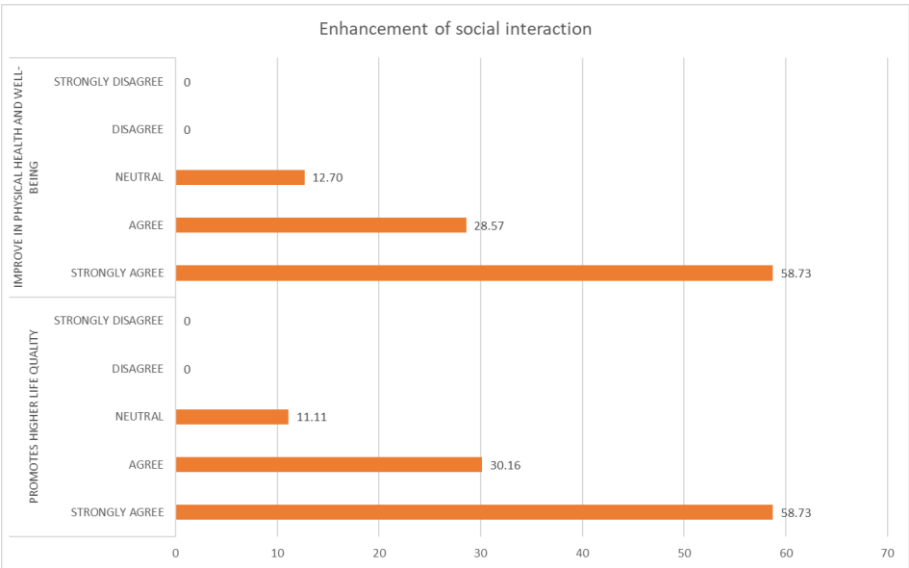


Figure 4: Enhancement of Social Interaction Chart

The questionnaire findings revealed that enhancing social interaction in public parks and open spaces has positively contributed to a higher quality of life. The majority of participants strongly agreed (58.73%) that these spaces promote a higher quality of life, indicating the significance of social interaction in improving overall well-being. Additionally, a considerable percentage of participants agreed (30.16%) with this statement, further emphasising the positive impact of social interaction in public parks and open spaces.

Furthermore, the questionnaire findings indicated that public parks and open spaces also play a crucial role in improving physical health and well-being. The majority of respondents strongly agreed (58.73%) that these spaces contribute to the improvement of physical health and well-being. This suggests that engaging in activities within these environments, such as walking, exercising,

or participating in recreational activities, can have positive effects on individuals' physical health.

The absence of any participants selecting "disagree" or "strongly disagree" options for both variables indicate a consensus among respondents regarding the positive influence of public parks and open spaces on social interaction and physical health. This widespread agreement strengthens the argument for the importance of these spaces in promoting a higher quality of life and improving overall well-being.

These findings align with previous research emphasising the significant role of public parks and open spaces in enhancing social interaction and improving physical health and well-being. By providing opportunities for socialisation, community engagement, and physical activity, these spaces create a conducive environment for individuals to lead healthier and more fulfilling lives.

It is worth noting that the positive outcomes observed in this study may be attributed to the design and management practices employed in the public parks and open spaces under investigation. These findings highlight the importance of incorporating design features and management strategies that facilitate social interaction and promote physical activity in urban planning and development.

Overall, the questionnaire findings support the notion that public parks and open spaces positively impact the enhancement of social interaction and the improvement of physical health and well-being. These spaces offer valuable opportunities for individuals to connect with others, engage in physical activities, and ultimately lead more satisfying lives. The results underscore the significance of continued investment in creating and maintaining high-quality public parks and open spaces, as they play a vital role in fostering a healthier and more socially connected urban community.

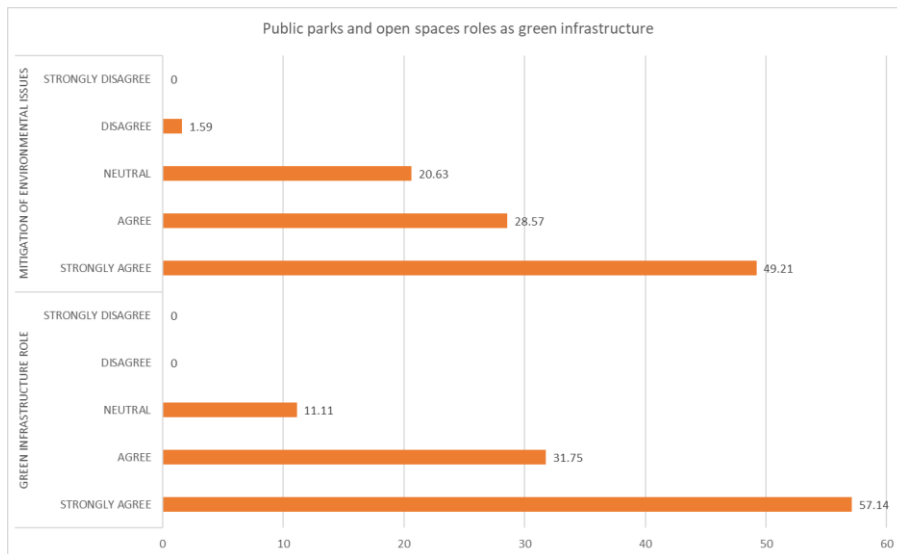


Figure 5: Public Parks and Open Spaces as Green Infrastructure Chart

The findings from the questionnaire indicate that public parks and open spaces play a significant role as green infrastructure. A majority of the respondents strongly agreed (57.14%) with the statement that public parks and open spaces have a crucial role as green infrastructure, while an additional 31.75% agreed with this notion. This high level of agreement highlights the recognition among participants of the importance of public parks and open spaces in supporting the overall green infrastructure of urban areas.

Furthermore, the questionnaire revealed that public parks and open spaces are perceived to mitigate environmental issues effectively. Nearly half of the respondents (49.21%) strongly agreed that these spaces contribute to environmental mitigation, and an additional 28.57% agreed with this statement. Only a small percentage (1.59%) disagreed with the notion, while the rest (20.63%) maintained a neutral stance. These findings indicate that the majority of participants recognise the positive impact of public parks and open spaces in addressing environmental concerns, such as air pollution, urban heat island effect, and biodiversity loss.

The high level of agreement regarding the role of public parks and open spaces as green infrastructure suggests that these spaces are widely acknowledged for their contribution to the overall sustainability and quality of urban environments. The findings align with previous research that emphasises the multifaceted benefits of public parks and open spaces, ranging from improved

air quality and temperature regulation to the preservation of biodiversity and ecosystem services.

The positive perception of public parks and open spaces as effective environmental mitigators reflects their potential to provide ecological functions and address pressing environmental challenges. By incorporating green infrastructure elements within urban areas, such as trees, green roofs, and permeable surfaces, public parks and open spaces can enhance storm water management, reduce heat island effects, and promote biodiversity conservation. These findings support the importance of incorporating green infrastructure strategies in urban planning and design to create sustainable and resilient cities.

The results from the questionnaire provide valuable insights into public perceptions of the roles of public parks and open spaces as green infrastructure. The widespread agreement among respondents highlights the need to prioritise developing and maintaining these spaces to enhance urban sustainability. However, it is crucial to continue exploring and understanding the diverse perspectives and experiences of different stakeholders to ensure that the design and management of public parks and open spaces align with the needs and aspirations of the community.

Overall, the findings affirm the significance of public parks and open spaces as green infrastructure in addressing environmental challenges and promoting sustainable urban development. These spaces not only contribute to the ecological well-being of cities but also provide opportunities for recreational activities, social interactions, and the enhancement of overall quality of life. Therefore, it is essential for policymakers, urban planners, and stakeholders to prioritise the preservation, creation, and equitable distribution of public parks and open spaces to foster a more sustainable and liveable urban environment.

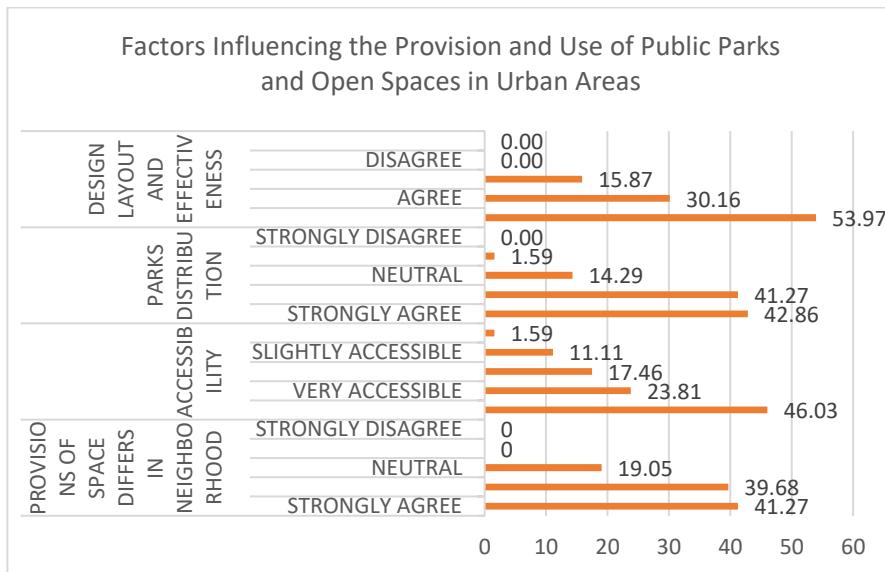


Figure 6: Factors Influencing the Provision and Use of Public Parks and Open Spaces in Urban Areas Chart

The findings from the questionnaire provide valuable insights into the factors influencing the provision and use of public parks and open spaces in urban areas. The respondents' perceptions shed light on various key variables that contribute to the overall quality and accessibility of these spaces.

Regarding the provisions of space in different neighbourhoods, a substantial portion of the respondents strongly agreed (41.27%) that the provision of space differs across neighbourhoods. Additionally, a significant percentage agreed (39.68%) with this statement. This indicates a consensus among the participants that there are disparities in the availability of public parks and open spaces in various neighbourhoods. It highlights the need for equitable distribution of these spaces to ensure that all residents have equal opportunities to access and enjoy them.

In terms of accessibility, the majority of respondents reported that public parks and open spaces were extremely accessible (46.03%). This indicates that a significant proportion of urban residents find it easy to reach these spaces, contributing to their usability and potential for recreational activities. Furthermore, a considerable number of respondents expressed that these spaces were very accessible (23.81%) and moderately accessible (17.46%), reinforcing the notion that efforts have been made to enhance the accessibility of public parks and open spaces in urban areas. However, it is crucial to

address the needs of those who perceive these spaces as slightly accessible (11.11%) or not accessible (1.59%), as their experiences may differ.

Regarding the distribution of parks, a significant percentage of respondents agreed (41.27%) and strongly agreed (42.86%) that parks are well-distributed throughout urban areas. This indicates a positive perception of the spatial distribution of parks and suggests that efforts have been made to provide equal access to these spaces across neighbourhoods. However, it is important to consider the perspectives of those who expressed a neutral stance (14.29%) or disagreed (1.59%), as their feedback may provide insights into potential areas for improvement.

The design layout and effectiveness of public parks and open spaces were generally well-received by the respondents. A majority strongly agreed (53.97%) that the design layout of these spaces was effective, while a significant percentage agreed (30.16%) with this statement. This positive response suggests that urban residents find the design of public parks and open spaces appealing and functional, contributing to their overall enjoyment and utilisation. It signifies the importance of considering the design aspects when developing and maintaining these spaces to maximise their effectiveness.

Overall, the questionnaire findings highlight the importance of equitable provision, accessibility, spatial distribution, and effective design in shaping the provision and use of public parks and open spaces in urban areas. These findings provide valuable insights for urban planners, policymakers, and designers in their efforts to enhance the quality and accessibility of these spaces, ensuring that they cater to the diverse needs and preferences of urban residents. By addressing the factors identified through this study, it is possible to create more inclusive and vibrant urban environments that promote the well-being and enjoyment of all residents.

5. 0 CONCLUSIONS

In conclusion, the research conducted on the significance of public parks and open spaces in urban areas, particularly in Sungai Petani, Malaysia, has provided valuable insights into various aspects related to quality of life, social interaction, environmental sustainability, and factors influencing the provision and use of these spaces. The findings of the questionnaire shed light on the perceptions and attitudes of urban residents and contribute to our understanding of the role of public parks and open spaces in enhancing the quality of life in urban areas.

One notable finding is the strong consensus among participants regarding the positive impact of public parks and open spaces on social interaction and community cohesion. The majority of respondents recognised the important role of these spaces in fostering social bonds, strengthening community ties, and promoting a sense of belonging. This highlights the significance of public parks and open spaces as venues for people to come together, engage in recreational activities, and build relationships. The findings emphasise the need for inclusive and collaborative approaches involving community members and stakeholders in planning and managing these spaces to ensure their success.

Additionally, the research findings emphasised the contribution of public parks and open spaces to improved physical health and well-being. Participants acknowledged the positive effects of engaging in activities within these spaces, such as walking, exercising, and participating in recreational activities. This supports the potential of public parks and open spaces in promoting healthier and more active lifestyles among urban residents. It underscores the importance of incorporating design features and management strategies that facilitate physical activity and promote well-being in urban planning and development.

Furthermore, the study highlighted the significant role of public parks and open spaces as green infrastructure. Participants recognised the importance of these spaces in mitigating environmental issues, such as air pollution, urban heat island effect, and biodiversity loss. The findings support the integration of green infrastructure elements within urban areas to enhance sustainability, promote ecological functions, and address pressing environmental challenges. They emphasise the need for continued investment in creating and maintaining high-quality public parks and open spaces as part of urban development strategies.

The research also examined factors influencing the provision and use of public parks and open spaces. Participants acknowledged the disparities in the availability of these spaces across neighbourhoods and emphasised the importance of equitable distribution to ensure equal access for all residents. The study highlighted the significance of accessibility, spatial distribution, and effective design in shaping the provision and utilisation of public parks and open spaces. These findings provide valuable insights for urban planners, policymakers, and designers in their efforts to create inclusive, vibrant, and well-utilized urban environments.

In conclusion, the research findings underscore the crucial role of public parks and open spaces in enhancing the quality of life in urban areas, specifically in Sungai Petani. These spaces contribute to social interaction, community cohesion, physical health, and environmental sustainability. The study

emphasises the need for inclusive and collaborative approaches, equitable provision, accessibility, spatial distribution, and effective design in the planning, design, and management of public parks and open spaces. By addressing these factors, urban areas can create sustainable, liveable, and thriving environments that enhance the well-being and enjoyment of their residents.

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Tarikh : 20 Januari 2023

Prof. Madya Dr. Nur Hisham Ibrahim
Rektor
Universiti Teknologi MARA
Cawangan Perak



Tuan,

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Sekian, terima kasih.

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27.1.2023

PROF. MADYA DR. NUR HISHAM IBRAHIM
REKTOR
UNIVERSITI TEKNOLOGI MARA
CAWANGAN PERAK
KAMPUS SERI ISKANDAR