ASSESSING INFLUENCES OF PUBLIC OPEN SPACE ON WELL BEING OF LOW-COST HOUSING RESIDENTS IN MALAYSIA POST COVID-19

By

HARITH BIN MOHMMAD ZIN

Thesis submitted to the School of Graduate Studies, Universiti Putra Malaysia, in Fulfilment of the Requirements for the Degree of Master of Science

August 2023

FRSB 2023 7

Abstract of thesis presented to the Senate of Universiti Putra Malaysia in fulfilment of the requirement for the degree of Master of Science

ASSESSING INFLUENCES OF PUBLIC OPEN SPACE ON WELL BEING OF LOW-COST HOUSING RESIDENTS IN MALAYSIA POST COVID-19

By

HARITH BIN MOHMMAD ZIN

August 2023

Supervisor : Nor Azlina Abu Bakar, PhD
Faculty : Design and Architecture

Malaysian Well-being Index (MyWI) 2020 reported that the well-being of low-cost housing residents was inimical due to the loss of opportunities for recreation because of movement control order (MCO) during the COVID-19 pandemic. Residents were restricted from moving, including visiting public open space (POS), which affected them physically and mentally because of the poor condition of their living space, such as overcrowding and poor ventilation. Therefore, this study aims to assess the importance of adaptable POS on physical and mental well-being from the perspective of low-cost housing residents during and post pandemic. This study employed a qualitative research method using three case studies at *Projek Perumahan Rakyat* (PPR) in Lembah Pantai, Kuala Lumpur representing low-cost housing development. Semi-structured interviews and field observations are the primary methods for data collection. In total, 15 POS users were purposively selected for the interviews and observations were conducted at different times and days. Findings were analysed using ATLAS.ti v22 software and content analysis. The results show that the pandemic negatively affected low-cost housing residents' physical and mental well-being because of the limited space for recreation and social activities. The residents needs POS and appreciate it more than before. Therefore, POS in low-cost housing needs physical and social improvement by implementing design principles that are adaptable to shocks and stresses for a good well-being of residents.

Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia
sebagai memenuhi keperluan untuk ijazah Master Sains

MENILAI PENGARUH RUANG TERBUKA AWAM TERHADAP KESEJAHTERAAN PENDUDUK PERUMAHAN KOS RENDAH DI MALAYSIA PASCA COVID-19

Oleh

HARITH BIN MOHMMAD ZIN

Ogos 2023

Penyelia : Nor Azlina Abu Bakar, PhD
Fakulti : Rekabentuk dan Senibina

Indeks Kesejahteraan Penduduk Malaysia 2020 melaporkan kesejahteraan penduduk perumahan kos rendah adalah pada tahap yang sangat tidak memuaskan berpunca daripada peluang untuk berekreasi yang terhad dalam tempoh perintah kawalan pergerakan (PKP) semasa wabak COVID-19 melanda. Penduduk disekat untuk bergerak bebas termasuklah untuk mengunjungi ruang terbuka awam dan mempengaruhi fizikal dan mental penduduk dek keadaan rumah mereka yang sesak dan kurang pengudaraan. Oleh itu, kajian ini bertujuan untuk menilai kepentingan ruang terbuka awam yang mampu beradaptasi terhadap kesejahteraan fizikal dan mental penduduk perumahan kos rendah semasa dan pasca COVID-19. Pendekatan kualitatif digunakan bersama tiga kajian kes di Projek Perumahan Rakyat (PPR) di Lembah Pantai, Kuala Lumpur bagi mewakili pembangunan perumahan kos rendah. Temu bual separa berstruktur dan kaedah pemerhatian diguna pakai sebagai kaedah utama dalam pengumpulan data. Secara keseluruhannya, 15 pengguna ruang terbuka awam dipilih secara persampelan bertujuan untuk menyertai temu bual, manakala pemerhatian di lapangan dijalankan pada hari dan masa yang berlainan. Dapatan daripada kajian ini dianalisis menggunakan perisian ATLAS.ti v22 dan juga analisis kandungan. Kajian ini mendapati pandemik memberi kesan yang negatif kepada fizikal dan mental penduduk perumahan kos rendah disebabkan oleh ruang yang terhad untuk melakukan rekreasi dan juga aktiviti sosial. Ini menyebabkan penduduk memerlukan dan menghargai kepentingan ruang terbuka awam terhadap kesejahteraan mereka. Oleh yang demikian, ruang terbuka awam di perumahan kos rendah memerlukan penambahbaikan secara fizikal dan sosial dengan menggunakan prinsip reka bentuk yang mampu beradaptasi dengan pelbagai potensi kejutan dan tekanan untuk kesejahteraan penduduk perumahan kos rendah.

ACKNOWLEDGEMENTS

First and foremost, I praise to Allah for all the blessings, knowledge and strength granted from Him for me to complete this study. Nothing can be achieved without His blessings and grace.

My heartfelt appreciation to my dedicated supervisor Dr. Nor Azlina Abu Bakar, and co-supervisor Ar. Aznida Azlan, whose expertise were invaluable in guiding my study journey. It was a roller-coaster ride, but they made it fantastic. I truly appreciate their endless support, feedback and encouragement for me to complete this study. They are truly the best role model and mentor. To all examiners, thank you for the constructive feedbacks.

To my precious parents, Haji Mohmmad Zin and Hajjah Sakira, I am extremely grateful for the never-ending love, understanding and immeasurable sacrifices while I complete this study. Slowly but surely, your son is graduating! I also truly appreciate my sisters, brothers, in laws, nephews and future nieces that never fails to put smiles on my face, never let me down and no one could take you place. To all my friends who always bringing rainbow and happy distraction, I really hoped that you are all blessed. Thank you for trusting me throughout my study journey.

My gratitude and heartful thanks to my research peers, Dr. Hedieh Takhmiri and Dr. Izyan Ayuni for the endless support and encouragement. To Kuala Lumpur City Hall (KLCH), enumerator and all respondents from PPR Kerinchi, PPR Pantai Ria and PPR Sri Pantai, I really appreciate your cooperation in providing valuable insights for this study.

Last but not least, I would like to acknowledge the Fundamental Research Grant Scheme (FRGS) by Ministry of Higher Education for providing generous allowances for my studies and made this research possible. Also, I would like to thank me for believing and doing the best.

This thesis was submitted to the Senate of Universiti Putra Malaysia and has been accepted as fulfilment of the requirement for the degree of Master of Science. The members of the Supervisory Committee were as follows:

Nor Azlina Abu Bakar, PhD
Senior Lecturer
Faculty of Design and Architecture
Universiti Putra Malaysia
(Chairman)

Aznida Azlan,
Senior Lecturer, Ar.
Faculty of Design and Architecture
Universiti Putra Malaysia
(Member)

_____

ZALILAH MOHD SHARIFF, PhD
Professor and Dean
School of Graduate Studies
Universiti Putra Malaysia

Date: 14 December 2023

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS

CIDB	Construction Industry Development Board
CIS	Construction Industry Standard
CMCO	Conditional Movement Control Order
FDTCP	Federal Department of Town and Country Planning
KLCH	Kuala Lumpur City Hall
LCH	Low-cost Housing
MCO	Movement Control Order
MP	Member of Parliament
MVPA	Moderate to vigorous physical activity
NP	Neighbourhood park
PA	Physical activity
POS	Public Open Space
PPR	*Projek Perumahan Rakyat*
RO	Research Objective
RQ	Research Question
WHO	World Health Organization

CHAPTER 1

INTRODUCTION

1.1 Introduction

Since Malaysia achieved independence in 1957, Kuala Lumpur has experienced high urbanisation at an unprecedented pace following urban densification principles, causing undesirable consequences on people's lives (Yigitcanlar et al., 2020a). Consequently, massive rural-urban migration occurred because of economic, social and cultural activities, technology and education. Kuala Lumpur is estimated to become denser, with a 2,254,000 population by 2040 (KLCH, 2020). In any urbanization with a massive population, space is one of the most significant drawbacks affecting urban dwellers' attitudes and values (Ahmad et al., 2009).

As the population increase, urban land receives tremendous pressure to be developed as more affordable housing or to provide recreational areas due to space and land scarcity in the city centre (Suratman et al., 2020). In fact, both are important for a decent living and improved well-being. Urbanization requires massive housing development, yet the biggest challenge recently is providing affordable housing and decent low-cost housing. In line with Kuala Lumpur Structure Plan (KLSP) 2040, decent housing needs public open space (POS) as an outdoor recreational and physical activity opportunities to increase health and well-being for a vibrant and healthy city.

The provision of urban housing will further cause the limited land supply and the increment of land value; thus, houses remain unaffordable in urban areas even with the reduced house prices (Annuar, 2019; Economic Planning Unit, 2021). Further, land shortage and high land value make adequate POS provision difficult, especially in a low-cost housing development (Wahi et al., 2018). Omar et al. (2017) emphasized that the need for POS as recreational facilities increases as the population increases. Besides challenging efforts to provide more affordable and low-cost housing due to land shortage, the population demand for POS remains an obstacle. Population growth is a critical factor behind the increase in land shortage.

While POS is necessary for positive psychological and human development (Ismail et al., 2020), low-cost housing residents' well-being is inimical since their houses tend to be overcrowded. As a result, they need outdoor open space for various outdoor activities. N. F. Azmi et al. (2019) and Solari and Mare (2012) pointed out that living in overcrowded conditions may affect people negatively

such as health hazards (Zainal et al., 2012), social stress (Ventriglio et al., 2021) that may persist throughout their life and influence their socioeconomic and human well-being. Therefore, low-cost housing residents need proper POS planning within the neighbourhood for outdoor activities and greater well-being. As previous study proved that proper POS could enhance the well-being of residents, more attention is needed to develop adaptable POS to enhance the well-being of low-cost housing residents. Hence, POS should allow the users to improve their well-being through its environment, setting and organised activities. Besides, this study is crucial because cities that are undergoing rapid urbanisation usually degrade and convert POS to other land use (Wu & Kim, 2021). Therefore, this study is needed to justify the importance of adaptable POS to urbanites especially on low-cost housing residents' well-being.

1.2 Problem Statement

Up to 25% of Malaysian population whose experienced mental stress such as depression and anxiety during COVID-19 pandemic are *Projek Perumahan Rakyat* (PPR) residents (Shukor, 2020). Regarding the situation, the Malaysian Well-being Index (MyWI) 2020 disclosed 15.7% of well-being declination among PPR residents is due to limited opportunities for recreation and entertainment as the pandemic strikes (Department of Statistics Malaysia, 2021b). Mokhtar et al. (2022) also reported the social distancing degraded the residents' quality of life especially due to lessen recreational activities.

PPR is one of the Malaysia affordable housing type that fall under low-cost housing scheme specially for gross household income below RM3,000; which deemed as poor under Malaysia Household Income Classification (DOSM, 2020d). Therefore, majority of residents that reside PPR scheme are classified as poor.

During that unprecedented event, residents were hindered from visiting any open space to curb the infectious disease. However, PPR residents with limited indoor spaces need POS as buffer space from crowded and stressful living conditions (Noor Hisham & Md Amin, 2020). The function of POS as a stress reliever should not be neglected to enhance mental and physical well-being even during hard times (Mayen Huerta & Cafagna, 2021; Moulay & Daouia, 2020). Based on the interviews by Shukor (2020), PPR residents agreed that opportunities to have open green space within neighbourhood is crucial to minimize the incidence of mental stress.

Despite the need for POS, The Sun (2021) reported that PPR struggles to meet residents' demand on POS (Supramani, 2021). The residents are unsatisfied with the poor condition of POS that resulted in underutilized, thus, deteriorate

health (Bakar et al., 2016). Moreover, the usage of POS dropped significantly during COVID-19 (Mohd Razali & Abd. Shukor, 2022) and lead to sedentary lifestyle that might resulted in more serious health issues (Fleckney & Bentley, 2021). This calls for POS re-assessment on residents' well-being as mooted by Lembah Pantai MP, Fahmi Fadzil (Annuar, 2019). Therefore, the provision of POS in low-cost housing needs for re-assessment to meet community needs for recreational and outdoor activity opportunities even during hard times.

However, there is limited information on the well-being declination due to COVID-19 on the physical and mental well-being of low-cost housing residents related to POS and outdoor recreational activities. POS and well-being were widely studied in Australia, Europe and North America (Nath et al., 2018). Although the importance of POS during COVID-19 were also studied in Malaysia, nevertheless, qualitative research on the influence of POS on low-cost housing residents' mental and physical well-being is scarce in Malaysia. Furthermore, they are limited to capture the effect of POS during pandemic based on low-cost housing residents' perception. Therefore, this study assesses the influence of POS on the physical and mental well-being of low-cost housing residents during and post COVID-19 pandemic.

1.3 Aim of the Study

This study aims to assess the influence of public open space (POS) on the mental and physical well-being of low-cost housing residents during movement control order (MCO) and post COVID-19.

1.4 Research Questions

1. How does public open space (POS) contribute to the mental and physical well-being of low-cost housing residents during and post COVID-19 restriction?
2. What are the existing guidelines and the current conditions of POS for low-cost housing in Kuala Lumpur?
3. What are POS improvements required in low-cost housing in urban areas to deal with vulnerabilities (ex: COVID-19, poverty)?

1.5 Research Objectives

1. To identify the influence of public open space (POS) on the mental and physical well-being of low-cost housing residents during and post COVID-19 restriction.

2. To assess current guidelines, implementation, and the issues related to POS in low-cost housing in Kuala Lumpur.
3. To investigate adaptable (able to cope with vulnerabilities such as COVID-19 and poverty) POS for low-cost housing in the urban area.

1.6 Significance of the Study

The assessment of POS in low-cost housing during and post-pandemic period is needed, as it provides better understanding on low-income communities' needs and preferences particularly on the design and planning as it influence well-being and contribute to quality of life. Similarly, this study is significant in improving the quality of low-income communities' living by providing functional and quality POS that can offer activities for mental and physical well-being enhancement. The findings are also significant in enhancing POS policy and direction towards high quality implementation in low-cost housing in Malaysia. Lastly, this study is vital to achieving Kuala Lumpur Structure Plan 2040, goal number 3, for a vibrant and healthy city by providing quality open space that is accessible for a variety of activities in housing development including low-cost housing.

1.7 Scope of the Study

This study only focuses on two factors which are POS and well-being of low-cost housing residents during and post COVID-19. Therefore, the scope of this study is mainly to investigate the influences of POS design on the mental and physical well-being of low-cost housing residents during and post COVID-19. Another scope of the study that worth mentioning is stated as follows.

COVID-19

Novel coronavirus disease (COVID-19) is an unprecedented contagious outbreak caused by SARS-CoV-2 virus since December 2019 that has created tremendous effects on global health. The infected patient may have mild to moderate respiratory illness and usually get better without specific treatment. However. The vulnerable such as older people and person with critical illness e.g., diabetes, cardiovascular disease, serious respiratory illness, and cancer may develop chronic disease. The infected person at any age may get sick and die due to this pandemic. As of August 2023, more than 6.9 million confirmed deaths globally (WHO, 2023).

The best way to slowing down the COVID-19 transmission is to stay away from other people at least one (1) metre, wearing mask while in public area, and

washing hand or sanitizing frequently. Responding to the crisis, most of the government introduced lockdown and movement control order (MCO) as an early non-pharmaceutical prevention including Asian country like Malaysia in combating the infectious diseases (Ahmadpoor & Shahab, 2021). The outbreak causes unpreventable disturbance on people's normal lifestyle in psychological and physical perspectives since people are prohibited to be physically engage like before. The vaccination also recommended to people so that they are immune or develop less sickness to the infection.

Lembah Pantai, Kuala Lumpur

Kuala Lumpur or The Federal Territory of Kuala Lumpur is selected as a geographical location in this study because it represents the most urbanised city in Malaysia with the highest provision of low-cost housing (KPKT, 2016; Omar et al., 2017a). It was initially a mining site in 1870s and now become a global city with growing economy in Southeast Asia and leading financial and economic centre, cultural hub in Malaysia.

Meanwhile, Lembah Pantai is a parliamentary constituency and sub-district in The Federal Territory of Kuala Lumpur, Malaysia that locates about five PPR (KLCH, 2020). Based on OpenDOSM Next Gen launched on 12th January 2023, Lembah Pantai population is about 148,094 people made up 7.47% of Kuala Lumpur total population with 50.9% are male and 49.1% female according to My Census 2020 (DOSM, 2020a). Lembah Pantai is chosen as it situated near to high-urbanizing city centre of Kuala Lumpur and surrounded by rapid development. One of the residential areas in Lembah Pantai is Pantai Dalam which located south-west of Kuala Lumpur. Bangsar South is one of popular area under Lembah Pantai constituency where a well-known reputable residential and entertainment area is located.

Between the wealthy Bangsar South and the working class of urban Malays, Pantai Dalam serves as the ideal dividing line. The former is mostly living in thriving neighbourhood that promotes new lifestyle experience. For the latter who residing low-cost housing or PPR, the luxury living are symbols of ambitious. Furthermore, they are vulnerable to high cost of living, social problem, crime, environmental deterioration, unemployment, poverty (Siwar et al., 2016) and the latest shock of COVID-19 pandemic (Megat Muzafar & Kunasekaran, 2020). Since Lembah Pantai is among the highest district locates low-cost housing and most of the population living in low-cost flats, it is chosen as a case study site.

***Projek Perumahan Rakyat* (PPR)**

According to Ministry of Housing and Local Government of Malaysia, PPR is one type of affordable housing scheme delivered by Malaysia Government which fall under low-cost housing development (Ministry of Housing and Local

Government, 2023). The provision of PPR is to house lower income people whose household monthly income below RM3,000 (DOSM, 2020d). The selection of this housing is appropriate to this study as it provide controlled parameters to answer research questions in term of socio-economic status of residents which are low-income communities.

Public Open Space (POS)

POS in this study refers to the free accessible open space for people to have recreational activities and social interaction, specifically among low-income communities residing *Projek Perumahan Rakyat* (PPR). The recreational space for various social and outdoor activities for a population between 3,000 to 12,000 is categorized as a neighbourhood park (FDTCP, 2011). Therefore, based on the population numbers of the studied area, POS in this study refers to "neighbourhood park". Hence, the term "POS" and "neighbourhood park" will be used interchangeably throughout this study.

This study focuses on the physical component and design elements of POS and the external factor that may influence its utilization. Since the previous researcher reported various external factors might influence POS usage, this study also focuses on how POS planning can affect utilization amid COVID-19 and further affect well-being. It is also noted that POS utilization depends on individuals and awareness; thus, this study did not claim that it will change people's perceptions or the community's behaviour. Nevertheless, this study tries to provide the best POS planning and design to encourage people to use and enhance their well-being, emphasizing the element of adaptable POS.

Well-being

Besides the multi-dimensional of well-being, this study only refers to respondents' mental and physical well-being for several reasons. According to United Nations (2023), COVID-19 has significantly triggered mental health issues by 25% among the world population due to disturbance of daily routines, uncertainty about the future and loss of income. This psychological distress also common during pandemic (Lee et al., 2020).

Moreover, the stay-at-home order depicted in the world population has resulted in a sedentary lifestyle closely related to the emergence of non-communicable diseases to mental issues (Fleckney & Bentley, 2021). Hence, physical inactive may relate to other serious health issues, including mental disorders. Mental and physical well-being are both important and complimenting each other. For instances, mental issues increase the long-lasting physical illness, while the severe physical conditions increase the risk for mental illness (National Institute of Mental Health, 2018). Therefore, this study focuses on these two as they are prevalence during COVID-19 in affecting the health and well-being of people.

1.8 Limitations of the Study

This study was conducted during COVID-19 when some movement restrictions were still mandated. Therefore, some issues and problems are relatively new to researchers in the field. References are lacking; hence in-depth data is required. Though data and recommendations cannot be generalized to other urban areas globally, the findings of this study are essential to guide future research. The movement restriction and social distancing also influence the data collection process. Participatory activities are believed to be much needed to apply a more holistic and people-centred approach.

1.9 Thesis Structure

This thesis is divided into five chapters as follows:

CHAPTER 1 explains the background of the study, issues, problem statement and significance of the study. Then, the research aim and objectives are highlighted to answer all research questions. The limitation of this study is also explained, which can be a recommendation for further research.

CHAPTER 2 presents the theoretical and conceptual reviews on the subject of this study. This chapter is divided into three parts: introduction to POS, issues related to POS implementation in low-cost housing and preferred POS by residents. The literature's content is reviewed to develop a framework for this study.

CHAPTER 3 elaborates on the research strategy inquiry implemented in this study. This chapter also highlights the step taken during data collection, together with the justification of the sampling technique and unit of analysis. The data analysis process using ATLAS.ti software is further explained in this section.

CHAPTER 4 presents the analysis and discussion of case study findings from semi-structured interviews with POS users and site observation. The analysis using ATLAS.ti software helps to present the frequency of codes that emerged from the quotation.

CHAPTER 5 summarizes the research findings and highlights this research implication, contribution, and recommendation for future research

REFERENCES

A Samad, N. S., Abdul Rahim, A. S., Mohammad Afandi, S. H., & Mohd Johari, M. Y. (2021). Factors influencing the public park use in Kuala Lumpur , Malaysia Factors influencing the public park use in Kuala Lumpur , Malaysia. *OP Conference Series: Earth and Environmental Science PAPER*. https://doi.org/10.1088/1755-1315/756/1/012085

Abu Bakar, N. A. (2022, November 12). Utamakan pembangunan bandar untuk semua. *Berita Harian*, 4–7. https://www.bharian.com.my/rencana/komentar/2022/11/1024601/utamakan-pembangunan-bandar-untuk-semua#.Y3NEDaAnNT9.linkedin

Abu Kasim, J., Mohd Yusof, M. J., & Mohd Shafri, H. Z. (2018). Urban Green Space Degradation: An Experience of Kuala Lumpur City. *Environmental Management and Sustainable Development*, *8*(1), 27. https://doi.org/10.5296/emsd.v8i1.13917

Addas, A., & Maghrabi, A. (2021). Social evaluation of public open space services and their impact on well-being: A micro-scale assessment from a Coastal University. *Sustainability (Switzerland)*, *13*(8). https://doi.org/10.3390/su13084372

Agost-Felip, R., Ruá, M. J., & Kouidmi, F. (2021). An inclusive model for assessing age-friendly urban environments in vulnerable areas. *Sustainability (Switzerland)*, *13*(15). https://doi.org/10.3390/su13158352

Ahirrao, P., & Khan, S. (2021). Assessing public open spaces: A case of city nagpur, india. *Sustainability (Switzerland)*, *13*(9). https://doi.org/10.3390/su13094997

Ahmad, Z., Ahmad, N., & Abdullah, H. (2009). Urbanism, space and human psychology: Value change and urbanization in Malaysia. *European Journal of Social Sciences*, *11*(3), 464–470.

Ahmadpoor, N., & Shahab, S. (2020). Realising the value of greenspace: a planners' perspective on the COVID-19 pandemic. *Town Planning Review*, *September*. https://doi.org/10.3828/tpr.2020.37

Ahmadpoor, N., & Shahab, S. (2021). Urban form: Realising the value of green space: a planners' perspective on the COVID-19 pandemic. *Town Planning Review*, *92*(1), 49–55. https://doi.org/10.3828/tpr.2020.37

Aini, Q., Marlina, H., & Nikmatullah, A. (2019). Evaluation of Accessibility for People with Disability in Public Open Space. *IOP Conference Series: Materials Science and Engineering*, *506*(1). https://doi.org/10.1088/1757-899X/506/1/012018

Ajayi, A. O., & Amole, O. O. (2022). Open spaces and wellbeing: the impact of outdoor environments in promoting health. *Cities and Health*, *00*(00), 1–16.

https://doi.org/10.1080/23748834.2021.2011537

Al-Fadala, E., & Fadli, F. (2020). Smart City Applications: Promoting comfort, health and well-being through Sustainable Smart Urban Design (S2UD) in Msheireb Downtown. *2020 IEEE International Conference on Informatics, IoT, and Enabling Technologies, ICIoT 2020*, 254–261. https://doi.org/10.1109/ICIoT48696.2020.9089503

Aliyas, Z. (2017). *Factors Influencing Leisure Walking In Residential Areas In A City In Iran* [Universiti Putra Malaysia]. http://psasir.upm.edu.my/id/eprint/70777

Aliyas, Z. (2019). Physical, mental, and physiological health benefits of green and blue outdoor spaces among elderly people. *International Journal of Environmental Health Research*, *31*(6), 703–714. https://doi.org/10.1080/09603123.2019.1681379

Aliyas, Z. (2020). A qualitative study of park-based physical activity among adults. *Journal of Public Health*, *28*(5), 623–632. https://doi.org/10.1007/s10389-019-01063-7

Alkhaja, N., Alawadi, K., & Ibrahim, H. M. (2023). Title: Post-pandemic planning: Do we have enough and efficient access to parks? *Frontiers in Built Environment*, *9*(March). https://doi.org/10.3389/fbuil.2023.1158430

Alwah, A. A. Q., Li, W., Alwah, M. A. Q., & Shahrah, S. (2021). Developing a quantitative tool to measure the extent to which public spaces meet user needs. *Urban Forestry and Urban Greening*, *62*(April), 127152. https://doi.org/10.1016/j.ufug.2021.127152

Annuar, A. (2019). *Lembah Pantai MP moots overhaul of public housing scheme, says not meeting urban poor needs*. https://www.malaymail.com/news/malaysia/2019/06/27/lembah-pantai-mp-moots-overhaul-of-public-housing-scheme-says-not-meeting-u/1766093

Arifwidodo, S. D., & Chandrasiri, O. (2020). Association between park characteristics and park-based physical activity using systematic observation: Insights from Bangkok, Thailand. *Sustainability (Switzerland)*, *12*(6). https://doi.org/10.3390/su12062559

Arshad, A., Ashraf, M., Sundari, R. S., Qamar, H., Wajid, M., & Hasan, M. ul. (2020). Vulnerability assessment of urban expansion and modelling green spaces to build heat waves risk resiliency in Karachi. *International Journal of Disaster Risk Reduction*, *46*(February), 101468. https://doi.org/10.1016/j.ijdrr.2019.101468

Austin, G., Duncan, M. J., & Bell, T. (2021). Codesigning Parks for Increasing Park Visits and Physical Activity in a Low-Socioeconomic Community: The Active By Community Design Experience. *Health Promotion Practice*,

22(3), 338–348. https://doi.org/10.1177/1524839919900768

Australian Government Department of Health. (2020). Protect Yourself and Others from COVID-19. *Australian Government Department of Health*, 1. https://www.who.int/emergencies/diseases/novel-coronavirus-2019/advice-for-public

Azad, S. P., Morinaga, R., & Kobayashi, H. (2018). Effect of housing layout and open space morphology on residential environments –applying new density indices for evaluation of residential areas case study: Tehran, Iran. *Journal of Asian Architecture and Building Engineering*, *17*(1), 79–86. https://doi.org/10.3130/jaabe.17.79

Azagew, S., & Worku, H. (2020). Socio-demographic and physical factors influencing access to urban parks in rapidly urbanizing cities of Ethiopia: The case of Addis Ababa. *Journal of Outdoor Recreation and Tourism*, *31*(June), 100322. https://doi.org/10.1016/j.jort.2020.100322

Azian, F. U. M., Yusof, N., & Kamal, E. M. (2020). Problems in high rise residential building: From management perspective. *IOP Conference Series: Earth and Environmental Science*, *452*(1). https://doi.org/10.1088/1755-1315/452/1/012087

Azmi, N. F., Ruslee, S. N., Adilah, Y., Harumain, S., Nizam, S., Chua, S., Lin, J., & Peng, A. C. (2019). a Study of Overcrowding Factors in Public Low-Cost Housing in Malaysia. *Journal of Building Performance*, *10*(1), 52–58.

Badar, R., & Bahadure, S. (2020). Neighbourhood open spaces for social cohesion. *E3S Web of Conferences*, *170*, 1–6. https://doi.org/10.1051/e3sconf/202017006019

Bakar, N. A., Malek, N. A., & Mansor, M. (2016). Access to Parks and Recreational Opportunities in Urban Low-income Neighbourhood. *Procedia - Social and Behavioral Sciences*, *234*, 299–308. https://doi.org/10.1016/j.sbspro.2016.10.246

Balai Kerishnan, P., Maruthaveeran, S., & Maulan, S. (2020). Investigating the usability pattern and constraints of pocket parks in Kuala Lumpur, Malaysia. *Urban Forestry and Urban Greening*, *50*(March), 126647. https://doi.org/10.1016/j.ufug.2020.126647

Barton, H., & Grant, M. (2006). A health map for the local human habitat. *Journal of The Royal Society for the Promotion of Health*, *126*(6), 252–253. https://doi.org/10.1177/1466424006070466

Basu, S., & Nagendra, H. (2021). Perceptions of park visitors on access to urban parks and benefits of green spaces. *Urban Forestry and Urban Greening*, *57*(December 2020). https://doi.org/10.1016/j.ufug.2020.126959

Berdejo-Espinola, V., Suárez-Castro, A. F., Amano, T., Fielding, K. S., Oh, R. R.

Y., & Fuller, R. A. (2021). Urban green space use during a time of stress: A case study during the COVID-19 pandemic in Brisbane, Australia. *People and Nature*, *3*(3), 597–609. https://doi.org/10.1002/pan3.10218

Bernama. (2021, February 19). PPR dinaik taraf sebagai Rumah Malaysia - Zuraida. *MalaysiaKini*. https://www.malaysiakini.com/news/563568

Bernama. (2023, March 5). Hadiri kursus kesedaran sivik sebelum ambil kunci rumah PPR - Nga. *Astro Awani*. https://www.astroawani.com/berita-malaysia/hadiri-kursus-kesedaran-sivik-sebelum-ambil-kunci-rumah-ppr-nga-409306

Bikomeye, J. C., Namin, S., Anyanwu, C., Rublee, C. S., Ferschinger, J., Leinbach, K., Lindquist, P., Hoppe, A., Hoffman, L., Hegarty, J., Sperber, D., & Beyer, K. M. M. (2021). Resilience and equity in a time of crises: Investing in public urban greenspace is now more essential than ever in the us and beyond. *International Journal of Environmental Research and Public Health*, *18*(16). https://doi.org/10.3390/ijerph18168420

Bojorquez, I., De Lourdes Romo-Aguilar, M., Ojeda-Revah, L., Tena, F., Lara-Valencia, F., García, H., Díaz, R., & Aranda, P. (2021). Public spaces and physical activity in adults: Insights from a mixed-methods study. *Cadernos de Saude Publica*, *37*(1), 1–14. https://doi.org/10.1590/0102-311X00028720

Bornioli, A., Parkhurst, G., & Morgan, P. L. (2018). The psychological wellbeing benefits of place engagement during walking in urban environments: A qualitative photo-elicitation study. *Health and Place*, *53*(March), 228–236. https://doi.org/10.1016/j.healthplace.2018.08.018

Byrne, J., & Sipe, N. (2010). Green and open space planning for urban consolidation--A review of the literature and best practice. In *Issues Paper* (Vol. 11, Issue May 2014).

Cai, X., Aning Tedong, P., & Zainol, R. (2022). INADEQUATE EXPOSURE TO GREENSPACE AND ITS EFFECTS ON MENTAL HEALTH DURING THE PANDEMIC. *Planning Malaysia*, *20*(5), 40–50.

Carmona, M. (2010). Contemporary public space, part two: Classification. *Journal of Urban Design*, *15*(2), 157–173. https://doi.org/10.1080/13574801003638111

Carmona, M. (2015). Re-theorising contemporary public space: a new narrative and a new normative. *Journal of Urbanism*, *8*(4), 373–405. https://doi.org/10.1080/17549175.2014.909518

Chen, C., Luo, W., Li, H., Zhang, D., Kang, N., Yang, X., & Xia, Y. (2020). Impact of perception of green space for health promotion on willingness to use parks and actual use among young urban residents. *International Journal of Environmental Research and Public Health*, *17*(15), 1–21. https://doi.org/10.3390/ijerph17155560

Cheng, Y., Zhang, J., Wei, W., & Zhao, B. (2021). Effects of urban parks on

residents' expressed happiness before and during the COVID-19 pandemic. *Landscape and Urban Planning*, *212*(April). https://doi.org/10.1016/j.landurbplan.2021.104118

Chenyang, D., Maruthaveeran, S., & Shahidan, M. F. (2022). The usage, constraints and preferences of green space at disadvantage neighborhood: A review of empirical evidence. *Urban Forestry and Urban Greening*, *75*(August), 127696. https://doi.org/10.1016/j.ufug.2022.127696

Cheung, P. K., Jim, C. Y., & Siu, C. T. (2021). Effects of urban park design features on summer air temperature and humidity in compact-city milieu. *Applied Geography*, *129*(March), 102439. https://doi.org/10.1016/j.apgeog.2021.102439

Chong, J., Rana, S., & Ojal, M. (2020). Public Spaces as an Invaluable Resource for Delivering Healthy and More Equitable Cities and Communities. *The Journal of Public Space*, *5*(3), 227–232.

Chua, R. S., & Deguchi, A. (2008). Implementation issues on Planning Control According to the Provision of Town and Country Planning Act 1976 in Malaysia. *Journal of Architecture and Urban Design*, *No 14*, 47–58.

CIDB. (2019). Standard Industri Pembinaan CIS 26: 2019 (Standard Perumahan Kebangsaan). In *Construction Industry Standard*. http://journal.um-surabaya.ac.id/index.php/JKM/article/view/2203

Cohen, D. A., Han, B., Derose, K. P., Williamson, S., Marsh, T., Raaen, L., & McKenzie, T. L. (2016a). The Paradox of Parks in Low-Income Areas: Park Use and Perceived Threats. *Environment and Behavior*, *48*(1), 230–245. https://doi.org/10.1177/0013916515614366

Cohen, D. A., Han, B., Derose, K. P., Williamson, S., Marsh, T., Raaen, L., & McKenzie, T. L. (2016b). The Paradox of Parks in Low-Income Areas: Park Use and Perceived Threats. *Environment and Behavior*, *48*(1), 230–245. https://doi.org/10.1177/0013916515614366

Cohen, D. A., Han, B., Isacoff, J., Shulaker, B., & Williamson, S. (2019). Renovations of neighbourhood parks: Long-term outcomes on physical activity. *Journal of Epidemiology and Community Health*, *73*(3), 214–218. https://doi.org/10.1136/jech-2018-210791

Cohen, D. A., Han, B., Isacoff, J., Shulaker, B., Williamson, S., Marsh, T., McKenzie, T. L., Weir, M., & Bhatia, R. (2015). Impact of park renovations on park use and park-based physical activity. *Journal of Physical Activity and Health*, *12*(2), 289–295. https://doi.org/10.1123/jpah.2013-0165

Cohen, D. A., Han, B., Park, S., Williamson, S., & Derose, K. P. (2019). Park Use and Park-Based Physical Activity in Low-Income Neighborhoods. *Journal of Aging and Physical Activity*, *27*(3), 334–342. https://doi.org/10.1123/japa.2018-0032

Cozens, P. M., Saville, G., & Hillier, D. (2005). Crime prevention through environmental design (CPTED): A review and modern bibliography. *Property Management*, *23*(5), 328–356. https://doi.org/10.1108/02637470510631483

Creswell, J. W. (2014). *Research Design: Qualitative, Quantitative and Mixed Methods Approaches (4th Edition)* (4th ed.). SAGE Publications. https://study.sagepub.com/creswellrd4e

Creswell, J. W., & Poth, C. N. (2018). *Qualitative Inquiry & Research Design: Choosing Among Five Approaches* (4th ed.). SAGE Publications.

Cronin-de-Chavez, A., Islam, S., & McEachan, R. R. C. (2019). Not a level playing field: A qualitative study exploring structural, community and individual determinants of greenspace use amongst low-income multi-ethnic families. *Health and Place*, *56*(February), 118–126. https://doi.org/10.1016/j.healthplace.2019.01.018

Currie, M. A. (2017). A design framework for small parks in ultra-urban, metropolitan, suburban and small town settings. *Journal of Urban Design*, *22*(1), 76–95. https://doi.org/10.1080/13574809.2016.1234334

Dali, M. M., Yusoff, S. M., & Ibrahim, P. H. (2014). Implementation of open space: The need for uniform policy? *Open House International*, *39*(1), 82–91. https://doi.org/10.5539/jsd.v6n7p16

Das, K. V., Fan, Y., & French, S. A. (2017). Park-Use Behavior and Perceptions by Race, Hispanic Origin, and Immigrant Status in Minneapolis, MN: Implications on Park Strategies for Addressing Health Disparities. *Journal of Immigrant and Minority Health*, *19*(2), 318–327. https://doi.org/10.1007/s10903-015-0339-1

Department of Statistics Malaysia. (2021a). *Kenyataan Media: Laporan Anggaran Pendapatan Isi Rumah Dan Insiden Kemiskinan, Malaysia 2020*.

Department of Statistics Malaysia. (2021b). *Malaysia Well-Being Index 2020* (Issue December). https://www.dosm.gov.my/portal-main/release-content/malaysian-well-being-index-2020

DOSM. (2020a). *Jumlah penduduk di parlimen Lembah Pantai, Kuala Lumpur*. Department of Statistics Malaysia. https://tableau.dosm.gov.my/t/BPPD-BahagianperangkaanpendudukdanDemografi/views/MyCenDash/PARLIMEN

DOSM. (2020b). LAUNCHING OF REPORT ON THE KEY FINDINGS POPULATION AND HOUSING CENSUS OF MALAYSIA 2020. In *Department of Statistics Malaysia*. https://www.dosm.gov.my/v1/index.php?r=column/cthemeByCat&cat=117&bul_id=akliVWdIa2g3Y2VubTVSMkxmYXp1UT09&menu_id=L0pheU43

NWJwRWVSZklWdzQ4TlhUUT09

DOSM. (2020c). Malaysia's new poverty line income is RM2,208, over 400k households considered poor. *DOSM*. https://www.malaymail.com/news/malaysia/2020/ 07/10/statistics-dept-malaysias-new%02-poverty-line-income-isrm2208-over-400k%02-house/1883285

DOSM. (2020d). *Pengelasan Baharu Isi Rumah 2020*. Department of Statistics Malaysia. https://www.dosm.gov.my/v1/index.php?r=column/cthemeByCat&cat=120&bul_id=TU00TmRhQ1N5TUxHVWN0T2VjbXJYZz09&menu_id=amVoWU54UTl0a21NWmdhMjFMMWcyZz09

DOSM. (2023). *Current Population Estimates By Adminstrative District (2023)* (Issue August). https://www.dosm.gov.my/portal-main/release-content/current-population-estimates-by-adminstrative-district

Douglas, M., Katikireddi, S. V., Taulbut, M., McKee, M., & McCartney, G. (2020). Mitigating the wider health effects of covid-19 pandemic response. *The BMJ*, *369*(April), 1–6. https://doi.org/10.1136/bmj.m1557

Du, J., King, R., & Chanchani, R. (2020). Urban Inequalities During COVID-19 |Tackling Inequality in Cities is Essential for Fighting COVID-19. *World Resources Institute*, 1–7. https://www.wri.org/blog/2020/04/coronavirus-inequality-cities

Dubey, S., Sahoo, K. C., Dash, G. C., Sahay, M. R., Mahapatra, P., Bhattacharya, D., Barrio, M. O. del, & Pati, S. (2022). Housing-related challenges during COVID-19 pandemic among urban poor in low- and middle-income countries: A systematic review and gap analysis. *Frontiers in Public Health*, *10*(1). https://doi.org/10.3389/fpubh.2022.1029394

Economic Planning Unit. (2021a). 12th Malaysia Plan (2021-2025). *Economic Planning Unit, Prime Miniter's Department*, 1–532. https://rmke12.epu.gov.my/bm%0Ahttps://rmke12.epu.gov.my/about-us

Economic Planning Unit. (2021b). A Prosperous, Inclusive, Sustainable Malaysia. In *12th Malaysian Plan*. https://rmke12.epu.gov.my/bm

Economic Planning Unit. (2021c). *Twelfth Plan Pamphlet* (p. 1). https://rmke12.epu.gov.my/en

Ekawati, S. A., Ali, M., Trisutomo, S., & Ghani, R. C. A. (2020). The Study of Public Open Space effectiveness in Makassar Waterfront City using Good Public Space Index (GPSI). *IOP Conference Series: Materials Science and Engineering*, *875*(1). https://doi.org/10.1088/1757-899X/875/1/012003

El Khateeb, S., & Shawket, I. M. (2022). A new perception; generating well-being urban public spaces after the era of pandemics. *Developments in the Built*

Environment, *9*. https://doi.org/10.1016/j.dibe.2021.100065

Elliott, H., Eon, C., & Breadsell, J. K. (2020). Improving city vitality through urban heat reduction with green infrastructure and design solutions: A systematic literature review. *Buildings*, *10*(12), 1–30. https://doi.org/10.3390/buildings10120219

Engemann, K., Pedersen, C. B., Arge, L., Tsirogiannis, C., Mortensen, P. B., & Svenning, J. C. (2019). Residential green space in childhood is associated with lower risk of psychiatric disorders from adolescence into adulthood. *Proceedings of the National Academy of Sciences of the United States of America*, *116*(11), 5188–5193. https://doi.org/10.1073/pnas.1807504116

Estabrooks, P. A., Lee, R. E., & Gyurcsik, N. C. (2003). Resources for physical activity participation: Does availability and accessibility differ by neighborhood socioeconomic status? *Annals of Behavioral Medicine*, *25*(2), 100–104. https://doi.org/10.1207/S15324796ABM2502_05

Fatiah, A. ., Ponrahono, Z., & Zakariya, K. (2021). Quality Of Designs And Features Of Small Urban Green Spaces In Petaling Jaya Town, Malaysia. *Journal of the Malaysian Institute of Planners*, *19*(1), 138–149. https://www.planningmalaysia.org/index.php/pmj/article/view/931

FDTCP. (2011). *Open Spaces in Urban Malaysia* (Federal Department of Town and Country Planning (ed.)).

FDTCP. (2013). *Garis Panduan Tanah Lapang dan Kawasan Rekreasi, GP005-A* (Issue Julai).

FDTCP. (2021). *GP005 2021: Open Space Planning Guideline*. https://www.planmalaysia.gov.my/planmalaysia/modules_resources/database_stores/17/46_38.pdf

Fleckney, P., & Bentley, R. (2021). The urban public realm and adolescent mental health and wellbeing: A systematic review. *Social Science and Medicine*, *284*(April), 114242. https://doi.org/10.1016/j.socscimed.2021.114242

Flowers, E. P., Timperio, A., Hesketh, K. D., & Veitch, J. (2019). *Examining the Features of Parks That Children Visit During Three Stages of Childhood*. https://www.mdpi.com/1660-4601/16/9/1658?type=check_update&version=1

Flowers, E. P., Timperio, A., Hesketh, K. D., & Veitch, J. (2020). Comparing the features of parks that children usually visit with those that are closest to home: A brief report. *Urban Forestry and Urban Greening*, *48*(June 2019), 126560. https://doi.org/10.1016/j.ufug.2019.126560

Francis, J., Giles-Corti, B., Wood, L., & Knuiman, M. (2012). Creating sense of community: The role of public space. *Journal of Environmental Psychology*, *32*(4), 401–409. https://doi.org/10.1016/j.jenvp.2012.07.002

Geng, D. (Christina), Innes, J., Wu, W., & Wang, G. (2021). Impacts of COVID-19 pandemic on urban park visitation: a global analysis. *Journal of Forestry Research*, *32*(2), 553–567. https://doi.org/10.1007/s11676-020-01249-w

Ghanbari-Azarneir, S., Anbari, S., Hosseini, S.-B., & Yazdanfar, S.-A. (2015). Identification of Child-friendly Environments in Poor Neighborhoods. *Procedia - Social and Behavioral Sciences*, *201*(February), 19–29. https://doi.org/10.1016/j.sbspro.2015.08.114

Grigoletto, A., Mauro, M., Campa, F., Loi, A., Zambon, M. C., Bettocchi, M., Nieuwenhuijsen, M., Bragonzoni, L., Maietta Latessa, P., & Toselli, S. (2021). Attitudes towards green urban space: a case study of two italian regions. *International Journal of Environmental Research and Public Health*, *18*(12). https://doi.org/10.3390/ijerph18126442

Groshong, L., Wilhelm Stanis, S. A., Kaczynski, A. T., Hipp, J. A., & Besenvi, G. M. (2016). Exploring attitudes, perceived norms, and personal agency: Insights into theory-based messages to encourage park-based physical activity Lisa. *Journal of Activity & Health*.

Hakovirta, M., & Denuwara, N. (2020). How COVID-19 redefines the concept of sustainability. *Sustainability (Switzerland)*, *12*(9), 10–13. https://doi.org/10.3390/su12093727

Hamdy, M., & Plaku, R. (2021a). Pocket parks: Urban living rooms for urban regeneration. *Civil Engineering and Architecture*, *9*(3), 747–759. https://doi.org/10.13189/cea.2021.090316

Hamdy, M., & Plaku, R. (2021b). Pocket parks: Urban living rooms for urban regeneration. *Civil Engineering and Architecture*, *9*(3), 747–759. https://doi.org/10.13189/cea.2021.090316

Hamzah, N. A. (2022, September 15). 98,000 Unit Rumah PPR Siap di Seluruh Negara. *Utusan Malaysia*. https://www.utusan.com.my/nasional/2022/09/98000-unit-rumah-ppr-siap-di-seluruh-negara/

Hanapi, N. L., & Ahmad, S. S. (2016a). A Review on Environmental Characteristic that Influence Children Physical Activities in Low Cost Housing. *Procedia - Social and Behavioral Sciences*, *222*, 19–27. https://doi.org/10.1016/j.sbspro.2016.05.166

Hanapi, N. L., & Ahmad, S. S. (2016b). A Review on Environmental Characteristic that Influence Children Physical Activities in Low Cost Housing. *Procedia - Social and Behavioral Sciences*, *222*, 19–27. https://doi.org/10.1016/j.sbspro.2016.05.166

Harian Metro. (2017, October 19). *Nikmati kemudahan Pantai Eco Park*. https://www.hmetro.com.my/mutakhir/2017/10/274391/nikmati-

kemudahan-pantai-eco-park

Hartabela, D., Dewancker, B., Vidyana, C., & Mori, Y. (2022). Tourist Preferences and Expectations of Urban Park: a Case Study in Kitakyushu, Japan. *Planning Malaysia*, *20*(1), 89–100. https://doi.org/10.21837/PM.V20I20.1081

Heo, S., Nori-Sarma, A., Kim, S., Lee, J. T., & Bell, M. L. (2021). Do persons with low socioeconomic status have less access to greenspace? Application of accessibility index to urban parks in Seoul, South Korea. *Environmental Research Letters*, *16*(8). https://doi.org/10.1088/1748-9326/ac12f1

Ho, R., Chong, P., Chung, T., Fan, C., Ho, R., Lam, K., Lee, R., Lo, Y., Ng, E., Wan, L., & Wong, K. (2020). *Stay Physically Active While Staying At Home*. *June*.

Honey-Roses, J., Anguelovski, I., Bohigas, J., Chireh, V., Daher, C., Konijnendijk, C., Litt, J., Mawani, V., McCall, M., Orellana, A., Oscilowicz, E., Sánchez, U., Senbel, M., Tan, X., Villagomez, E., Zapata, O., & Nieuwenhuijsen, M. (2020). *The Impact of COVID-19 on Public Space: A Review of the Emerging Questions*. 1–20. https://doi.org/10.31219/osf.io/rf7xa

Huang, J. H., Hipp, J. A., Marquet, O., Alberico, C., Fry, D., Mazak, E., Lovasi, G. S., Robinson, W. R., & Floyd, M. F. (2020). Neighborhood characteristics associated with park use and park-based physical activity among children in low-income diverse neighborhoods in New York City. *Preventive Medicine*, *131*(April 2019), 105948. https://doi.org/10.1016/j.ypmed.2019.105948

Hughey, S. M., Walsemann, K. M., Child, S., Powers, A., Reed, J. A., & Kaczynski, A. T. (2016). Using an environmental justice approach to examine the relationships between park availability and quality indicators, neighborhood disadvantage, and racial/ethnic composition. *Landscape and Urban Planning*, *148*, 159–169. https://doi.org/10.1016/j.landurbplan.2015.12.016

Ibrahim, P. H., Dali, M. M., & Haron, R. C. (2017). Open space development planning in Malaysia: Issues and problems. *Advanced Science Letters*, *23*(7), 6322–6325. https://doi.org/10.1166/asl.2017.9261

Idrus, N., & Siong, H. C. (2008). Affordable And Quality HousingThrough The Low Cost Housing. *Affordable And Quality HousingThrough The Low Cost Housing Provision In Malaysia*, 1–21.

Ishak, N. H., Mohamad Thani, T., & Ed Wynn, L. (2018). A Study on Space Design Criteria for Affordable Housing in Klang Valley, Malaysia. *Journal of Built Environment, Technology and Engineering*, *4*, 82–98.

Ismail, A. S., Azili, N. S., & Taufik, F. A. @. (2019). The Effectiveness of Public

Facilities in Low Cost Housing Flats from Residential Satisfaction Towards Sustainable Living. *Asia Proceedings of Social Sciences*, *5*(1 SE-5th ASIA International Conference 2019, Malaysia). https://doi.org/10.31580/apss.v5i1.1066

Ismail, A. S., Azili, N. S., Taufik, F. A., Esa, E. M., Ashar, A. A., @ Taufik, F. A., Esa, E. M., & Ashar, A. A. (2020). Public facilities preference of youth residents in low-cost housing flats towards sustainable living. *International Journal of Psychosocial Rehabilitation*, *24*(2), 1950–1971. https://doi.org/10.37200/IJPR/V24I2/PR200496

Jamhawi, M. D., Al-shawabkeh, R. K., & Alobaidat, E. I. (2020). Spatial Modeling of Transformation of Public Open Spaces in Zarqa , Jordan. *International Journal of Sustainable Development and Planning*, *15*(5), 685–703.

Jamhawi, M. D., Al-Shawabkeh, R. K., & Alobaidat, E. I. (2020). Spatial modeling of transformation of public open spaces in Zarqa, Jordan. *International Journal of Sustainable Development and Planning*, *15*(5), 685–703. https://doi.org/10.18280/ijsdp.150511

Jayakody, R. R. J. C., Amarathunga, D., & Haigh, R. (2018). Integration of disaster management strategies with planning and designing public open spaces. *Procedia Engineering*, *212*(2017), 954–961. https://doi.org/10.1016/j.proeng.2018.01.123

Jennings, V., & Bamkole, O. (2019). The relationship between social cohesion and urban green space: An avenue for health promotion. *International Journal of Environmental Research and Public Health*, *16*(3). https://doi.org/10.3390/ijerph16030452

KLCH. (2020). Kuala Lumpur Structure Plan 2040 (PSKL2040). In *Kuala Lumpur City Hall*.

KLCH. (2023). *Kuala Lumpur Structure Plan 2040 (Final Report-Mei 2023)*.

Kleeman, A., Gunn, L., Giles-Corti, B., & Foster, S. (2020). Communal area design in apartment buildings: development and comparison of a desktop and on-the-ground landscape assessment tool. *Cities & Health*, 1–15. https://doi.org/10.1080/23748834.2020.1773034

Konijnendijk van den Bosch, C. (2021). *Introducing-the-3-30-300-rule*.

Kowaltowski, D. C. C. K., da Silva, V. G., Pina, S. A. M. G., Labaki, L. C., Ruschel, R. C., & de Carvalho Moreira, D. (2006). Quality of life and sustainability issues as seen by the population of low-income housing in the region of Campinas, Brazil. *Habitat International*, *30*(4), 1100–1114. https://doi.org/10.1016/j.habitatint.2006.04.003

KPKT. (2016). KPKT Statistics 2016. *Ministry of Urban Wellbeing, Housing and Local Government*, 30. www.kpkt.gov.my

Kuala Lumpur City Hall. (2018). *Senarai PPR / PA Di Bawah Seliaan DBKL Mengikut Parlimen*. Data.Gov.My. https://www.data.gov.my/data/ms_MY/dataset/senarai-ppr-pa-di-bawah-seliaan-dbkl-mengikut-parlimen/resource/4c006680-388b-4f18-b495-3fa8f4bde1bc?view_id=cc6cb984-9616-453a-889f-cad25f385648

Latfi, M. F. M., Karim, H. A., & Zahari, S. S. (2012). Compromising the Recreational Activities of Children in Low Cost Flats. *Procedia - Social and Behavioral Sciences*, *50*(July), 791–799. https://doi.org/10.1016/j.sbspro.2012.08.081

Lauwers, L., Leone, M., Guyot, M., Pelgrims, I., Remmen, R., Van den Broeck, K., Keune, H., & Bastiaens, H. (2021). Exploring how the urban neighborhood environment influences mental well-being using walking interviews. *Health and Place*, *67*(May 2020), 102497. https://doi.org/10.1016/j.healthplace.2020.102497

Lee, S. A., Jobe, M. C., Mathis, A. A., & Gibbons, J. A. (2020). Incremental validity of coronaphobia : Coronavirus anxiety explains depression , generalized anxiety , and death anxiety. *Journal of Anxiety Disorders Journal*, *74*(July), 6–9. https://doi.org/10.1016/j.janxdis.2020.102268

Lee, Y. C., & Kim, K. H. (2015). Attitudes of citizens towards urban parks and green spaces for urban sustainability: The case of Gyeongsan City, Republic of Korea. *Sustainability (Switzerland)*, *7*(7), 8240–8254. https://doi.org/10.3390/su7078240

Lehberger, M., Kleih, A. K., & Sparke, K. (2021). Self-reported well-being and the importance of green spaces – A comparison of garden owners and non-garden owners in times of COVID-19. *Landscape and Urban Planning*, *212*(November 2020), 104108. https://doi.org/10.1016/j.landurbplan.2021.104108

Liang, X., Lu, T., & Yishake, G. (2022). How to promote residents' use of green space: An empirically grounded agent-based modeling approach. *Urban Forestry and Urban Greening*, *67*(July 2021), 127435. https://doi.org/10.1016/j.ufug.2021.127435

Litman, T. (2021). Urban Sanity: Understanding Urban Mental Health Impacts and How to Create Saner, Happier Cities. In *Victoria Transport Policy Institute*.

Liu, S., & Wang, X. (2021). Reexamine the value of urban pocket parks under the impact of the COVID-19. *Urban Forestry and Urban Greening*, *64*(February), 127294. https://doi.org/10.1016/j.ufug.2021.127294

Lundgren-Kownacki, K., Hornyanszky, E. D., Chu, T. A., Olsson, J. A., & Becker, P. (2018). Challenges of using air conditioning in an increasingly hot climate. *International Journal of Biometeorology*, *62*(3), 401–412.

https://doi.org/10.1007/s00484-017-1493-z

M.Rahim, F. A., Zainon, N., Sulaiman, S., Lou, E., Zulkifli, N. H., & Ayob, M. F. (2019). Factors Affecting the Ownership of Low-Cost Housing for Socio-Economic Development in Malaysia. *Journal of Building Performance*, *10*(1), 1–16.

Madzia, J., Ryan, P., Yolton, K., Percy, Z., Newman, N., LeMasters, G., & Brokamp, C. (2019). Residential Greenspace Association with Childhood Behavioral Outcomes. *Journal of Pediatrics*, *207*, 233–240. https://doi.org/10.1016/j.jpeds.2018.10.061

Maidin, A. J., & Mobarak Ali, B. B. (2009). Powers of the Local Authority in Regulating Land Planning and Development Control: Whither Control. *Planning Malaysia Journal*, *7*(1), 133–147. https://doi.org/10.21837/pmjournal.v7.i1.75

Malek, N. A., Mohammad, S. Z., & Nashar, A. (2018). Determinant factor for quality green open space assessment in Malaysia. *Journal of Design and Built Environment*, *18*(2), 26–36. https://doi.org/10.22452/jdbe.vol18no2.3

Malonza, J. M. (2020). *Neighbourhood Streets as Public Space . COVID-19 Public Life in Kimisange , Rwanda*. *5*(3), 39–52. https://doi.org/10.32891/jps.v5i3.1367

Maric, J., Aleksandra, D., Antonic, B., Furundzic, D., & Parezanin, V. (2021). The effects of open space on reducing workplace stress: Case study of business park in the post-socialist urban setting. *Sustainability (Switzerland)*, *13*(1), 1–17. https://doi.org/10.3390/su13010336

Marques, M., Gheller, R., Henrique, N., Menezes, E. C., Streit, I., Franchini, E., & Autran, R. (2020). Physical activity during the COVID-19 pandemic: a survey with adults in Northern Brazil. *Revista Brasileira de Atividade Física & Saúde*, *25*(December), 1–8. https://doi.org/10.12820/rbafs.25e0151

Marquet, O., Aaron Hipp, J., Alberico, C., Huang, J. H., Fry, D., Mazak, E., Lovasi, G. S., & Floyd, M. F. (2019). Park use preferences and physical activity among ethnic minority children in low-income neighborhoods in New York City. *Urban Forestry and Urban Greening*, *38*(January), 346–353. https://doi.org/10.1016/j.ufug.2019.01.018

Marquet, O., Hipp, J. A., Alberico, C., Huang, J. H., Mazak, E., Fry, D., Lovasi, G. S., & Floyd, M. F. (2019). How Does Park Use and Physical Activity Differ between Childhood and Adolescence? A Focus on Gender and Race-Ethnicity. *Journal of Urban Health*, *96*(5), 692–702. https://doi.org/10.1007/s11524-019-00388-8

Maryanti, M. R., Khadijah, H., Uzair, A. M., & Ghazali, M. A. R. M. M. (2016). The urban green space provision using the standards approach: issues and challenges of its implementation in Malaysia. *Sustainable Development*

and Planning VIII, *1*, 369–379. https://doi.org/10.2495/sdp160311

Marzukhi, M. A., Karim, H. A., & Latfi, M. F. (2012). Evaluating the Shah Alam City Council Policy and Guidelines on the Hierarchy of Neighborhood Open Space. *Procedia - Social and Behavioral Sciences*, *36*(June 2011), 456–465. https://doi.org/10.1016/j.sbspro.2012.03.050

Mayen Huerta, C., & Cafagna, G. (2021). Snapshot of The Use of Urban Green Spaces in Mexico City During The Covid-19 Pandemic: A Qualitative Study. *International Journal of Environmental Research and Public Health*, *18*(8). https://doi.org/10.3390/ijerph18084304

Megahed, N. A., & Ghoneim, E. M. (2020). Antivirus-built environment: Lessons learned from Covid-19 pandemic. *Sustainable Cities and Society*, *61*(May), 102350. https://doi.org/10.1016/j.scs.2020.102350

Megat Muzafar, P. M., & Kunasekaran, T. (2020). Three Major Threats – Money, Food and Living Conditions. *Khazanah Research Institute*, *March*, 1–8.

Meikle, S., Ramasut, T., & Walker, J. (2001). Sustainable Urban Livelihoods: Concepts and Implications for Policy. *Development*, *33*(112), 361–375. http://www.emeraldinsight.com/doi/10.1108/03068290610660643

Ministry of Health Malaysia. (2020). Senarai Pusat Saringan Dan Hospital Yang Mengendalikan Kes Covid-19. *Garis Panduan Pengurusan COVID-19 Di Malaysia*, *5*, 15. http://www.moh.gov.my/index.php/pages/view/2019-ncov-wuhan-guidelines

Ministry of Health Malaysia. (2021). *SOP Perintah Kawalan Pergerakan (PKP)*. Ministry of Health Malaysia. https://covid-19.moh.gov.my/faqsop/sop-perintah-kawalan-pergerakan-pkp

Ministry of Housing and Local Government. (2023). *Pemilikan Rumah PPR*. Ministry of Housing and Local Government. https://www.kpkt.gov.my/index.php/pages/view/256

Ministry of Local Government Development. (2021). *Pihak Berkuasa Tempatan*. Ministry of Local Government Development.

Mohamed, M.Farid, N.Raman, S., Iman Pratama, T. M., & M. Yusoff, W. F. (2014). Outdoor Environment of Low-cost Housing: A case study of Flat Taman Desa Sentosa. *E3S Web of Conferences*, *3*. https://doi.org/10.1051/e3sconf/20140301005

Mohamed, Mohd Farid, Raman, S. N., Pratama, T. M. I., & M. Yusoff, W. F. (2014). Outdoor Environment of Low-cost Housing: A case study of Flat Taman Desa Sentosa. *E3S Web of Conferences*, *3*. https://doi.org/10.1051/e3sconf/20140301005

Mohd Razali, I. A. K., & Abd. Shukor, S. F. (2022). *COMPARISON OF*

MALAYSIAN URBAN GREEN SPACES USE PRIOR AND DURING THE COVID-19 PANDEMIC AND PREFERENCES FOR POST-PANDEMIC DESIGN. *20*(5), 1–13.

Mokhtar, N. S., Hoon Leh, O. L., Marzukhi, M. A., & Kwong, Q. J. (2022). SOCIAL IMPACT OF SOCIAL DISTANCING ON RESIDENTS OF LOW-COST APARTMENTS DURING THE CONDITIONAL MOVEMENT CONTROL ORDER (CMCO) IN SELANGOR ,. *Planning Malaysia*, *20*(4), 167–182. https://planningmalaysia.org/index.php/pmj/article/view/1159

Morar, T., Radoslav, R., Spiridon, L. C., & Păcurar, L. (2014). Assessing pedestrian accessibility to green space using GIS. *Transylvanian Review of Administrative Sciences*, *42*, 116–139.

Morrow, V. (2001). Using qualitative methods to elicit young people's perspectives on their environments: Some ideas for community health initiatives. *Health Education Research*, *16*(3), 255–268. https://doi.org/10.1093/her/16.3.255

Moulay, A., & Daouia, C. (2020). *THE POST COVID-19 ASPECT OF PUBLIC OPEN SPACES – AN ECONOMIC AND URBAN DESIGN PERSPECTIVE*. *September*. https://www.researchgate.net/publication/344058553_THE_POST_COVID-19_ASPECT_OF_PUBLIC_OPEN_SPACES_-_AN_ECONOMIC_AND_URBAN_DESIGN_PERSPECTIVE

Mphande, F. A. (2016a). Poverty, Health and Livelihoods. In *Infectious Diseases and Rural Livelihood in Developing Countries* (pp. 1–16). Springer Singapore. https://doi.org/10.1007/978-981-10-0428-5_1

Mphande, F. A. (2016b). Poverty, Health and Livelihoods. In *Infectious Diseases and Rural Livelihood in Developing Countries* (pp. 1–16). Springer Nature. https://doi.org/10.1007/978-981-10-0428-5

Mullenbach, L. E., Larson, L. R., Floyd, M. F., Marquet, O., Huang, J., Alberico, C., Ogletree, S. S., & Hipp, J. A. (2022). Landscape and Urban Planning Cultivating social capital in diverse , low-income neighborhoods : The value of parks for parents with young children. *Landscape and Urban Planning*, *219*(November 2021), 104313. https://doi.org/10.1016/j.landurbplan.2021.104313

Myrick, P. (2020). The Recovery Will Happen in Public Space. *Project for Public Spaces*, https://www.pps.org/article/the-recovery-will-happ. https://www.pps.org/article/the-recovery-will-happen-in-public-space

Nared, P. V., & Lamovšek, A. Z. (2015). Public open space as a contribution to urban development in small Slovenian cities. *Urbani Izziv*, *26*, S114–S129. https://doi.org/10.5379/urbani-izziv-en-2015-26-supplement-008

Nath, T. K., Zhe Han, S. S., & Lechner, A. M. (2018). Urban green space and well-being in Kuala Lumpur, Malaysia. *Urban Forestry and Urban*

Greening, *36*(October), 34–41. https://doi.org/10.1016/j.ufug.2018.09.013

National Housing Department. (2020). *Program Perumahan Rakyat (PPR)*. Jabatan Perumahan Negara. https://teduh.kpkt.gov.my/scheme/ppr_dimiliki

National Institute of Mental Health. (2018). Chronic Illness and Mental Health: Recognizing and Treating Depression. *NIH Publication*, 1,2. https://www.nimh.nih.gov/health/publications/chronic-illness-mental-health

Navarrete-Hernandez, P., Vetro, A., & Concha, P. (2021). Building safer public spaces: Exploring gender difference in the perception of safety in public space through urban design interventions. *Landscape and Urban Planning*, *214*(July 2020), 104180. https://doi.org/10.1016/j.landurbplan.2021.104180

Nitidara, N. P. A., Sarwono, J., Suprijanto, S., & Soelami, F. X. N. (2022). The multisensory interaction between auditory, visual, and thermal to the overall comfort in public open space: A study in a tropical climate. *Sustainable Cities and Society*, *78*(10), 103622. https://doi.org/10.1016/j.scs.2021.103622

Nochian, A., Mohd Tahir, O., Maulan, S., & Rakhshandehroo, M. (2015). A comprehensive public open space categorization using classification system for sustainable development of public open spaces. *ALAM CIPTA, International Journal on Sustainable Tropical Design Research & Practice*, *8*(spec.1), 29–40. https://www.researchgate.net/publication/291833200_A_COMPREHENSIVE_PUBLIC_OPEN_SPACE_CATEGORIZATION_USING_CLASSIFICATION_SYSTEM_FOR_SUSTAINABLE_DEVELOPMENT_OF_PUBLIC_OPEN_SPACES

Noor Hisham, N., & Md Amin, N. D. (2020). Housing Design for Urban Poor in Kuala Lumpur: A Literature Review. *IOP Conference Series: Earth and Environmental Science*, *498*(1). https://doi.org/10.1088/1755-1315/498/1/012083

Ogletree, S. S., Huang, J. H., Alberico, C., Marquet, O., Floyd, M. F., & Hipp, J. A. (2020). Parental preference for park attributes related to children's use of parks in low-income, racial-ethnic diverse neighborhoods. *Preventive Medicine*, *1*(1), 6–15. https://doi.org/10.1016/j.ypmed.2019.105948

Omar, D., Omar, K. A., Kamaludin, Z., Othman, S., & Mohd Yusoff, Z. (2017a). Recreational facilities for youth in Malaysian Urban Areas. Case studies: Lembah Pantai, Kuala Lumpur and Kota Kinabalu, Sabah. *Planning Malaysia*, *6*, 67–74. https://doi.org/10.21837/pmjournal.v16.i6.268

Omar, D., Omar, K. A., Kamaludin, Z., Othman, S., & Mohd Yusoff, Z. (2017b). Recreational facilities for youth in Malaysian Urban Areas. Case studies: Lembah Pantai, Kuala Lumpur and Kota Kinabalu, Sabah. *Planning*

Malaysia, *6*, 67–74. https://doi.org/10.21837/pmjournal.v16.i6.268

Otero Peña, J. E., Kodali, H., Ferris, E., Wyka, K., Low, S., Evenson, K. R., Dorn, J. M., Thorpe, L. E., & Huang, T. T. K. (2021). The Role of the Physical and Social Environment in Observed and Self-Reported Park Use in Low-Income Neighborhoods in New York City. *Frontiers in Public Health*, *9*(April), 1–9. https://doi.org/10.3389/fpubh.2021.656988

Padial-Ruz, R., Puga-González, M. E., Céspedes-Jiménez, Á., & Cabello-Manrique, D. (2021a). Determining factors in the use of urban parks that influence the practice of physical activity in children: A systematic review. *International Journal of Environmental Research and Public Health*, *18*(7). https://doi.org/10.3390/ijerph18073648

Padial-Ruz, R., Puga-González, M. E., Céspedes-Jiménez, Á., & Cabello-Manrique, D. (2021b). Determining factors in the use of urban parks that influence the practice of physical activity in children: A systematic review. *International Journal of Environmental Research and Public Health*, *18*(7). https://doi.org/10.3390/ijerph18073648

Park, S., Han, B., Cohen, D. A., & Derose, K. P. (2018). Contributions of Neighborhood Parks to Physical Activity in High-Poverty Urban Neighborhoods. *Journal of Urban Health*, *95*(6), 881–887. https://doi.org/10.1007/s11524-018-0320-0

Patterson, R., McNamara, E., Tainio, M., de Sá, T. H., Smith, A. D., Sharp, S. J., Edwards, P., Woodcock, J., Brage, S., & Wijndaele, K. (2018). Sedentary behaviour and risk of all-cause, cardiovascular and cancer mortality, and incident type 2 diabetes: a systematic review and dose response meta-analysis. *European Journal of Epidemiology*, *33*(9), 811–829. https://doi.org/10.1007/s10654-018-0380-1

Paul, A., Nath, T. K., Noon, S. J., Islam, M. M., & Lechner, A. M. (2020). Public Open space, Green exercise and well-being in Chittagong, Bangladesh. *Urban Forestry and Urban Greening*, *55*(April), 126825. https://doi.org/10.1016/j.ufug.2020.126825

Piaggio, M. (2021). The value of public urban green spaces: Measuring the effects of proximity to and size of urban green spaces on housing market values in San José, Costa Rica. *Land Use Policy*, *109*(July), 105656. https://doi.org/10.1016/j.landusepol.2021.105656

Pisano, C. (2020). Strategies for post-COVID cities: An insight to Paris En Commun and Milano 2020. *Sustainability (Switzerland)*, *12*(15). https://doi.org/10.3390/SU12155883

Pouso, S., Borja, Á., Fleming, L. E., Gómez-Baggethun, E., White, M. P., & Uyarra, M. C. (2021). Contact with blue-green spaces during the COVID-19 pandemic lockdown beneficial for mental health. *Science of the Total Environment*, *756*, 143984.

https://doi.org/10.1016/j.scitotenv.2020.143984

Rameli, A. (2021). *Transit Oriented Development (TOD) and Market Feasibility Study for Real estate Development: Policies, Strategies and Urban Planning Guideline*.

Rebar, A. L., Stanton, R., Geard, D., Short, C., Duncan, M. J., & Vandelanotte, C. (2015). A meta-meta-analysis of the effect of physical activity on depression and anxiety in non-clinical adult populations. *Health Psychology Review*, *9*(3), 366–378. https://doi.org/10.1080/17437199.2015.1022901

Reis, A. C., Mortimer, T., Vieira, M. C., Pessanha de Freitas, V., & Sperandei, S. (2020). Quality of Public Physical Activity Resources and its Association with Frequency of Use in Two Low-Income Neighborhoods in Brazil. *Leisure Sciences*, *0*(0), 1–25. https://doi.org/10.1080/01490400.2020.1714518

Rice, W. L., Mateer, T. J., Reigner, N., Newman, P., Lawhon, B., & Taff, B. D. (2020). Changes in recreational behaviors of outdoor enthusiasts during the COVID-19 pandemic: analysis across urban and rural communities. *Journal of Urban Ecology*, *6*(1), 1–7. https://doi.org/10.1093/jue/juaa020

Roberts, H., Kellar, I., Conner, M., Gidlow, C., Kelly, B., Nieuwenhuijsen, M., & McEachan, R. (2019). Associations between park features, park satisfaction and park use in a multi-ethnic deprived urban area. *Urban Forestry and Urban Greening*, *46*(October). https://doi.org/10.1016/j.ufug.2019.126485

Rosli, S., Leh, O. L. H., Adzmi, N. A. M., & Marzukhi, M. A. (2020). Relationship between quality of urban parks and physical activity: A case study in changkat public park, Batu Gajah, Perak. *Planning Malaysia*, *18*(4), 158–172. https://doi.org/10.21837/pm.v18i14.824

Saldana, J. (2013). The Coding Manual for Qualitative Researchers (2nd edition). In *SAGE Publication* (2nd ed.). Sage Publications. https://doi.org/10.1108/QROM-08-2016-1408

Samad, N. S. A., Abdul-Rahim, A. S., Afandi, S. H. M., & Mohd Johari, M. Y. (2021). Factors influencing the public park use in Kuala Lumpur, Malaysia. *IOP Conference Series: Earth and Environmental Science*, *756*(1). https://doi.org/10.1088/1755-1315/756/1/012085

Santini, Z. I., Jose, P. E., York Cornwell, E., Koyanagi, A., Nielsen, L., Hinrichsen, C., Meilstrup, C., Madsen, K. R., & Koushede, V. (2020). Social disconnectedness, perceived isolation, and symptoms of depression and anxiety among older Americans (NSHAP): a longitudinal mediation analysis. *The Lancet Public Health*, *5*(1), e62–e70. https://doi.org/10.1016/S2468-2667(19)30230-0

Schultz, C. L., Wilhelm Stanis, S. A., Sayers, S. P., Thombs, L. A., & Thomas, I.

M. (2017). A longitudinal examination of improved access on park use and physical activity in a low-income and majority African American neighborhood park. *Preventive Medicine*, *95*, S95–S100. https://doi.org/10.1016/j.ypmed.2016.08.036

Sefcik, J. S., Kondo, M. C., Klusaritz, H., Sarantschin, E., Solomon, S., Roepke, A., South, E. C., & Jacoby, S. F. (2019a). Perceptions of nature and access to green space in four urban neighborhoods. *International Journal of Environmental Research and Public Health*, *16*(13), 1–13. https://doi.org/10.3390/ijerph16132313

Sefcik, J. S., Kondo, M. C., Klusaritz, H., Sarantschin, E., Solomon, S., Roepke, A., South, E. C., & Jacoby, S. F. (2019b). Perceptions of nature and access to green space in four urban neighborhoods. *International Journal of Environmental Research and Public Health*, *16*(13), 1–13. https://doi.org/10.3390/ijerph16132313

Shaikh, H., Mahalle, S., & Sahu, S. (2019). Towards creating an Ideal Neighbourhood. *International Research Journal of Engineering and Technology*, 6979–6982. www.irjet.net

Shoari, N., Ezzati, M., Baumgartner, J., Malacarne, D., & Fecht, D. (2020). Accessibility and allocation of public parks and gardens in England and Wales: A COVID-19 social distancing perspective. *PLoS ONE*, *15*(10 October 2020), 1–10. https://doi.org/10.1371/journal.pone.0241102

Shuib, K. B., Hashim, H., & Nasir, N. A. M. (2015). Community Participation Strategies in Planning for Urban Parks. *Procedia - Social and Behavioral Sciences*, *168*, 311–320. https://doi.org/10.1016/j.sbspro.2014.10.236

Shuid, S. (2016). The housing provision system in Malaysia. *Habitat International*, *54*, 210–223. https://doi.org/10.1016/j.habitatint.2015.11.021

Shukor, S. F. A. (2020). *The PPR Design Affects The Mental Health Of The Population During The CPP*. Faculty of Design and Architecture, UPM. https://frsb.upm.edu.my/article/the_ppr_design_affects_the_mental_health_of_the_population_during_the_cpp-56832 2/2

Sirrs, S., Studio, D., & Amos, T. (2011). *Centre for the Built Environment*. *May 2010*.

Siwar, C., Ahmed, F., Bashawir, A., & Mia, M. S. (2016). Urbanization and Urban Poverty in Malaysia: Consequences and Vulnerability. *Journal of Applied Sciences*, *16*(4), 154–160. https://doi.org/10.3923/jas.2016.154.160

Slater, S., Fitzgibbon, M., & Floyd, M. F. (2013). Urban Adolescents' Perceptions of their Neighborhood Physical Activity Environments. *Leisure Sciences*, *35*(2), 167–183. https://doi.org/10.1080/01490400.2013.761912

Snell, T. L., Simmonds, J. G., & Klein, L. M. (2020). Exploring the impact of contact with nature in childhood on adult personality. *Urban Forestry and*

Urban Greening, *55*(April), 126864. https://doi.org/10.1016/j.ufug.2020.126864

Soga, M., Evans, M. J., Tsuchiya, K., & Fukano, Y. (2021). A room with a green view: the importance of nearby nature for mental health during the COVID-19 pandemic. *Ecological Applications*, *31*(2), 1–10. https://doi.org/10.1002/eap.2248

Solari, C. D., & Mare, R. D. (2012). Housing crowding effects on children's wellbeing. *Social Science Research*, *41*(2), 464–476. https://doi.org/10.1016/j.ssresearch.2011.09.012

Sreetheran, M. (2017). Exploring the urban park use, preference and behaviours among the residents of Kuala Lumpur, Malaysia. *Urban Forestry and Urban Greening*, *25*(May), 85–93. https://doi.org/10.1016/j.ufug.2017.05.003

Supramani, S. (2021). Facilities such as playgrounds , government clinics are not readily available at PPR. *TheSun*.

Suratman, R., M. Raid, M., Nadzri, M. I., Samsudin, S., & Mohammad, N. (2020). The Implementation Of Standard Approach For Open Space Planning In Kuala Lumpur. *Journal of the Malaysian Institute of Planners*, *18*(4), 452–464. https://doi.org/10.21837/pm.v18i14.845

Teimouri, R. (2019). Social sustainability with Urban Green Space (UGS) planning. *Journal of Advances in Humanities and Social Sciences*, *5*(5), 236–246. https://doi.org/10.20474/jahss-5.5.5

Teimouri, R., Ghorbani, R., & Hodjati, H. (2017). Investigation of the Relationship between Public Green Space and Urban Life Quality. *Environmental Management and Sustainable Development*, *6*(1), 28. https://doi.org/10.5296/emsd.v6i1.10467

Teixeira, S. (2016). Beyond Broken Windows: Youth Perspectives on Housing Abandonment and its Impact on Individual and Community Well-Being. *Child Indicators Research*, *9*(3), 581–607. https://doi.org/10.1007/s12187-015-9327-1

Theobald, W. (1984). A History of Recreation Resource Planning: The Origin of Space Standards. *Leisure Studies*, *3*(2), 189–200. https://doi.org/10.1177/004728758502400294

Tu, X., Huang, G., & Wu, J. (2018). Contrary to common observations in the west, urban park access is only weakly related to neighborhood socioeconomic conditions in Beijing, China. *Sustainability (Switzerland)*, *10*(4), 1–12. https://doi.org/10.3390/su10041115

Ugolini, F., Massetti, L., Calaza-Martínez, P., Cariñanos, P., Dobbs, C., Ostoic, S. K., Marin, A. M., Pearlmutter, D., Saaroni, H., Šaulienė, I., Simoneti, M., Verlič, A., Vuletić, D., & Sanesi, G. (2020). Effects of the COVID-19

pandemic on the use and perceptions of urban green space: An international exploratory study. *Urban Forestry and Urban Greening*, *56*(October). https://doi.org/10.1016/j.ufug.2020.126888

Ugolini, F., Massetti, L., Pearlmutter, D., & Sanesi, G. (2021). Usage of urban green space and related feelings of deprivation during the COVID-19 lockdown: Lessons learned from an Italian case study. *Land Use Policy*, *105*(September 2020), 105437. https://doi.org/10.1016/j.landusepol.2021.105437

UN-Habitat. (2020). *Integrating health in urban and territorial planning: A sourcebook*. https://unhabitat.org/sites/default/files/2020/05/1-final_highres_20002_integrating_health_in_urban_and_territorial_planning_a_sourcebook.pdf

United Nations. (2023). *Report 2022 (Goal 3)-Ensure Healthy Lives and Promote Well-being for all at all Ages*. United Nations Statistics Division Development (UNSD). https://unstats.un.org/sdgs/report/2022/Goal-03/

Van Hecke, L., Deforche, B., Van Dyck, D., De Bourdeaudhuij, I., Veitch, J., & Van Cauwenberg, J. (2016). Social and physical environmental factors influencing adolescents' physical activity in urban public open spaces: A qualitative study using walk-along interviews. *PLoS ONE*, *11*(5), 1–24. https://doi.org/10.1371/journal.pone.0155686

Vaughan, C. A., Colabianchi, N., Hunter, G. P., Beckman, R., & Dubowitz, T. (2018). Park Use in Low-Income Urban Neighborhoods: Who Uses the Parks and Why? *Journal of Urban Health*, *95*(2), 222–231. https://doi.org/10.1007/s11524-017-0221-7

Veitch, J., Flowers, E., Ball, K., Deforche, B., & Timperio, A. (2020). Designing parks for older adults: A qualitative study using walk-along interviews. *Urban Forestry and Urban Greening*, *54*(June), 126768. https://doi.org/10.1016/j.ufug.2020.126768

Veitch, J., Salmon, J., Crawford, D., Abbott, G., Giles-Corti, B., Carver, A., & Timperio, A. (2018). The REVAMP natural experiment study: The impact of a play-scape installation on park visitation and park-based physical activity. *International Journal of Behavioral Nutrition and Physical Activity*, *15*(1), 1–14. https://doi.org/10.1186/s12966-017-0625-5

Ventriglio, A., Torales, J., Castaldelli-Maia, J. M., De Berardis, D., & Bhugra, D. (2021). Urbanization and emerging mental health issues. *CNS Spectrums*, *26*(1), 43–50. https://doi.org/10.1017/S1092852920001236

Vich, G., Delclòs-Alió, X., Maciejewska, M., Marquet, O., Schipperijn, J., & Miralles-Guasch, C. (2021). Contribution of park visits to daily physical activity levels among older adults: Evidence using GPS and accelerometery data. *Urban Forestry and Urban Greening*, *63*(April). https://doi.org/10.1016/j.ufug.2021.127225

Wahi, N., Mohamad Zin, R., Munikanan, V., Mohamad, I., & Junaini, S. (2018). Problems and Issues of High Rise Low Cost Housing in Malaysia. *IOP Conference Series: Materials Science and Engineering*, *341*(1). https://doi.org/10.1088/1757-899X/341/1/012027

Wai, H., Mak, L., & Koh, K. (2021). *Building a Healthy Urban Environment in East Asia Building a Healthy Urban Environment in East Asia*. *March*.

Wang, H., Dai, X., Wu, J., Wu, X., & Nie, X. (2019). Influence of urban green open space on residents' physical activity in China. *BMC Public Health*, *19*(1), 1–12. https://doi.org/10.1186/s12889-019-7416-7

Washington, T. L., Cushing, D. F., Mackenzie, J., Buys, L., & Trost, S. (2019). Fostering social sustainability through intergenerational engagement in Australian neighborhood parks. *Sustainability (Switzerland)*, *11*(16), 1–16. https://doi.org/10.3390/su11164435

Wexler, N., Fan, Y., Das, K. V., & French, S. (2021). Randomized informational intervention and adult park use and park-based physical activity in low-income, racially diverse urban neighborhoods. *Journal of Physical Activity and Health*, *18*(8), 920–928. https://doi.org/10.1123/jpah.2020-0751

WHO. (2010). Urban planning, environment and health: From evidence to policy action - meeting report. In *WHO Regional Office for Europe*. http://www.euro.who.int/__data/assets/pdf_file/0004/114448/E93987.pdf %5Cnpapers2://publication/uuid/D1F4723F-9856-4156-8C4D-5DB0EE873300

WHO. (2023). *Coronavirus disease (COVID-19) pandemic*. World Health Organization. https://www.who.int/emergencies/diseases/novel-coronavirus-2019

WHO Regional Office for Europe. (2016). *Urban green spaces and health*. 92.

Widiger, T. A., & Oltmanns, J. R. (2017). Neuroticism is a fundamental domain of personality with enormous public health implications. *World Psychiatry*, *16*(2), 144–145. https://doi.org/10.1002/wps.20411

Wilson, J., & Kelling, G. L. (1982). Broken Windows: The Police and Neighbourhood Safety. *The Atlantic Monthly*, *249*, 29–38.

Wood, L., Hooper, P., Foster, S., & Bull, F. (2017). Public green spaces and positive mental health – investigating the relationship between access, quantity and types of parks and mental wellbeing. *Health and Place*, *48*(September), 63–71. https://doi.org/10.1016/j.healthplace.2017.09.002

Wook Seo, K. (2022). Fine-Grained Parallelism for Post-Pandemic Cities: 12 Design Strategies for Resilient Urban Planning. *Planning Malaysia*, *20*(3), 37–49. https://doi.org/10.21837/pm.v20i22.1125

Wu, L., & Kim, S. K. (2021). Does socioeconomic development lead to more equal distribution of green space? Evidence from Chinese cities. *Science of the Total Environment*, *757*, 143780. https://doi.org/10.1016/j.scitotenv.2020.143780

Xie, B., Jiao, J., An, Z., Zheng, Y., & Li, Z. (2019). Deciphering the stroke–built environment nexus in transitional cities: Conceptual framework, empirical evidence, and implications for proactive planning intervention. *Cities*, *94*(June), 116–128. https://doi.org/10.1016/j.cities.2019.05.035

Yigitcanlar, T., Kamruzzaman, M., Teimouri, R., Degirmenci, K., & Alanjagh, F. (2020a). Association between park visits and mental health in a developing country context: The case of Tabriz, Iran. *Landscape and Urban Planning*, *199*(July 2019), 103805. https://doi.org/10.1016/j.landurbplan.2020.103805

Yigitcanlar, T., Kamruzzaman, M., Teimouri, R., Degirmenci, K., & Alanjagh, F. (2020b). Association between park visits and mental health in a developing country context: The case of Tabriz, Iran. *Landscape and Urban Planning*, *199*, 103805. https://doi.org/10.1016/j.landurbplan.2020.103805

Yin, R. K. (2017). *Case Study Research and Applications: Design and Methods*. SAGE Publications. https://books.google.com.my/books?id=6DwmDwAAQBAJ

Yin, R. K. (2018). Case Study Research and Applcations Design and Methods. In *SAGE Publication*.

Yusof, N., Abulzawaid, A., & El-Khateeb, S. M. (2020). Park use patterns among children- dual roles of neighbourhood parks. *IOP Conference Series: Earth and Environmental Science*, *452*(1). https://doi.org/10.1088/1755-1315/452/1/012102

Zainal, N. R., Kaur, G., Ahmad, N. 'Aisah, & Khalili, J. M. (2012). Housing Conditions and Quality of Life of the Urban Poor in Malaysia. *Procedia - Social and Behavioral Sciences*, *50*(July 2012), 827–838. https://doi.org/10.1016/j.sbspro.2012.08.085

Zhang, X., Zhou, S., Lin, R., & Su, L. (2020). Relationship between long-term residential green exposure and individuals' mental health: Moderated by income differences and residential location in urban China. *International Journal of Environmental Research and Public Health*, *17*(23), 1–21. https://doi.org/10.3390/ijerph17238955

Zhang, Y., Mavoa, S., Zhao, J., Raphael, D., & Smith, M. (2020). The association between green space and adolescents mental well-being: A systematic review. *International Journal of Environmental Research and Public Health*, *17*(18), 1–26. https://doi.org/10.3390/ijerph17186640