



This author profile is generated by Scopus. [Learn more](#)

Wiranegara, Hanny Wahidin

[Universitas Trisakti, Jakarta, Indonesia](#) [57200723444](#) [Connect to ORCID](#)

2

Citations by **2 documents**

10

Documents

1

h-index [View *h*-graph](#)

[View all metrics](#) >

[Set alert](#)

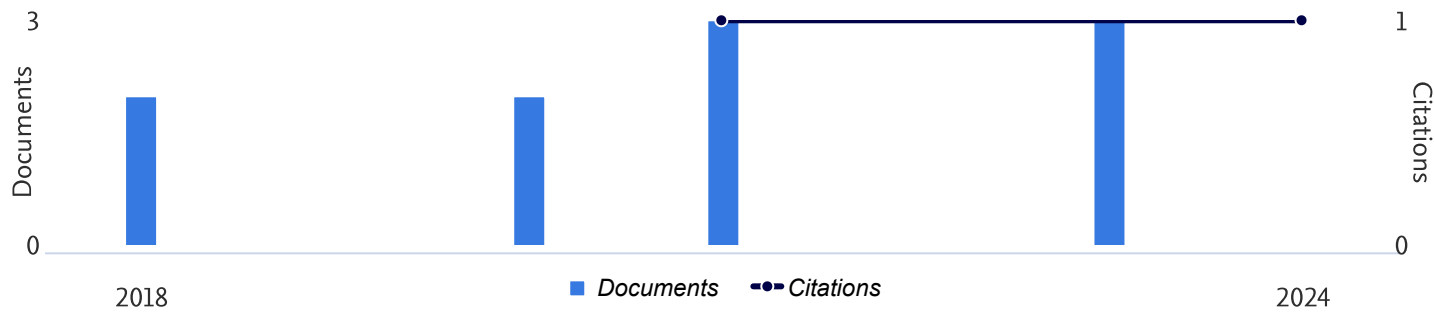


[Edit profile](#)



[More](#)

Document & citation trends



Scopus Preview

Scopus Preview users can only view a limited set of features. Check your institution's access to view all documents and features.

Check access


10 Documents Author Metrics ^{New} Cited by 2 documents 0 Preprints 19 Co-Authors 0 Topics 0 Awarded Grants ^{Beta}

Note:

Scopus Preview users can only view an author's last 10 documents, while most other features are disabled. Do you have [access](#) through your institution? Check your institution's access to view all documents and features.

10 documents

Export all Save all to list

Sort by Date (newest) 

Conference Paper

Spatial factors influencing sense of belonging of the middle-income residents living in planned housing in Jabodetabek

0

Citations

Ramadhani, A., Wiranegara, H.W., Tuguis, I., Thahirah, D.

AIP Conference Proceedings, 2023, 2706, 020169

Show abstract  Related documents

Conference Paper • *Open access*

Characteristics of public spaces in BSD City-gated community

0

Citations

Alfarizi, F.A., Wiranegara, H.W., Supriyatna, Y.

IOP Conference Series: Earth and Environmental Science, 2023, 1263(1), 012012

Show abstract  Related documents

Conference Paper • *Open access*

Effect of various housing patterns on social cohesion

0

Rahmanita, P., Wiranegara, H.W., Supriatna, Y.

IOP Conference Series: Earth and Environmental Science, 2023, 1263(1), 012011

Citations

Show abstract  Related documents

Conference Paper • *Open access*

Housing parks utilization behaviour based on income group in Jabodetabek area

0

Citations

Cantika, C., Wiranegara, H.W., Luru, M.N.

IOP Conference Series: Earth and Environmental Science, 2021, 737(1), 012060

Show abstract  Related documents

Conference Paper • *Open access*

The effect of housing policies on housing segregation in Indonesia

0

Citations

Wiranegara, H.W., Situmorang, R., Safitri, G., ...Maharani Putri, S., Haridza, T.Q.

IOP Conference Series: Earth and Environmental Science, 2021, 737(1), 012064

Show abstract  Related documents

Conference Paper • *Open access*

Effect of distance of housing to airport on noise disturbances level (case: Housing around Soekarno-Hatta International Airport)

0

Citations

Wigatiningrum, R., Wiranegara, H.W., Luru, M.N.

IOP Conference Series: Earth and Environmental Science, 2021, 737(1), 012030

Show abstract  Related documents

Article

Balanced housing policy optimization

0

Citations

Trisuci, R., Wiranegara, H.W., Supriatna, Y., Ramadhani, A.

International Journal of Scientific and Technology Research, 2020, 9(3), pp. 3025–3027

Show abstract  Related documents

Article

Walkability of sidewalk in commercial corridors

Sari, S.P., Wiranegara, H.W., Hardjakusumah, H.H., Luru, M.N.

International Journal of Scientific and Technology Research, 2020, 9(3), pp. 1367–1372

Show abstract  Related documents

1

Citations

Conference Paper • *Open access*

Accessibility of low-income family flats in North Jakarta city

Feminin, T.A., Wiranegara, H.W., Supriatna, Y.

IOP Conference Series: Earth and Environmental Science, 2018, 106(1), 012030

Show abstract  Related documents

0

Citations

Conference Paper • *Open access*

Composing the theme of city to be diverse and sustainable

Wiranegara, H.W.

IOP Conference Series: Earth and Environmental Science, 2018, 106(1), 012045

Show abstract  Related documents

1

Citations

[Back to top](#)

Author Position

Check your institution's access to view Author position.

[Check access](#)

First author %



Last author %



PAPER • OPEN ACCESS

The 6th International Symposium on Sustainable Urban Development (The 6th ISoSUD) 2023

To cite this article: 2023 *IOP Conf. Ser.: Earth Environ. Sci.* **1263** 011001

View the [article online](#) for updates and enhancements.

You may also like

- [Preface](#)
- [Atomic-scale interpretation of the quantum oscillations in cuprate superconductors](#)
K S Lee, J-J Kim, S H Joo et al.
- [Assessment of black rot development on apple surface using laser biospeckle technique](#)
Chhanda Koley, Rittik Das and Anil Kumar Nirala

PRIME
PACIFIC RIM MEETING
ON ELECTROCHEMICAL
AND SOLID STATE SCIENCE

HONOLULU, HI
Oct 6–11, 2024

Abstract submission deadline:
April 12, 2024

Learn more and submit!

Joint Meeting of
The Electrochemical Society
•
The Electrochemical Society of Japan
•
Korea Electrochemical Society

The 6th INTERNATIONAL SYMPOSIUM
ON SUSTAINABLE URBAN DEVELOPMENT
(The 6th ISoSUD) 2023

The International Symposium on Sustainable Urban Development (ISoSUD) is a series of international activities organized by the Faculty of Landscape Architecture and Environmental Technology, Universitas Trisakti, Jakarta. The event is held once every 3 (three) years with themes related to current issues regarding sustainable urban development, in particular related to urban environmental management and environmental technologies. The activity aims to facilitate academics to publish their research results in order to enhance their scientific expertise as researchers.

The 6th ISoSUD in 2023 carried the theme "**From Recovery To Resilience: Building A Sustainable Future For A Better Life**" which means this symposium will focus on how we can recover from the difficult times caused by the COVID-19 pandemic and build a better future and sustainable. This theme also shows the importance of building resilience in facing future challenges, whether related to climate change, economic policies, or other social problems.

The COVID-19 pandemic that swept the world in the last four years has had a significant impact on human health, the global economy, and the daily lives of people around the world. It will take the concerted efforts of all countries and peoples to overcome this pandemic and rebuild the world after it. This pandemic underscores the need for global efforts to strengthen health systems, enhance societal resilience, strengthen international cooperation, and accelerate action to achieve sustainable development goals and combat climate change. This crisis provides an opportunity to make significant changes in the way we view and manage our economic and social activities and to create a world that is more sustainable and fairer for all people and our planet. Now is the time to make a difference, to make a profound systemic shift towards a more sustainable economy for the benefit of our people and our planet. In other words, now is the right time to undertake significant transformations in existing economic and social systems, which can help sustainably achieve the SDGs and fight climate change to ensure a better future for people and our planet. Overall, post-pandemic recovery must be based on the principles of sustainable development contained in the SDGs. By integrating the SDG goals into our recovery policies and actions, we can create a more sustainable, inclusive, and resilient future for our people and the world.

The 6th ISoSUD was held in the hybrid conference:

- a. Day 1, on Wednesday, August 2nd, 2023, at Building M, 12th floor, Universitas Trisakti, Jakarta, Indonesia. There were 130 participants offline and 170 participants on the Zoom platform in the plenary session.



- b. On day 2, on Thursday, August 3rd, 2023, using the Zoom meeting facility, 270 participants attended virtually on Day 2.

In this two-day International Symposium, experts, researchers, and academician shared their valuable insights and research findings. These esteemed presenters hail from 58 universities and institutions in Filipina, India, Indonesia, Iraq, Japan, Malaysia, Netherlands, Singapura, and Taiwan, reflecting the symposium's diverse and inclusive nature. The call paper system that has been used since the first ISoSUD in 2008 succeeded in inviting 165 manuscripts (more than 400 authors) that were presented offline and virtually. Then, 136 from 165 papers were selected further to be published in IOP Proceedings Indexed by Scopus. After another review process, 106 manuscripts were published in IOP EES. To improve the quality of the manuscripts, the organizing committee held a Coaching Clinic for Scientific Paper Writing on June 24th, 2023. Prof. Mohamad Ali Fulazzaky, Ph.D, delivered the coaching clinic.

The 6th ISoSUD 2023 involved co-host universities consisting of five from within the country and four from abroad: Universitas Jember (UNEJ), Jember, Indonesia; Universitas Islam Indonesia (UII), Yogyakarta, Indonesia; Universitas Pasundan (UNPAS), Bandung, Indonesia; Institut Teknologi Sepuluh November (ITS), Surabaya, Indonesia; Universitas Indonesia (UI), Jakarta, Indonesia; Universiti Teknologi Malaysia (UTM), Malaysia; Universiti Tun Hussein Onn Malaysia (UTHM), Malaysia; The University of Kitakyushu, Japan; Chung Yuan Christian University (CYCU), Taiwan. During the class presentation session, a presentation from the participants representing the 6th ISoSUD co-host was carried out. Besides that, The 6th ISoSUD 2023 was supported as well by the Indonesian Society of Sanitary and Environment Engineers (IATPI), which has continuously supported our symposium since 2008. And sponsored by PT Enviro Cipta Lestari.

In the plenary session, some main speakers delivered more focused seminar themes; they were:

Welcoming Speech:

Prof. Dr. Kadarsah Suryadi DEA – Rector of Universitas Trisakti

Opening Speech:

Ir. Diana Kusumastuti, MT. - Director General of Human Settlements, Ministry of Public Works and Public Housing Indonesia

Plenary Speakers:

Day-1

1. Prof. Lin Chi Wang - Chung Yuan Christian University (CYCU), Taiwan
2. Prof. Ir. Joni Hermana M.Sc.ES., Ph.D – Institut Teknologi Sepuluh November (ITS), Indonesia

Day 2

3. Prof. Ts. Dr. Azmi Bin Aris - Universiti Teknologi Malaysia (UTM), Malaysia
4. Prof. Dr. Eng. Toru Matsumoto - University of Kitakyushu, Japan
5. Associate Prof. Victor R Savage – Nanyang Technological University (NTU), Singapore

We believe that this event will be able to facilitate good networking among researchers, scientists, engineers, and practitioners with common interests, especially in sharing the latest research results, ideas, development, and applications in Sustainable Urban Development. Hopefully, all participants enjoyed the seminar and found this experience inspiring and helpful in their professional field. Thank you for choosing the 6th ISoSUD as your symposium reference. Let us embrace the spirit of collaboration and innovation as we strive towards a sustainable future for a better life. We hope to have your pleasant support and participation in the next three years on The 7th ISoSUD 2026.

Sincerely,

Assoc. Prof. Ariani Dwi Astuti, ST., MT., PhD

Chairperson of The 6th International Symposium on Sustainable Urban Development (ISoSUD) 2023

INTERNATIONAL ADVISORY BOARD

- Prof. Ir. Dato' Dr. Zainai Mohamed – Universiti Teknologi Malaysia, Malaysia
- Prof. Ts. Dr. Azmi Bin Aris – Universiti Teknologi Malaysia, Malaysia
- Prof. Lin-Chi Wang Chung Yuan Christian University, Taiwan
- Prof. Ts. Dr. Aeslina Binti Abdul Kadir Universiti Tun Hussein Onn Malaysia, Malaysia
- Assoc Prof Ts Dr. Rafidah Hamdan- Universiti Tun Hussein Onn Malaysia, Malaysia
- Prof. Dr. Eng. Toru Matsumoto – University of Kitakyushu, Japan
- LAr. Dr. Rohayah binti Che Amat – Universiti Teknologi Malaysia, Malaysia
- Assoc Prof. Dr. Victor R Savage, Nanyang Technology University, Singapore
- Prof. Dr. Karim Hassan Alwan – University of Baghdad, Iraq
- Dr. Nada Khaleefah Alrikabi – University of Baghdad, Iraq
- Dr. Indriyani Rachman – University of Kitakyushu, Japan
- Prof. Ir. Asri Nugrahanti, MS., PhD, IPU – Universitas Trisakti, Jakarta, Indonesia
- Prof. Dr. Ir. Indra Surjati, MT – Universitas Trisakti, Jakarta, Indonesia
- Assoc. Prof. Dr. Yonik Meilawati Yustiani, ST., MT – Universitas Pasundan, Bandung, Indonesia
- Dr. Ir. Yeny Dhokhikah S.T., M.T. – Universitas Jember, Indonesia
- Prof. Dr-Ing. Ir. Widodo Brontowiyono., M.Sc. – Universitas Islam Indonesia, Yogyakarta, Indonesia
- Prof. Arseto Yekti Bagastyo, ST., MT., MPhil., PhD – Institut Teknologi Sepuluh November, Surabaya, Indonesia

SCIENTIFIC COMMITTEE

- Prof. Mohamad Ali Fulazzaky, Ph.D– Universitas Djuanda, Bogor, Indonesia
- Dr. Salmiati Yunus – Universiti Teknologi Malaysia, Malaysia
- Prof. Ts. Dr. Aeslina Binti Abdul Kadir Universiti Tun Hussein Onn Malaysia, Malaysia
- Dr. Shamila Arfan – Universiti Teknologi Malaysia, Malaysia
- Prof. Arseto Yekti Bagastyo, ST., MT., MPhil., PhD – Institut Teknologi Sepuluh Nopember, Surabaya, Indonesia
- Prof. IDAA Warmadewanthi ST., MT., PhD PhD – Institut Teknologi Sepuluh Nopember, Surabaya, Indonesia
- Prof. Dr-Ing. Ir. Widodo Brontowiyono., M.Sc. – Universitas Islam Indonesia, Yogyakarta, Indonesia
- Assoc. Prof. Dr. Yonik Meilawati Yustiani, ST., MT – Universitas Pasundan, Bandung, Indonesia
- Dr. Evi Afiatun, ST., MT – Universitas Pasundan, Bandung, Indonesia
- Dr. Anni Rochaeni, ST., MT – Universitas Pasundan, Bandung, Indonesia
- Dr. Fadjar Lucia Nugroho, Msc. DEA – Universitas Pasundan, Bandung, Indonesia
- Dr. Ir. Yeny Dhokhikah S.T., M.T. – Universitas Jember, Jember, Indonesia
- Dr. Indriyani Rachman – University of Kitakyushu, Japan
- Dr-Ing. Sucipta Laksono, ST, MT- Universitas Indonesia, Depok, Indonesia

- Prof. Dr. Ir. Astri Rinanti, S.Si., MT – Universitas Trisakti, Jakarta, Indonesia
- Assoc. Prof. Dr. Melati F Fachrul, MS – Universitas Trisakti, Jakarta, Indonesia
- Assoc. Prof. Dr. Ir. Diana Irvindiaty Hendrawan, MSi – Universitas Trisakti, Jakarta, Indonesia
- Assoc. Prof. Dr. Ir. Rahel Situmorang, M.Plan – Universitas Trisakti, Jakarta, Indonesia
- Dr. Ir. Ratnaningsih Ruhiyat, MT – Universitas Trisakti, Jakarta, Indonesia
- Dr. M M Sintorini Moerdjoko, M.Kes – Universitas Trisakti, Jakarta, Indonesia
- Dr. Ir. Anita Sitawati Wartaman, M.Si – Universitas Trisakti, Jakarta, Indonesia
- Dr. Ir. Endrawati Fatimah, MPSt – Universitas Trisakti, Jakarta, Indonesia
- Dr. Ir. Ramadhani Yanidar, MT – Universitas Trisakti, Jakarta, Indonesia
- Dr. Ir. Hanny Wiranegara, MT – Universitas Trisakti, Jakarta, Indonesia
- Dr. Rositayanti H., ST., MT – Universitas Trisakti, Jakarta, Indonesia
- Herika, S.Si, M.Si, Ph.D-Universitas Trisakti, Jakarta, Indonesia
- Dibyanti Danniswari, S.P, M.Si, M.Agr, Ph.D– Universitas Trisakti, Jakarta, Indonesia

ORGANIZING COMMITTEE

Chair Person	: Assoc. Prof. Ariani Dwi Astuti, ST., MT., PhD
Co-chair person	: Lutfia Rahmiati, ST., MT
Treasurer	: Sarah Aphirta, ST., MT
Secretary	: Sheilla Megagupita Putri Marendra, ST., MT
Sponsorship	: Pramati Purwaningrum, ST., MT
Event Management	: Astari Minarti ST, MSc
Publication	: Wisely Yahya, ST., M.P.W.K
Food and Beverages	: Ir. Asih Wijayanti, M.Si
Logistic, accommodation and transportation:	Reza Fauzi, ST., M.Ars

Table of contents

Volume 1263

2023

◀ Previous issue Next issue ▶

6th International Symposium on Sustainable Urban Development 2023 02/08/2023 - 03/08/2023 Jakarta, Indonesia

Accepted papers received: 03 November 2023

Published online: 06 December 2023

Open all abstracts

Preface

OPEN ACCESS

011001

The 6th International Symposium on Sustainable Urban Development (The 6th ISoSUD) 2023

+ Open abstract  View article  PDF

OPEN ACCESS

011002

Peer Review Statement

+ Open abstract  View article  PDF

Ecological Disaster Mitigation and Adaptation

OPEN ACCESS

012001

Community resilience index in the overflow flood area around Lake Tempe, Wajo District, South Sulawesi

This site uses cookies. By continuing to use this site you agree to our use of cookies. To find out more, see our Privacy and Cookies policy.



N Albaniah, A Ramadhani and M N Luru

[+ Open abstract](#)

[View article](#)

[PDF](#)

OPEN ACCESS

012002

Landslide disaster mitigation and adaptation strategy in one of the East Java horseshoe areas using geographic information system analysis

J F Irawan, Haeruddin, S Aminah, F A D Suparno and F A Lazuardi

[+ Open abstract](#)

[View article](#)

[PDF](#)

OPEN ACCESS

012003

Health risk analysis of benzene, toluene, ethylbenzene, and xylene (BTEX) in groundwater in Yogyakarta City, Indonesia

A Juliani, S Rahmawati, A Bariroh, G A Dalimunthe, L I Ardhayanti and W P Aprilia

[+ Open abstract](#)

[View article](#)

[PDF](#)

OPEN ACCESS

012004

Institutional resilience of tourism villages against the Covid-19 pandemic in the Special Region of Yogyakarta

S P Putri and M Permana

[+ Open abstract](#)

[View article](#)

[PDF](#)

Urban Health and Sanitation

OPEN ACCESS

012005

The factors influencing urban health in Jakarta Province during Covid-19 outbreak

W Yahya, E Fatimah, P R Sihombing and B Adinugroho

[+ Open abstract](#)

[View article](#)

[PDF](#)

OPEN ACCESS

012006

Sanitation facility mapping at Kalideres District, West Jakarta

This site uses cookies. By continuing to use this site you agree to our use of cookies. To find out more, see our [Privacy and Cookies policy](#).



A W Ryansa, M M Sintorini and R Hadisoebroto

[+ Open abstract](#)

[View article](#)

[PDF](#)

OPEN ACCESS

012007

Evaluation of sanitation hygiene implementation at refill drinking water depot in Lembursitu Sub-District, Sukabumi City

E Afiatun, S Wahyuni and N I Supendi

[+ Open abstract](#)

[View article](#)

[PDF](#)

OPEN ACCESS

012008

Unveiling *Ceratocystis* wilt disease: a review of cocoa's unforgiving foe

R Lloren

[+ Open abstract](#)

[View article](#)

[PDF](#)

Urban Dynamic and Development

OPEN ACCESS

012009

The presence of signage in the control of visual pollution in urban areas: A case study in the M.T Haryono street corridor, Kendari City, Indonesia

Halim, S Ramadan, A Al-Ikhsan, A J Ladianto, A Faslih and A M Firdausah

[+ Open abstract](#)

[View article](#)

[PDF](#)

OPEN ACCESS

012010

Local characters of Chinese ethnic settlements in Chinatown area of Malang and Kembang Jepun area of Surabaya

L D Wulandari, D Asikin and E I Pratiwi

[+ Open abstract](#)

[View article](#)

[PDF](#)

OPEN ACCESS

012011

Effect of various housing patterns on social cohesion

This site uses cookies. By continuing to use this site you agree to our use of cookies. To find out more, see our [Privacy and Cookies policy](#).



P Rahmanita, H W Wiranegara and Y Supriatna

[+ Open abstract](#)

[View article](#)

[PDF](#)

OPEN ACCESS

012012

Characteristics of public spaces in BSD City-gated community

F A Alfarizi, H W Wiranegara and Y Supriatna

[+ Open abstract](#)

[View article](#)

[PDF](#)

OPEN ACCESS

012013

Comprehensive assets-based approach for neighborhoods that are under-resourced in Jakarta (case study: Keagungan Sub-district in West Jakarta, Indonesia)

M Ischak, W Sejati, E R Kridarso, D Rosnarti and L H Purwaningsih

[+ Open abstract](#)

[View article](#)

[PDF](#)

OPEN ACCESS

012014

Dynamics of land cover change, regional development, and its local dependence driving factors in Bojonegoro Regency

A Savitri, A E Pravitasari and V B Rosandi

[+ Open abstract](#)

[View article](#)

[PDF](#)

OPEN ACCESS

012015

Rural-to-urban reclassification and its impact on urbanization in Indonesia: a case study of West Java Province

L K Katherina

[+ Open abstract](#)

[View article](#)

[PDF](#)

OPEN ACCESS

012016

The impact of the operation of the Jatiasih toll gate on economic activities in the Jatiasih Sub-district

W Yahya and A Sitawati

[+ Open abstract](#)

[View article](#)

[PDF](#)

This site uses cookies. By continuing to use this site you agree to our use of cookies. To find out more, see our [Privacy and Cookies policy](#).



PAPER • OPEN ACCESS

Characteristics of public spaces in BSD City-gated community

To cite this article: F A Alfarizi *et al* 2023 *IOP Conf. Ser.: Earth Environ. Sci.* **1263** 012012

View the [article online](#) for updates and enhancements.

You may also like

- [The Changes in Public Spaces Usages for Performing Arts Sector After Covid-19 Disruption in Surakarta, Indonesia](#)
Ainun Khofifah, Ratri Werdiningtyas and Kusumastuti Kusumastuti
- [Public spaces as a factor of the quality of the urban environment \(on the example of the city of Irkutsk\)](#)
N V Polyakova, V V Polyakov and V E Zaleshin
- [Spatial Character Analysis of Streets as Public Spaces: The Case of Izmit Hurriyet and Cumhuriyet Street, Turkey](#)
Mehtap Özbayraktar, Merve Pekdemir and Gumru Mrzaliyeva



245th ECS Meeting • May 26-30, 2024 • San Francisco, CA

Don't miss your chance to present!

Connect with the leading electrochemical and solid-state science network!

Deadline Extended: December 15, 2023

Submit now!



Characteristics of public spaces in BSD City-gated community

F A Alfarizi, H W Wiranegara*, Y Supriyatna

Department of Urban and Regional Planning, Faculty of Landscape Architecture and Environmental Technology, Universitas Trisakti, Jakarta, Indonesia

*hanny.w@trisakti.ac.id

Abstract. Providing public spaces within city-gated communities can help reduce social segregation between residents and non-residents. To facilitate interaction, it is important to identify the characteristics of public space that are most preferred. This study aims to identify the characteristics of public space based on the preferences of gated and non-gated residents in a private city-gated community. There are four characteristics of public space studied: multifunctionality, accessibility, convenience, and inclusiveness. Collecting data uses the questionnaire survey method. The analysis technique used second-order confirmatory factor analysis. This study's results show that multifunctionality, accessibility, convenience, and inclusiveness are significant characteristics of public space to stimulate interaction between gated and non-gated residents in BSD City. Accessibility is the characteristic of mosques and markets. On city parks and a total public space, it is not proven. The users of city parks are not concerned with it as long as they can obtain their needs within it. So, the conclusion is that the three main characteristics of public spaces promoting interaction between residents of gated and non-gated are multifunctionality, convenience, and inclusiveness.

1. Introduction

The rise of gated communities in urban areas has had several negative consequences, including social segregation and disintegration. The communities are characterized by restricted access and privatization, which create a physical and social divide between residents and the surrounding community. This model of housing also conflicts with an important principle of democratic urban society: community heterogeneity [1].

Public spaces in cities can act as a bridge between private spaces, which can help to minimize segregation and social disintegration caused by the development of gated communities [2]. Public spaces can help to create an inclusive society and a diverse community culture by providing opportunities for people to come together and participate in joint activities [3]. Therefore, social interaction between gated and non-gated residents can be facilitated in public spaces. However, several previous studies have found that even though there are public spaces that can be accessed by gated and non-gated residents, the interaction between the two is still difficult [4][5]. This shows that public space still does not meet their needs. On the other hand, public space is a social product, so its characteristics must be built based on the needs or preferences of the community. So far, no research has been found that focuses on the characteristics of public spaces based on the preferences of gated and non-gated residents in a city-gated community. Based on this, the purpose of this study was to determine the characteristics of public spaces based on the preferences of gated and non-gated residents in BSD city as a private city gated community.



Four fundamental qualities affect the effectiveness of public space, namely adequate accessibility, facilitation for residents' activities, convenience and good aesthetics, and being able to bring together individuals or groups to create social interaction [6]. In previous research, it was stated that public spaces that are safe, inclusive, green, accessible and multifunctional can be spaces that encourage social interaction, welfare and health for the community [7]. Furthermore, other studies describe four main qualities of the success of public space, including multifunctionality, accessibility, convenience, and friendliness/inclusiveness [8][9][10].

Based on previous research, it was stated that parks, markets, and mosques were the types of public spaces that most often served as spaces for gated and non-gated residents to meet and interact [11][12][13][14]. Of all the private cities in Indonesia, so far only BSD City has provided these three public spaces. Therefore, BSD City was chosen as the research locus for identifying the characteristics of public spaces based on the preferences of gated and non-gated residents.

2. Methods

In this study, data was collected using a questionnaire survey. The questionnaires were distributed online via Google Forms and in person to visitors at three public spaces in BSD City: City Park 1, Pasar Modern, and the Islamic Center Mosque. The questionnaire was compiled including several indicators to measure the four main characteristics of public space, namely multifunctionality, accessibility, convenience, and inclusiveness. Indicators for each characteristic are shown in Table 1.

Table 1. Public space characteristics indicators

Dimensions	Indicator	Source
Multifunctionality	Numbers of activities	[8][9][14]
	Area of public space	
Accessibility	Area of parking space	[12][13][15]
	Distance of public spaces from public transport stops	
	Distance of public space from home	
	Traffic conditions around public spaces	
	Availability of pedestrian ways	
Convenience	Completeness of supporting facilities	[3][7][11]
	Plant availability	
	Availability of signage	
Inclusiveness	Availability of facilities for the elderly/disabled	[6][16]
	Availability of children's facilities	

The unit of analysis in this study is the three types of public spaces in BSD City: parks, markets, and mosques. The research samples are City Park 1, BSD Modern Market, and the Islamic Center Mosque. The number of respondents in this study was determined using the Lemeshow formula. The calculation results showed that the number of respondents is 100, with 33 respondents each in two public spaces and 34 respondents in the remaining public space.

The research technique used to test the characteristics of public spaces is second-order confirmatory factor analysis (CFA) with the help of the Smart-PLS application. This analysis consists of three stages: validity and reliability testing, inner model testing, and hypothesis testing.

Validity testing is used to assess whether the variables in the model are measuring what they are supposed to measure. This is done by calculating the Average Variance Extracted (AVE) and Composite Reliability (CR) values for each variable. A variable is considered valid if its AVE value is greater than 0.5 and its CR value is greater than 0.7.

Reliability testing is used to assess whether the variables in the model are consistent and reliable. This is done by calculating the Cronbach's Alpha value for each variable. A variable is considered reliable if its Cronbach's Alpha value is greater than 0.7.

Inner model testing is used to assess the fit of the model to the data. This is done by calculating the R-squared, Q-squared, and Goodness of Fit (GoF) values for the model. A model is considered to have a good fit if the R-squared value is high, the Q-squared value is positive, and the GoF value is above 0.38.

Hypothesis testing is used to test the specific hypotheses that were made about the relationships between the variables in the model. This is done by calculating the t-values and p-values for the path coefficients in the model. A path coefficient is considered to be significant if its t-value is greater than 1.96 and its p-value is less than 0.05.

The analysis was carried out at two levels: the level of public space as a whole and the level of each type of public space. This was done to assess the characteristics of public spaces in general and to compare the characteristics of different types of public spaces.

3. Results and Discussions

The results of the validity and reliability tests show that all dimensions of the characteristics of public spaces are valid and reliable. In the inner model test, convenience is the strongest dimension in measuring the characteristics of public space, with an R-squared value of 81.7%. The Q-squared and GoF values are above the minimum value, indicating that the model is a good fit for the data. In the hypothesis test, all dimensions of the characteristics of public spaces (multifunctionality, accessibility, convenience, and inclusiveness) are significant in measuring the characteristics of public spaces based on the preferences of gated and non-gated residents in BSD, with a T-statistics value of more than 1.96 and a P-value of less than 0.05.

3.1. Multifunctionality

Multifunctionality is an important characteristic of public space in encouraging interaction between gated and non-gated residents. The existence of various activities facilitated by the public spaces shows that these spaces are actively used by the community. In the context of city-scale gated communities, the occurrence of social interaction in public spaces can minimize social segregation between residents and non-residents of gated communities.

Table 2. Public space multifunctionality indicator

Type of public space	Indicator	Loading factor	User response
Market	Numbers of activity	0.624	4.03
	Area of market	0.680	3.79
City-park	Area of city park	0.747	3.94
Mosque	Numbers of activity	0.817	3.36
A total of three types of public space	Numbers of activity	0.757	3.94

Table 2 shows that the number of activities is a valid measure of the multifunctionality dimension of public space. All three types of public spaces in BSD City facilitate more than one activity, and the number of activities that can be carried out in public spaces is a consideration for respondents when visiting them. With no restrictions on who may enter the public spaces, many activities serve as a medium for people from various backgrounds to mingle, especially gated and non-gated residents. This is in line with previous research, which has shown that the existence of a space that can facilitate repeated and in-depth interactions can encourage stronger relationships between individuals or groups, even beyond differences in ethnicity, race, culture, and social status [10]. Therefore, the number of activities in public spaces is an important indicator of the multifunctionality characteristics of public spaces in BSD City.

In addition to the number of activities, the area of public space is also an important indicator of its multifunctionality. This is especially true for city parks and markets, which are often used for a variety of activities. This result is in line with the results of previous studies which state that the size of public space is sufficient and appropriate and can accommodate various kinds of activities at once [17]. In city

parks, visitors' response to the area of the park tends to agree to be one of their considerations when carrying out activities in it, so some of them feel the area of this park needs to be increased so that they can have more flexible activities. These findings are consistent with the results of previous studies, which have shown that a large area of public space supported by a complete set of supporting facilities will create an integration of different activities and its spaces to encourage interaction and collaboration between gated and non-gated residents [10][17].

3.2. Accessibility

Several previous studies have shown that accessibility is an important quality that can affect the effectiveness of public spaces. The level of accessibility of public spaces is a key factor in determining their success [8]. In this study, accessibility was not found to be a significant measure of total public space. However, it was found to be significant in the case of markets and mosques (Table 3).

Table 3. Public space accessibility indicators

Type of public space	Indicator	Loading factor	User response
Market	Availability of pedestrian ways	0.785	3.06
Mosque	Area of parking space	0.648	3.27
	The distance of the mosque from the public transportation stops	0.663	3.58

Previous research has shown that accessibility does not have a significant relationship with community visits to parks [11]. However, the survey results of this study show that some park visitors do not consider accessibility at all when visiting City Park 1. In general, the accessibility dimension is significant in measuring the characteristics of public spaces based on the results of hypothesis testing. However, there are no indicators that have been significantly tested to measure the dimensions of accessibility of public spaces in general.

Accessibility is an important characteristic of markets and mosques. In markets, the availability of pedestrian ways is an indicator of accessibility. However, the availability of pedestrian ways was not a major factor for respondents when conducting activities in the market, as the majority of Modern Market users/visitors (88.2%) use private vehicles. The lack of pedestrian paths around the market may have contributed to this neutrality, as it limited the options for people who wanted to walk or bike to the market. Previous studies have shown that public spaces that are accessible from a variety of locations are more likely to attract people's interest [9].

The Islamic Center Mosque is an example of a public space where the indicators of parking space area and the distance from public transportation stops can measure accessibility. Visitors to the mosque tend to agree that these two indicators are important considerations when carrying out activities there. The mosque is located across from a public transportation terminal, which makes it easy for visitors to get there by public transportation. However, when there are large events at the mosque, the parking space available is not always enough to accommodate all of the visitors' vehicles. This has led to some visitors parking on the roadside around the mosque. Given that the majority of visitors to the mosque use private vehicles, it is important to increase the parking area. This is especially important for mosques that often hold large-scale events.

3.3. Convenience

The convenience dimension is an important factor in attracting visitors and encouraging social interaction in public spaces. The indicators of the completeness of supporting facilities and the availability of plants are proven to be valid measures of the convenience of public spaces in general (in the three types of public spaces that were tested simultaneously), as shown in Table 4.

Table 4. Public space convenience indicator

Type of public space	Indicator	Loading factor	User response
Market	Plant availability	0.836	3.50
City-park	Completeness of supporting facilities	0.747	4.06
	Plant availability	0.701	4.73
Mosque	Completeness of supporting facilities	0.742	3.70
	Plant availability	0.730	4.15
A total of three types of public spaces	Completeness of supporting facilities	0.638	3.97
	Plant availability	0.823	4.12

The indicator for the availability of plants in public spaces has a high loading factor value and the respondents respond well/strongly agree that the availability of plants must be included in the provision of public spaces. Previous studies have shown that people are reluctant to visit public spaces because of the lack of trees and shade which causes public space areas to feel hot during the day [18]. Thus, the indicator of the availability of plants in public spaces is important to facilitate social interaction between gated and non-gated residents.

The second indicator is the completeness of supporting facilities which have a high loading factor value and are well responded to (agree to strongly agree) by users. Based on the cross-tab results, there is a significant relationship between the completeness of supporting facilities and the number of activities in public spaces. This means that visitors who consider the number of activities in public spaces also consider the completeness of the supporting facilities in them. This is also supported by previous research which explains that the number and type of facilities in a public space can significantly influence the high number of community visits and activities carried out in it [11]. Thus, public space must be supported by complete supporting facilities so that it can accommodate various kinds of activities and attract the interest of gated and non-gated residents in BSD to carry out activities in public spaces. This phenomenon will have an impact on reducing segregation and social separation due to gated communities.

3.4. Inclusiveness

The inclusiveness of public spaces can encourage the creation of social interaction within the community [7]. The diversity of socio-economic backgrounds of people who are active in public spaces will encourage the diversity of interactions and activities that occur in them. Based on simultaneous testing in three types of public spaces (Table 5), it shows that indicators of the availability of special facilities for children are significant, while on a case-by-case basis, it is evident in parks and markets. This indicator indicates that public space is also used by children. This is because people's lives will be active if public spaces can serve the needs of all age groups [19].

Table 5. Public space inclusiveness indicator

Type of public space	Indicator	Loading factor	User response
Market	Availability of special facilities for children	0.683	3.59
City-park	Availability of special facilities for children	0.730	4.61
Mosque	Availability of special facilities for the elderly/disabled	0.712	4.42
A total of three types of public space	Availability of special facilities for children	0.696	4.02

In the case of city parks, the existence of children's facilities is a place to share space and interact regardless of background. Therefore, it is necessary to provide special facilities for children so that

activities in these two public spaces are not only filled by adults but also children to interact and get an education from a variety of backgrounds.

The availability of special facilities for the elderly/disabled in parks and markets is not a significant indicator of the convenience of public spaces. This is because visitors do not consider the existence of special facilities for the elderly as important. The observation results show that the elderly/disabled group tends to be accompanied more often by family/relatives so they don't need special facilities other than there are supporting facilities at City Park 1 and Modern Market which are friendly enough for the elderly/disabled group.

Meanwhile, in the mosque, the indicator of the availability of special facilities for the elderly/disabled is significant and is the most important indicator in the Islamic Center Mosque. Previous research has shown that every public space must be designed for a diversity of age groups and disabilities [7]. Respondents aged 60 years and over indicated that the availability of special facilities for the elderly/disabled at the Islamic Center Mosque was a crucial indicator. In general, the elderly group is the group that is most often involved in activities at the mosque in their spare time. Thus, an indicator of the availability of special facilities for the elderly/disabled is a medium that will facilitate interaction between gated and non-gated residents.

4. Conclusion

Multifunctionality, accessibility, convenience, and inclusiveness are significant characteristics of public spaces in BSD City. Significant indicators of multifunctionality are the number of activities and the area of public space. Convenience is proven to be measurable by indicators of the completeness of supporting facilities and the availability of plants. The inclusiveness can be measured by indicators of the availability of special facilities for the elderly/disabled and children. Accessibility is not proven as a characteristic of public spaces in general, it is only proven in mosques and markets. Therefore, it can be concluded that what is proven/significant as the characteristics of public spaces are multifunctionality, convenience, and inclusiveness.

References

- [1] Adnan N Arif N, Shamsudin Z, Ariffin K, Osman, Marina and Sulaiman N 2014 Practice of gated-communities development in Malaysia: towards sustainable communities. Conference: International Real Estate Research Symposium at Institut Penilaian Negara (INSPEN)
- [2] Carmona M 2015 Re-theorising contemporary public space: a new narrative and a new normative *J Urban* **8**
- [3] Ravazzoli E and Torricelli G P 2017 Urban mobility and public space. A challenge for the sustainable liveable city of the future *The Journal of Public Space* **2**
- [4] Yandri P 2015 Conflicts and segregation of housing cluster communities and its surrounding *Jurnal Kependudukan Indonesia*
- [5] Wu Y 2017 The Study on Social Interaction and Residential Differentiation in Gated Community under the Context of Globalization **124** 842–7
- [6] Nasution A D and Zahrah W 2015 The Space is not ours. the life of public open space in a gated community in Medan. Indonesia *Procedia-Social and Behavioral Sciences*
- [7] Sepe M 2021 Covid-19 pandemic and public spaces: improving quality and flexibility for healthier places *Urban Design International* **26**
- [8] van Eijk G and Engbersen R 2012 Facilitating "light" social interactions in public space: A collaborative study in a Dutch urban renewal neighbourhood *Journal of Urban Regeneration and Renewal* **5**
- [9] Stauskis G and Eckardt F 2011 Empowering Public Spaces as Catalysers of Social Interactions in Urban Communities *Journal of Architecture and Urbanism* **35**
- [10] Peterson M 2017 Living with a difference in hyper-diverse areas: How important are encounters in semi-public spaces? *Soc Cult Geogr* **18**

- [11] Bojorquez I, De Lourdes Romo-Aguilar M, Ojeda-Revah L, Tena F, Lara-Valencia F, García H, Díaz R and Aranda P 2021 Public spaces and physical activity in adults: Insights from a mixed-methods study *Cad Saude Publica* **37**
- [12] Gibson H J and Canfield J L 2016 The non-gated gated community of Stapleton *J Borderl Stud*
- [13] Klinmalai S and Kanki K 2015 Social Interaction Assessment Between Inside and Outside Gated Housing Projects in Disorder Residential Area: Background Study of gated housing development in sprawl area *日本建築学会計画系論文集* **80** 115–24
- [14] Susanti R, Widjajanti R, Wungo G L and Budiarti I 2020 Social Relationship between Kampong Gendong Residents and Gated/Non-Gated Community in Sendangmulyo Village Tembalang District. Semarang *TATALOKA*
- [15] Carmona M 2019 Principles for public space design. planning to do better *Urban Design International* **24** 47–59
- [16] Qian J 2020 Geographies of public space: Variegated publicness. variegated epistemologies *Prog Hum Geogr* **44** 77–98
- [17] Wirastrri M V and Pramudito S 2019 Identifikasi Aspek Kenyamanan Warga terhadap Keberadaan Ruang Terbuka Publik di Kampung Gampingan Kota Yogyakarta *Jurnal Arsitektur ARCADE* **3** 188
- [18] Agustin Handari Eka Saputra P, Sasongko W and Parlindungan Jurusan Perencanaan Wilayah dan Kota J 2022 Hubungan Kualitas Ruang Publik terhadap Terbentuknya Keterikatan Tempat di Kawasan Perkotaan Terpadu Kota Batu **11**
- [19] Zhang Y, Chen G, He Y, Jiang X and Xue C 2022 Social Interaction in Public Spaces and Well-Being among Elderly Women: Towards Age-Friendly Urban Environments *Int J Environ Res Public Health* **19**

Characteristics of public spaces in BSD city-gated community

F A Alfarizi¹, H W Wiranegara¹, Y Supriyatna¹

¹Department of Urban and Regional Planning, Faculty of Landscape Architecture and Environmental Technology, Universitas Trisakti, Jakarta, Indonesia

hanny.w@trisakti.ac.id

Abstract. Providing public spaces within city-gated communities can help reduce social segregation between residents and non-residents. To facilitate interaction, it is important to identify the characteristics of public space that are most preferred. This study aims to identify the characteristics of public space based on the preferences of gated and non-gated residents in a private city-gated community. There are four characteristics of public space studied: multifunctionality, accessibility, convenience, and inclusiveness. Collecting data uses the questionnaire survey method. The analysis technique used second-order confirmatory factor analysis. This study's results show that multifunctionality, accessibility, convenience, and inclusiveness are significant characteristics of public space to stimulate interaction between gated and non-gated residents in BSD City. Accessibility is the characteristic of mosques and markets. On city parks and a total public space, it is not proven. The users of city parks are not concerned with it as long as they can obtain their needs within it. So, the conclusion is that the three main characteristics of public spaces promoting interaction between residents of gated and non-gated are multifunctionality, convenience, and inclusiveness.

1. Introduction

The rise of gated communities in urban areas has had several negative consequences, including social segregation and disintegration. The communities are characterized by restricted access and privatization, which create a physical and social divide between residents and the surrounding community. This model of housing also conflicts with an important principle of democratic urban society: community heterogeneity [1].

Public spaces in cities can act as a bridge between private spaces, which can help to minimize segregation and social disintegration caused by the development of gated communities [2]. Public spaces can help to create an inclusive society and a diverse community culture by providing opportunities for people to come together and participate in joint activities [3]. Therefore, social interaction between gated and non-gated residents can be facilitated in public spaces. However, several previous studies have found that even though there are public spaces that can be accessed by gated and non-gated residents, the interaction between the two is still difficult [4][5]. This shows that public space still does not meet their needs. On the other hand, public space is a social product, so its characteristics must be built based on the needs or preferences of the community. So far, no research has been found that focuses on the characteristics of public spaces based on the preferences of gated and non-gated residents in a city-gated community. Based on this, the purpose of this study was to determine the characteristics of public spaces based on the preferences of gated and non-gated residents in BSD city as a private city gated community.

Four fundamental qualities affect the effectiveness of public space, namely adequate accessibility, facilitation for residents' activities, convenience and good aesthetics, and being able to bring together individuals or groups to create social interaction [6]. In previous research, it was stated that public spaces that are safe, inclusive, green, accessible and multifunctional can be spaces that encourage social interaction, welfare and health for the community [7]. Furthermore, other studies describe four main qualities of the success of public space, including multifunctionality, accessibility, convenience, and friendliness/inclusiveness [8][9][10].

Based on previous research, it was stated that parks, markets, and mosques were the types of public spaces that most often served as spaces for gated and non-gated residents to meet and interact [11][12][13][14]. Of all the private cities in Indonesia, so far only BSD City has provided these three public spaces. Therefore, BSD City was chosen as the research locus for identifying the characteristics of public spaces based on the preferences of gated and non-gated residents.

2. Material and Methods

In this study, data was collected using a questionnaire survey. The questionnaires were distributed online via Google Forms and in person to visitors at three public spaces in BSD City: City Park 1, Pasar Modern, and the Islamic Center Mosque. The questionnaire was compiled including several indicators to measure the four main characteristics of public space, namely multifunctionality, accessibility, convenience, and inclusiveness. Indicators for each characteristic are shown in Table 1.

Table 1. Public Space Characteristics Indicators

Dimensions	Indicator	Source
Multifunctionality	Numbers of activities	[8][9][14]
	Area of public space	
Accessibility	Area of parking space	[12][13][15]
	Distance of public spaces from public transport stops	
	Distance of public space from home	
	Traffic conditions around public spaces	
Convenience	Availability of pedestrian ways	[3][7][11]
	Completeness of supporting facilities	
	Plant availability	
Inclusiveness	Availability of signage	[6][16]
	Availability of facilities for the elderly/disabled	
	Availability of children's facilities	

The unit of analysis in this study is the three types of public spaces in BSD City: parks, markets, and mosques. The research samples are City Park 1, BSD Modern Market, and the Islamic Center Mosque. The number of respondents in this study was determined using the Lemeshow formula. The calculation results showed that the number of respondents is 100, with 33 respondents each in two public spaces and 34 respondents in the remaining public space.

The research technique used to test the characteristics of public spaces is second-order confirmatory factor analysis (CFA) with the help of the Smart-PLS application. This analysis consists of three stages: validity and reliability testing, inner model testing, and hypothesis testing.

Validity testing is used to assess whether the variables in the model are measuring what they are supposed to measure. This is done by calculating the Average Variance Extracted (AVE) and Composite Reliability (CR) values for each variable. A variable is considered valid if its AVE value is greater than 0.5 and its CR value is greater than 0.7.

Reliability testing is used to assess whether the variables in the model are consistent and reliable. This is done by calculating the Cronbach's Alpha value for each variable. A variable is considered reliable if its Cronbach's Alpha value is greater than 0.7.

Inner model testing is used to assess the fit of the model to the data. This is done by calculating the R-squared, Q-squared, and Goodness of Fit (GoF) values for the model. A model is considered to have a good fit if the R-squared value is high, the Q-squared value is positive, and the GoF value is above 0.38.

Hypothesis testing is used to test the specific hypotheses that were made about the relationships between the variables in the model. This is done by calculating the t-values and p-values for the path coefficients in the model. A path coefficient is considered to be significant if its t-value is greater than 1.96 and its p-value is less than 0.05.

The analysis was carried out at two levels: the level of public space as a whole and the level of each type of public space. This was done to assess the characteristics of public spaces in general and to compare the characteristics of different types of public spaces.

3. Results and Discussion

The results of the validity and reliability tests show that all dimensions of the characteristics of public spaces are valid and reliable. In the inner model test, convenience is the strongest dimension in measuring the characteristics of public space, with an R-squared value of 81.7%. The Q-squared and GoF values are above the minimum value, indicating that the model is a good fit for the data. In the hypothesis test, all dimensions of the characteristics of public spaces (multifunctionality, accessibility, convenience, and inclusiveness) are significant in measuring the characteristics of public spaces based on the preferences of gated and non-gated residents in BSD, with a T-statistics value of more than 1.96 and a P-value of less than 0.05.

3.1. Multifunctionality

Multifunctionality is an important characteristic of public space in encouraging interaction between gated and non-gated residents. The existence of various activities facilitated by the public spaces shows that these spaces are actively used by the community. In the context of city-scale gated communities, the occurrence of social interaction in public spaces can minimize social segregation between residents and non-residents of gated communities.

Table 2. Public Space Multifunctionality Indicator

Type of public space	Indicator	Loading factor	User response
Market	Numbers of activity	0,624	4,03
	Area of market	0.680	3,79
City-park	Area of city park	0,747	3,94
Mosque	Numbers of activity	0,817	3,36
A total of three types of public space	Numbers of activity	0,757	3,94

Table 2 shows that the number of activities is a valid measure of the multifunctionality dimension of public space. All three types of public spaces in BSD City facilitate more than one activity, and the number of activities that can be carried out in public spaces is a consideration for respondents when visiting them. With no restrictions on who may enter the public spaces, many activities serve a medium for people from various backgrounds to mingle, especially gated and non-gated residents. This is in line with previous research, which has shown that the existence of a space that can facilitate repeated and in-depth interactions can encourage stronger relationships between individuals or groups, even beyond differences in ethnicity, race, culture, and social status [10]. Therefore, the number of activities in public spaces is an important indicator of the multifunctionality characteristics of public spaces in BSD City.

In addition to the number of activities, the area of public space is also an important indicator of its multifunctionality. This is especially true for city parks and markets, which are often used for a variety of activities. This result is in line with the results of previous studies which state that the size of public space is sufficient and appropriate and can accommodate various kinds of activities at once [17]. In city

parks, visitors' response to the area of the park tends to agree to be one of their considerations when carrying out activities in it, so some of them feel the area of this park needs to be increased so that they can have more flexible activities. These findings are consistent with the results of previous studies, which have shown that a large area of public space supported by a complete set of supporting facilities will create an integration of different activities and its spaces to encourage interaction and collaboration between gated and non-gated residents [10][17].

3.2. Accessibility

Several previous studies have shown that accessibility is an important quality that can affect the effectiveness of public spaces. The level of accessibility of public spaces is a key factor in determining their success [8]. In this study, accessibility was not found to be a significant measure of total public space. However, it was found to be significant in the case of markets and mosques, as shown in Table 3.

Table 3. Public Space Accessibility Indicators

Type of public space	Indicator	Loading factor	User response
Market	Availability of pedestrian ways	0,785	3,06
Mosque	Area of parking space	0,648	3,27
	The distance of the mosque from the public transportation stops	0,663	3,58

Previous research has shown that accessibility does not have a significant relationship with community visits to parks [11]. However, the survey results of this study show that some park visitors do not consider accessibility at all when visiting City Park 1. In general, the accessibility dimension is significant in measuring the characteristics of public spaces based on the results of hypothesis testing. However, there are no indicators that have been significantly tested to measure the dimensions of accessibility of public spaces in general.

Accessibility is an important characteristic of markets and mosques. In markets, the availability of pedestrian ways is an indicator of accessibility. However, the availability of pedestrian ways was not a major factor for respondents when conducting activities in the market, as the majority of Modern Market users/visitors (88.2%) use private vehicles. The lack of pedestrian paths around the market may have contributed to this neutrality, as it limited the options for people who wanted to walk or bike to the market. Previous studies have shown that public spaces that are accessible from a variety of locations are more likely to attract people's interest [9].

The Islamic Center Mosque is an example of a public space where the indicators of parking space area and the distance from public transportation stops can measure accessibility. Visitors to the mosque tend to agree that these two indicators are important considerations when carrying out activities there. The mosque is located across from a public transportation terminal, which makes it easy for visitors to get there by public transportation. However, when there are large events at the mosque, the parking space available is not always enough to accommodate all of the visitors' vehicles. This has led to some visitors parking on the roadside around the mosque. Given that the majority of visitors to the mosque use private vehicles, it is important to increase the parking area. This is especially important for mosques that often hold large-scale events.

3.3. Convenience

The convenience dimension is an important factor in attracting visitors and encouraging social interaction in public spaces. The indicators of the completeness of supporting facilities and the availability of plants are proven to be valid measures of the convenience of public spaces in general (in the three types of public spaces that were tested simultaneously), as shown in Table 4.

Table 4. Public Space Convenience Indicator

Type of public space	Indicator	Loading factor	User response
Market	Plant availability	0,836	3,50
City-park	Completeness of supporting facilities	0,747	4,06
	Plant availability	0,701	4,73
Mosque	Completeness of supporting facilities	0,742	3,70
	Plant availability	0,730	4,15
A total of three types of public spaces	Completeness of supporting facilities	0,638	3,97
	Plant availability	0,823	4,12

The indicator for the availability of plants in public spaces has a high loading factor value and the respondents responded well/strongly agree that the availability of plants must be included in the provision of public spaces. Previous studies have shown that people are reluctant to visit public spaces because of the lack of trees and shade which causes public space areas to feel hot during the day [18]. Thus, the indicator of the availability of plants in public spaces is important to facilitate social interaction between gated and non-gated residents.

The second indicator is the completeness of supporting facilities which have a high loading factor value and are well responded to (agree to strongly agree) by users. Based on the cross-tab results, there is a significant relationship between the completeness of supporting facilities and the number of activities in public spaces. This means that visitors who consider the number of activities in public spaces also consider the completeness of the supporting facilities in them. This is also supported by previous research which explains that the number and type of facilities in a public space can significantly influence the high number of community visits and activities carried out in it [11]. Thus, public space must be supported by complete supporting facilities so that it can accommodate various kinds of activities and attract the interest of gated and non-gated residents in BSD to carry out activities in public spaces. This phenomenon will have an impact on reducing segregation and social separation due to gated communities.

3.4. Inclusiveness

The inclusiveness of public spaces can encourage the creation of social interaction within the community [7]. The diversity of socio-economic backgrounds of people who are active in public spaces will encourage the diversity of interactions and activities that occur in them. Based on simultaneous testing in three types of public spaces, it shows that indicators of the availability of special facilities for children are significant, while on a case-by-case basis, it is evident in parks and markets. This indicator indicates that public space is also used by children. This is because people's lives will be active if public spaces can serve the needs of all age groups [19].

Table 5. Public Space Inclusiveness Indicator

Type of public space	Indicator	Loading factor	User response
Market	Availability of special facilities for children	0,683	3,59
City-park	Availability of special facilities for children	0,730	4,61
Mosque	Availability of special facilities for the elderly/disabled	0,712	4,42
A total of three types of public space	Availability of special facilities for children	0,696	4,02

In the case of city parks, the existence of children's facilities is a place to share space and interact regardless of background. Therefore, it is necessary to provide special facilities for children so that activities in these two public spaces are not only filled by adults but also children to interact and get an education from a variety of backgrounds.

The availability of special facilities for the elderly/disabled in parks and markets is not a significant indicator of the convenience of public spaces. This is because visitors do not consider the existence of special facilities for the elderly as important. The observation results show that the elderly/disabled group tends to be accompanied more often by family/relatives so they don't need special facilities other than there are supporting facilities at City Park 1 and Modern Market which are friendly enough for the elderly/disabled group.

Meanwhile, in the mosque, the indicator of the availability of special facilities for the elderly/disabled is significant and is the most important indicator in the Islamic Center Mosque. Previous research has shown that every public space must be designed for a diversity of age groups and disabilities [7]. Respondents aged 60 years and over indicated that the availability of special facilities for the elderly/disabled at the Islamic Center Mosque was a crucial indicator. In general, the elderly group is the group that is most often involved in activities at the mosque in their spare time. Thus, an indicator of the availability of special facilities for the elderly/disabled is a medium that will facilitate interaction between gated and non-gated residents.

4. Conclusion

Multifunctionality, accessibility, convenience, and inclusiveness are significant characteristics of public spaces in BSD City. Significant indicators of multifunctionality are the number of activities and the area of public space. Convenience is proven to be measurable by indicators of the completeness of supporting facilities and the availability of plants. The inclusiveness can be measured by indicators of the availability of special facilities for the elderly/disabled and children. Accessibility is not proven as a characteristic of public spaces in general, it is only proven in mosques and markets. Therefore, it can be concluded that what is proven/significant as the characteristics of public spaces are multifunctionality, convenience, and inclusiveness.

References

- [1] Adnan N, Arif N, Shamsudin Z, Ariffin K and ... 2014 Practice of gated-communities development in Malaysia: towards sustainable communities *7th International Real ...*
- [2] Carmona M 2015 Re-theorising contemporary public space: a new narrative and a new normative *J Urban* **8**
- [3] Ravazzoli E and Torricelli G P 2017 Urban mobility and public space. A challenge for the sustainable liveable city of the future *The Journal of Public Space* **2**
- [4] Yandri P 2015 Conflicts and segregation of housing cluster communities and its surrounding *Jurnal Kependudukan Indonesia*
- [5] Wu Y 2017 The Study on Social Interaction and Residential Differentiation in Gated Community under the Context of Globalization **124** 842–7
- [6] Nasution A D and Zahrah W 2015 The Space is not ours, the life of public open space in a gated community in Medan, Indonesia *Procedia-Social and Behavioral Sciences*
- [7] Sepe M 2021 Covid-19 pandemic and public spaces: improving quality and flexibility for healthier places *Urban Design International* **26**
- [8] van Eijk G and Engbersen R 2012 Facilitating "light" social interactions in public space: A collaborative study in a Dutch urban renewal neighbourhood *Journal of Urban Regeneration and Renewal* **5**
- [9] Stauskis G and Eckardt F 2011 Empowering Public Spaces as Catalysers of Social Interactions in Urban Communities *Journal of Architecture and Urbanism* **35**
- [10] Peterson M 2017 Living with a difference in hyper-diverse areas: How important are encounters in semi-public spaces? *Soc Cult Geogr* **18**
- [11] Bojorquez I, De Lourdes Romo-Aguilar M, Ojeda-Revah L, Tena F, Lara-Valencia F, García H, Díaz R and Aranda P 2021 Public spaces and physical activity in adults: Insights from a mixed-methods study *Cad Saude Publica* **37**

- [12] Gibson H J and Canfield J L 2016 The non-gated gated community of Stapleton *J Borderl Stud*
- [13] Klinmalai S and Kanki K 2015 Social Interaction Assessment Between Inside and Outside Gated Housing Projects in Disorder Residential Area: Background Study of gated housing development in sprawl area *日本建築学会計画系論文集* **80** 115–24
- [14] Susanti R, Widjajanti R, Wungo G L and Budiarti I 2020 Social Relationship between Kampong Gendong Residents and Gated/Non-Gated Community in Sendangmulyo Village Tembalang District, Semarang *TATALOKA*
- [15] Carmona M 2019 Principles for public space design, planning to do better *Urban Design International* **24** 47–59
- [16] Qian J 2020 Geographies of public space: Variegated publicness, variegated epistemologies *Prog Hum Geogr* **44** 77–98
- [17] Wirastru M V and Pramudito S 2019 Identifikasi Aspek Kenyamanan Warga terhadap Keberadaan Ruang Terbuka Publik di Kampung Gampingan Kota Yogyakarta *Jurnal Arsitektur ARCADE* **3** 188
- [18] Agustin Handari Eka Saputra P, Sasongko W and Parlindungan Jurusan Perencanaan Wilayah dan Kota J 2022 Hubungan Kualitas Ruang Publik terhadap Terbentuknya Keterikatan Tempat di Kawasan Perkotaan Terpadu Kota Batu vol 11
- [19] Zhang Y, Chen G, He Y, Jiang X and Xue C 2022 Social Interaction in Public Spaces and Well-Being among Elderly Women: Towards Age-Friendly Urban Environments *Int J Environ Res Public Health* **19**.

Characteristics of public spaces in BSD city-gated community

ORIGINALITY REPORT

6%

SIMILARITY INDEX

5%

INTERNET SOURCES

4%

PUBLICATIONS

2%

STUDENT PAPERS

PRIMARY SOURCES

1	studentsrepo.um.edu.my Internet Source	1%
2	repository.sgu.ac.id Internet Source	1%
3	www.atlantis-press.com Internet Source	1%
4	wiut.uz Internet Source	1%
5	Submitted to Universitas Terbuka Student Paper	1%
6	upcommons.upc.edu Internet Source	1%
7	pdfs.semanticscholar.org Internet Source	1%
8	www.europeanproceedings.com Internet Source	1%
9	www.mdpi.com Internet Source	<1%

Exclude quotes On

Exclude matches < 15 words

Exclude bibliography On

Characteristics of public spaces in BSD city-gated community

GRADEMARK REPORT

FINAL GRADE

GENERAL COMMENTS

/0

PAGE 1

PAGE 2

PAGE 3

PAGE 4

PAGE 5

PAGE 6

PAGE 7
