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RETHINKING SOCIABLE GREEN SPACES AMID THE COVID-19 CRISIS: A CASE STUDY OF BATAM, INDONESIA

Carissa Dinar Aguspriyanti¹

Universitas Internasional Batam

E-mail: carissa@uib.ac.id

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Abstract: *One of the lasting impacts of the COVID-19 crisis undisputedly is changes in the way people use public spaces including green spaces. Some people despite the social isolation rules still often visit public green spaces to maintain their well-being. This study aimed to rethink how green spaces as a sociable place can be more adaptable to fulfill the new needs of people which have arisen due to the pandemic. Direct-structured observation and semi-structured interviews with purposive sampling were conducted in the park located in Batam, Indonesia. It was revealed that the use of this park as a sociable place has prioritized most on 'relaxation' behaviours at one time, followed by 'affiliation' and 'interaction' behaviours after the pandemic strikes. The 'affiliation' activities, nevertheless, were interestingly the top reason for people visiting this park more frequently in a week. The proposed post-pandemic concept of the park as a sociable green space was subsequently conceived around the circulation, furniture, and activity settings with several design strategies as a response to the key issues concerning the social behaviours and health protocol system in this park.*

Keyword: *sociable, green spaces, COVID-19 pandemic, Indonesia*

Abstrak: Salah satu dampak jangka panjang dari krisis COVID-19 yang tidak terbantahkan adalah perubahan cara orang menggunakan ruang publik termasuk ruang terbuka hijau. Walaupun terdapat aturan isolasi sosial, beberapa orang masih mengunjungi ruang terbuka hijau untuk menjaga kesehatan mereka. Penelitian ini bertujuan untuk memikirkan ulang bagaimana ruang terbuka hijau sebagai ruang publik ramah atau tempat bersosialisasi dapat menjadi lebih adaptif untuk memenuhi kebutuhan baru masyarakat yang muncul akibat pandemi. Observasi langsung terstruktur dan wawancara semi terstruktur dengan purposive sampling dilakukan di taman yang terletak di Batam, Indonesia. Studi ini menemukan bahwa penggunaan taman tersebut sebagai ruang publik ramah telah memprioritaskan perilaku 'relaksasi' dalam satu waktu, diikuti oleh perilaku 'afiliasi' dan 'interaksi' setelah pandemi melanda. Namun menariknya, aktivitas yang berkaitan dengan 'afiliasi' menjadi alasan utama orang untuk lebih sering mengunjungi taman ini dalam satu minggu. Usulan konsep taman pasca pandemi sebagai ruang terbuka hijau ramah kemudian digagas terkait pengaturan sirkulasi, furnitur, dan aktivitas dengan beberapa strategi desain sebagai respon terhadap isu-isu utama mengenai perilaku sosial dan sistem protokol kesehatan di taman ini.

Kata Kunci: ramah, ruang terbuka hijau, pandemi COVID-19, Indonesia

INTRODUCTION

The majority of people in the world have been concerned about mental health conditions due to the wake of the COVID-19 crisis. This is most likely related to the social isolation rules since humans are social creatures in which social interaction on daily basis is essential to maintain their quality of life. Previous studies indicate that a long period of quarantine, particularly a strict one, during the pandemic tends to cause fear and anxiety (Kamara et al., 2017; Ren et al., 2020).

The urban quarantine policy, generally, is limiting people from visiting public spaces including green spaces like public parks to avoid socializing and physical contact. Meanwhile, green spaces have

been widely known to provide beneficial impacts on humans health and well-being (WHO Regional Office for Europe, 2016; Nath et al., 2018; Ugolini et al., 2020; Dempsey & Dobson, 2021). Creating more opportunities for social interaction and enabling more deeply connection with nature as well as supporting local economies can be offered by green spaces. The UK government has even been using "green prescriptions" – which encourage people to do more physical activities in nature – in order to enhance people's quality of life in the middle of the pandemic (Lestari, 2020). Green spaces have thus become a relatively safe refuge place that will provide some respite from living in the social isolation (Jasiński, 2020). Given all these health and social dimension

benefits, it is noteworthy that green spaces are a vital element of our social infrastructure (IWUN, 2019) and health infrastructure (Dempsey & Dobson, 2021).

In some countries, Indonesia for instance, people are still allowed to go outside their homes for necessary purposes like working and doing physical activities. Therefore, some people despite the social distancing rules still often visit public green spaces to do physical activity and relax (Ugolini et al., 2020) or even study and work (Bayuadi, 2020). Unfortunately, inequality in access to green spaces has been a long-lasting urban issue nevertheless (Wolch et al., 2014; UN Habitat, 2020). White et al. state that when people are limited to what is within walking distance amid the pandemic, the lack of nearby green spaces can be felt more so that people are willing to travel long distances to visit green spaces (Dempsey & Dobson, 2021). This may lead to the high density of people in one public green space at the same time. As a sociable place, green spaces thus need to provide an adequately safe space allowing visitors to do activities whilst meeting physical distancing rules. Moreover, facing the second wave of the ongoing global health emergency, it has been reported in Batam, Indonesia, that the number of confirmed cases of COVID-19 has recently elevated. The latest news highlights that 14,645 people have tested positive of which a total of 2,345 are now still undergoing treatment in the hospital (Pemerintah Kota Batam, 2021). Although this figure may be less than what other cities in Indonesia have, it is still a wake-up call for a developing city like Batam to successfully hinder the spread of the virus even more.

Only little empirical studies have been done to explore the post-pandemic concept of sociable green spaces. It is essentially required thus to rethink how the sociable green spaces particularly in Batam, Indonesia, can be more adaptable to fulfill the new needs of people which have arisen amid the COVID-19 crisis.

LITERATURE REVIEW

Sociable Green Spaces

According to Mehta (2013), there are three types of social behaviours that each has a different outcome (see Table 1). She additionally asserts that these types of social behaviour may define the criteria of sociable places because their outcomes can be the key elements of sociable places. Then, it can be said that how sociable a green space could be determined by to what extent it can allow people to relax, interact with others, and have affiliations with it. Green spaces can serve as a sociable public space providing opportunities for people to involve in various kinds of activities individually or in groups (Aguspriyanti, 2021).

Prior to the COVID-19 pandemic era, among the three main goals of sociable places, 'interaction' was likely to be the top priority use of green spaces as revealed by Aguspriyanti (2021) in her recent study about sociable green corridors in Malang, Indonesia.

Meanwhile for some people in Croatia, Israel, and Slovenia, meeting people also became the most preferred reason to visit green spaces – such as urban parks – more than some people in Italia, Lithuania, and Spain (Ugolini et al., 2020). Nonetheless, it should also be stressed from Ugolini et al.'s research (2020) that regarding the case for all countries mentioned earlier, the most desired activities in green spaces were physical exercise and relaxing. This implies that the results may vary with either different types or locations of green spaces. Whilst social interaction could be arduous now for the spontaneous and casual one especially among strangers (Honey-Rosés et al., 2020), there is a possibility to experience a slight change in being actively connected to the place and community because of the tendency to avoid people.

Table 1. Social Behaviour Categories

Types of Social Behaviours	Outcomes	Indicators
Passive sociability (<i>Non-verbal activities and behaviors such as reading, eating, drinking, and watching people</i>)	Relaxation	Feeling comfortable or relax to do something alone
Fleeting sociability (<i>Short-term, low-intensity contacts such as playing and having a conversation</i>)	Interaction	Being encouraged to engage with others
Enduring sociability (<i>Long-term, high-intensity contacts such as regular gathering</i>)	Affiliation	Being actively connected to the place and community

Source: Mehta, 2013

The COVID-19 Crisis: Public Spaces and Physical Distancing

When the COVID-19 strikes the world, physical distancing regulations became the new concepts that need to be applied specifically in public spaces design. Having adequate space between individuals – was reported to be approximately 1,5-2 meters (Taşan-Kok, 2020) – is required when people are in public spaces (UN Habitat, 2020). Meanwhile, the Decree of the Minister of Health of the Republic of Indonesia No. HK.01.07/ MENKES/ 382/ 2020 is outlining the health protocols for communities in public places and facilities in Indonesia in particular. Crucial points related to these health protocols include layout and circulation settings with a minimum distance of one meter, limiting the number of people in one place at the same time by visiting schedule arrangements, providing partitions, applying the arrangement of entry and exit routes, optimizing air circulation and sunlight, and providing a special room such as a health post for first treatment if there are visitors who experience health

problems as well as striving for the layout or setting of a place to have a back-to-back position (Menteri Kesehatan Republik Indonesia, 2020).

In compliance with UN-Habitat (2020), public spaces should also deliver essential services to ensure the implementation of good health management amid the pandemic such as providing clean restrooms and hand-washing facilities. Furthermore, the current alteration of how people should be using public spaces points out that being adaptable and resilient is undoubtedly vital for public spaces in response to emergencies (Zandieh et al., 2020). The end of this health crisis is still unknown so people will have to learn and adapt to live with it.

METHODS

Descriptive-qualitative methods were conducted in this study by gathering and analyzing data from direct-structured observation and semi-structured interviews. The selected case study site is a neighborhood park, namely Taman Gajah Mada. This approximately 225 m x 48 m green space is located in Sekupang, Batam, Indonesia (see Figure 1) and is one of the easily accessible green spaces that are not many actually in that district. Hence,

based on the initial observation, it has appeared that people have even still willingly visited this park despite the pandemic.

As illustrated in Figure 2, to explore the latest purposes of the park as a sociable green space, direct-structured observation was conducted on Sunday specifically at the peak time which is between 7.30 AM to 8.30 AM. It focused on activity patterns identification by noting what kind of activities that people do regarding the main outcomes of sociable places by Mehta (2013) and their particular location within the park. Any activities that are included in the category of relaxation, interaction, and affiliation, therefore were recorded in a behavioural map and analyzed quantitatively by calculating their frequencies afterward. The park's endeavors to avoid the spread of the disease concerning the recommended health protocol implementation were also observed to gain an understanding of to what extent the park has prepared so far for the pandemic scenario.

Moreover, this research interviewed one respondent from each category – relaxation, interaction, and affiliation – who were chosen by purposive sampling to represent the sampled population's perception towards green spaces amid the COVID-19 crisis.



Figure 1. The Case Study Site: Taman Gajah Mada
Source: Google Earth with modification, 2021

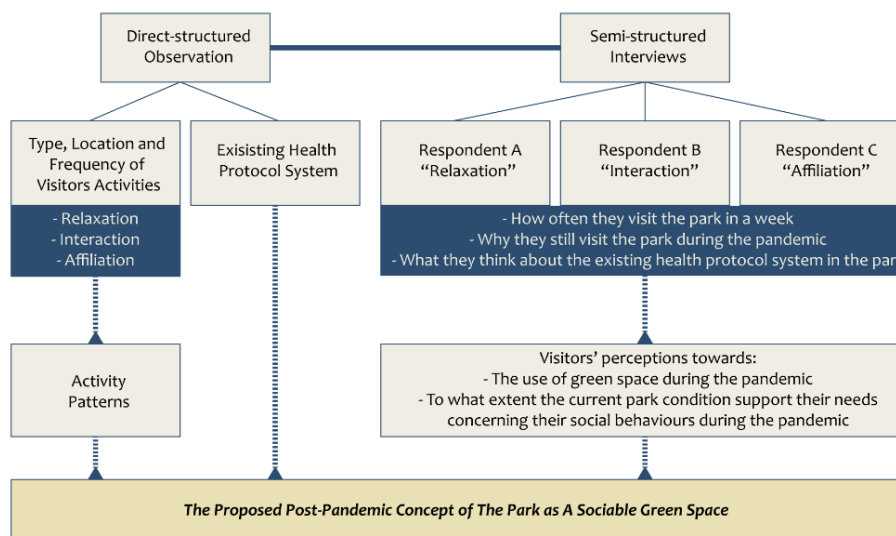


Figure 2. A Conceptual Framework of The Study
Source: Author, 2021

RESULTS AND DISCUSSION

Activity Patterns

As a neighbourhood park, there are adequate facilities to give activity options for the visitors such as multifunctional squares, an outdoor fitness area, a jogging track, playgrounds, and so on as shown in Figure 3. It also indicates all types of social behaviours have spreadly occurred in this park. Additionally, Figure 3 points out that the majority of people (57%) visited this park to do relaxation recently during the pandemic including sitting, watching people, eating, drinking and physical exercise (independent/individual).

exercise of which the frequency was the most among the others. It should be highlighted, nevertheless, that there were two types of physical activities in this park; the one relating to passive sociability (relaxation; feeling comfortable to do something alone) and the other one relating to enduring sociability (affiliation; being actively connected to the place and community). This enduring sociability or 'affiliation' was the second priority of activities in this park (23%) followed by 'interaction' with 20% of visitors doing so.

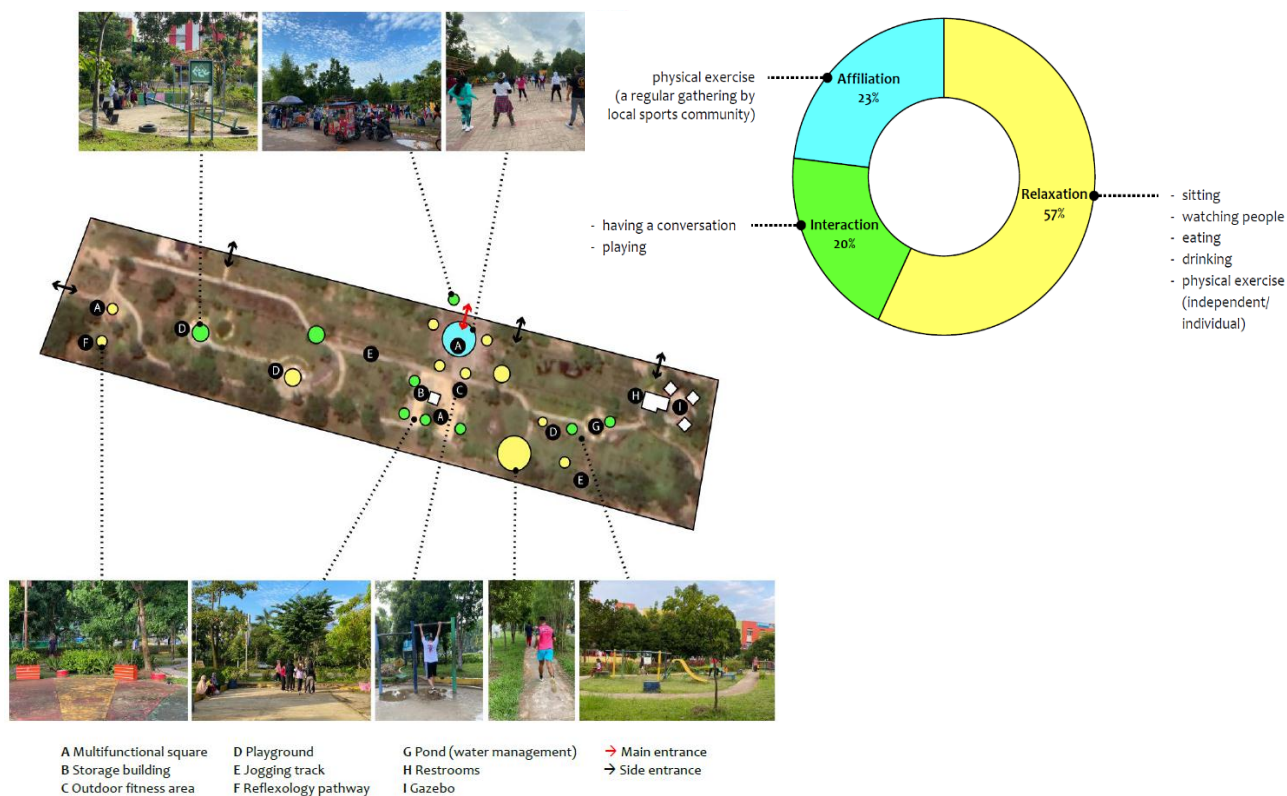


Figure 3. Activity patterns in the park
Source: Author, 2021

Existing Health Protocol System

Given the health protocol system recommended by the Indonesian Government (Menteri Kesehatan Republik Indonesia, 2020), this park has seemingly not done any specific arrangement yet. Only visitors' behaviour could reflect the implementation of the protocol such as wearing a mask. As a result, some visitors still find a difficulty to keep the required distance between people and even have to face others directly when they were going through narrow pathways such as jogging track and reflexology pathway. Additionally, other pivotal issues are that not only would some areas of the park especially the multifunctional squares be too crowded due to the regular gatherings of the local sports community, but also any health facilities were hardly found in this park.

Visitors' Perceptions

As shown in Table 2, people have visited this park every week during the pandemic. Although the most

priority of using public green spaces was related to 'relaxation' activities at one time, the most frequent visitors were the ones who have 'affiliation' behaviour – being actively connected to the place and community – in which they need to attend regular gatherings by their local sports community four times a week. Therefore, this behavioural phenomenon needs to be contemplated too.

Apparently, during the COVID-19 pandemic, this kind of sociable green space tended to be more favorable than other indoor public spaces for people to comply with their health and social needs. But, according to the visitors' perceptions, the current health protocol system in this park still needs to be improved in certain aspects so that they will feel safer and more comfortable.

The Proposed Post-Pandemic Concept of The Park as A Sociable Green Space

Responding to the issues discovered from the observation and interviews, the proposed post-

pandemic concept of the park as a sociable green space was elaborated upon in Table 3 and Figure 4.

Table 2. Visitors' Perceptions Towards The Park Amid The COVID-19 Crisis

Respondent	Visitation Frequency	Reason of Visitation	Existing Health Protocol System in The Park
Respondent A "Relaxation"	2 times/week	To do physical exercise in a public green open space because it is less risky compared to an indoor gym and relax by seeing greenery, watching people, eating, and drinking	Need improvement due to the lack of arrangement in circulation and furniture
Respondent B "Interaction"	1 time/week	To meet friends in a public green open space because it is less risky compared to other indoor public spaces	Need improvement due to the lack of arrangement in furniture and health facilities
Respondent C "Affiliation"	4 times/week	To join regular gatherings of the local sports community	Need improvement due to the lack of arrangement in visiting schedule

Source: Author, 2021

Table 3. The Proposed Post-Pandemic Concept of The Park as A Sociable Green Space

Key Issues Related to the Social Behaviours and Health Protocol System in The Park	Design Concepts	Design Strategies
Narrow pathways	Circulation Settings	<p>The arrangement of circulation within the park and entry-exit routes.</p> <ul style="list-style-type: none"> - Design a one-way route for the jogging track and reflexology pathway to prevent facing other visitors. - Close the access of side entrances by putting potted plants so that people will only use the main entrance for entry-exit routes to avoid any unwanted intervention to the designated circulation (one-way route) within the park.
Inadequate space between people and the lack of health facilities	Furniture Settings	<p>Providing informative signs.</p> <ul style="list-style-type: none"> - Add educational banners regarding the health protocol system in the park to educate visitors. - Put either "X" signs or potted plant (if applicable) on the furniture such as benches and playground equipment as well as arrange either circle signs or potted plant (if applicable) on the multifunctional squares with a distance between them

Key Issues Related to the Social Behaviours and Health Protocol System in The Park	Design Concepts	Design Strategies
		<p>around 1,5 meters to increase awareness of the required distance between visitors.</p> <p>Adding health facilities. Put hand-washing stations in easily accessed spots to help in preventing the spread of the virus.</p>
Crowdedness	Activity Settings	<p>The arrangement of visiting schedule. Set a schedule up in particular for community users and general users to minimize the risk of too many people at one time. For instance: <i>community users</i> → Wednesday, Friday, Saturday (17.00-18.00 WIB) and Sunday (07.00-08.00 WIB); <i>general users</i> → Monday-Saturday (07.00-17.00 WIB) and Sunday (08.00-17.00)</p>

Source: Author, 2021



Figure 4. Circulation and furniture settings
Source: Author, 2021

CONCLUSION

This study highlighted that after the pandemic strikes the use of public green spaces as a sociable place particularly in Batam, Indonesia, has prioritized most on 'relaxation' activities in which they could feel comfortable and relax to do something alone such as physical exercise, sitting, eating, drinking, and watching people, at one time. Other usages related to 'interaction' and 'affiliation' behaviours, however, remain to be necessarily supported. As the second priority of the use of the park, 'affiliation' activities

were interestingly the top reason of people visiting the park more frequently in a week. These were linked to the attachment of people to attend the regular community gathering, albeit the tendency to avoid people. Whereas, 'interaction' behaviours were most likely related to the needs of people meeting their friends in an outdoor public space which is considered safer than an indoor public space. Subsequently, it is necessary to rethink the concept of green spaces as a sociable place to host all manners of social behaviours in healthier and safer ways. In this case, the key issues which have arisen concerning the social behaviours and health protocol system in the park were narrow pathways, inadequate space between people, the lack of health facilities, and crowdedness. Arguably as a response to these issues, the proposed post-pandemic concept of the park as a sociable green space was conceived around both physical and non-physical dimensions including the circulation, furniture, and activity settings. These three concepts conveyed several design strategies that could relatively be adapted to public green spaces anywhere.

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