Journal of International Conference Proceedings (JICP) Vol. 4 No. 1 (2021)
Print ISSN: 2622-0989 / Online ISSN: 2621-993X
DOI: https://doi.org/10.32535/jicp.v4i1.1123

An Overview of Ecotherapy-Based Activities in Urban Green Spaces Design

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ABSTRACT

This research aims to see an overview of ecotherapy-based activities as a form of intervention in the design of urban green spaces during the pandemic. Ecotherapy is a combined approach of socio-ecological strategy that promotes mental health, through community participation and empowerment. The ecotherapy-based activities include horticultural therapy such as gardening and physical therapy such as sports activities. The research method is a qualitative method through case studies. The case study was carried out at two locations of Taman Maju Bersama which in 2020 had conducted a Focus Group Discussion (FGD) process at the planning stage. The impact of the COVID-19 virus outbreak presents an opportunity to integrate a public health perspective into the concept of urban green space design standards. This is an opportunity to improve urban green space design standards that need to be considered by the Jakarta Provincial Government in the future. Some considerations should be included: 1) the opportunity to improve urban green space on a neighborhood scale, 2) the potential for an ecotherapy approach, especially on spatial program interventions in urban green spaces design, 3) consideration of health protocol policies for handling COVID-19, such as a new interpersonal physical distance limit in urban public spaces.

Keywords: Community Participation, Ecotherapy, Focus Group Discussion, Green Spaces, Urban Design

JEL Classification Codes: I18, R58, Y30, Y40

INTRODUCTION

The Impact of COVID-19 on Behavioral Changes and Interactions in Public Space

The outbreak of the COVID-19 virus has a direct impact on all aspects of human life globally. It has especially changed the way we interact (Cudjoe & Kotwal, 2020), our habits and the way we use public spaces (Sepe, 2021). In the first half of 2020, half of the world's population was required to isolate or stay at home (Sandford, 2020). Since then, the restrictions on the use and physical distancing in public spaces have become key policy measures to reduce transmission of COVID-19 and protect public health (Honey-Roses et al., 2020; Davy, 2021).

Several phenomena have overlapped rapidly during the early days of COVID-19 according to Schlossberg et al. (2021). These include: 1) the need to maintain physical distance from others outside our household, 2) the need for open spaces that are closer to home, easily accessible and enjoyed by the community, 3) the need for more space to provide efficient mobility for essential workers in particular, and 4) the need for more space for local businesses as they try to keep their businesses open safely.

In the lock-down period, the relationship between private and public space is reversed: public space becomes quiet and empty, while private space becomes

Print ISSN: 2622-0989 / Online ISSN: 2621-993X
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"luxury", resulting in a shift in the character of public space into private space (Jasinski, 2020; Sepe, 2021). The pandemic has increased the value of the private space as it provides invaluable security from the epidemic and the mental comfort that is so much needed during isolation (Jasinski, 2020).

In an ideal scenario, public spaces are designed, built, and maintained with the expectation of providing access to clean air, recreation, nature, and a place where people can be interacted with each other; can see and be seen (Melcher, 2021). Before the pandemic, the phenomenon of crowd in public spaces was used as an assessment of the vitality of urban spaces. We can recognize ourselves as part of the crowd (Glissant, 1997) and experience ourselves as social beings (Melcher, 2021).

Since the implementation of physical distance restrictions in urban spaces during the pandemic, all kinds of adaptation processes have been carried out by each individual. However, it is undeniable that the limited space for movement brings new problems for individuals, such as being mentally depressed. The current topic of discussion related to mental health has also begun to be discussed frequently (Wahdaniyat, 2020). The shifting phenomena in social activities from public spaces to virtual spaces result in atrophy of the functions of public spaces as they are gradually taken over by digital platforms (Honey-Roses et al., 2020).

Davy (2021) describes three government policies during the COVID-19 pandemic that affect the behavior of individuals or groups as follows:

a. Having to keep a distance of at least 6 feet or 2 meters from other people in public places expands personal space at the expense of social space (Hall, 1966; Sommer, 1969), for example keeping a distance of 6 feet or 2 meters from other people can feel awkward and disrespectful in the open.
b. Having to wear a mouth-nose cover in public places severely limits the appearance of oneself in everyday life (Goffman, 1959). Facial expressions are important for conveying mood and meaning in personal encounters but are now limited to eye contact.
c. Having to stay at home changes the spatial meaning of the house. A house should be a private space that not everyone can see, at least from a public view. However, with school and work from home policies, video conferencing has become a very important interaction. The consequence of this is showing the condition of the house that can be known by other people or strangers. Although the video background feature can be changed or disguised, the intimacy of one's home changes meaning.

In general, Davy (2021) asserts that the COVID-19 pandemic should be considered a cultural challenge, not just a public health crisis. Low community compliance is often caused by resistance to monorational government regulations that may not care about group identity or individual freedom.

Understanding Social Distance and Physical Distance During the COVID-19 Pandemic

Social distance is a term that is often used during the COVID-19 pandemic, it actually has a wider meaning than just the simple meaning of physical or geographical distance (Torre, 2020). According to Torre (2014), physical distance in its simplest form is geographical distance, then studied extensively by research on proximity relations. According to Melcher (2021), the use of the term epidemiological during the COVID-19 pandemic actually refers to a certain physical distance (about six feet or 2 meters) that must be maintained while in a social environment, but many overcoming social distancing means psychological distance from other people who means self socially.

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The assumption that social distance undermines social connections stems from the ambiguity of the meaning of the term. In the social sciences, social distancing has a negative connotation and describes dysfunctional families (Polansky & Gaudin, 1983), marginalization of the poor (Krumer-Nevo & Orly, 2010), or discrimination against the homeless (Hodgetts et al., 2011). Social distance is an important requirement for social interaction in public spaces (Melcher, 2021). Public space interactions are interactions where we meet people we don't know and people who aren't always like us. This interaction is best achieved with little distance. Social distance is not antisocial, it's a distance that allows us to be with each other, as strangers who are also part of the crowd (Glissant, 1997) in the public space. Social distancing allows us to overcome fear and build self-confidence (Melcher, 2021), but social distancing can turn an already lonely life into uninterrupted isolation (Davy, 2021).

The definition of social distance can be traced through two main root term approaches. First, in sociology and psychology, social distance refers to differentiating oneself socially from other people or groups (Swim et al., 1999). The social distancing scale developed by Emory Bogardus in 1924 is a series of questions, (e.g., would you invite someone to your home or allow them to marry into your family) that uses prejudice as a measure (Ethington, 1997; Wark & Galliher, 2007). Bogardus social distance is not physical distance, but a measurement of psychological attitudes towards other people outside the individual's own social group. Second, in anthropology, Hall (1966) uses the term social distance in one of the definitions of four interpersonal distances around the human body.

The reaction to COVID-19 and social distancing is relevant to its spatial consequences, such as expanding personal space but reducing social space. Planning that regulates distance and proximity requires knowledge of not only physical space but also social and cultural space (Davy, 2021). The extension of personal distance to 6 feet or 2 meters interferes with the spatiality of everyday life (Jacobs et al., in press). The expansion triggers more possible violations that occur and social interactions become less pleasant.

Because of this ambiguity over the term social distancing, the World Health Organization (Ghebreyesus, 2020; Kaur, 2020; World Health Organization, 2020) and some governments (e.g., Public Health Ontario, 2020) are now recommending the use of the term physical distancing as a substitute for the term social distancing. According to Bergman et al. (2020) what we need during a pandemic is not social distancing, but physical distancing with social connectedness.

Interpersonal Space in Public Space

In terms of social interaction with other people, someone will set the distance between individuals or interpersonal space (Hall, 1966). If no more space is available, then physiological stress will increase.

The proxemics study conducted by Hall (1966) allows us to understand that behind physical distance there is social contact that has an impact on the comfort zone around individuals who depend on cultural patterns. Everyone is surrounded by a bubble-like surface that forms a zone of emotional strength or a boundary of individual safety. Interpersonal distance defined by Hall (1966) is a spatial measure that corresponds to the type of interaction of each individual depending on cultural patterns, namely 0-0.45 meters (intimate space); 0.45-1.2 meters (personal space); 1.2-3.6 meters (social space); and 3.6-7.6 meters (public space) for Western culture (shown in Figure 1).

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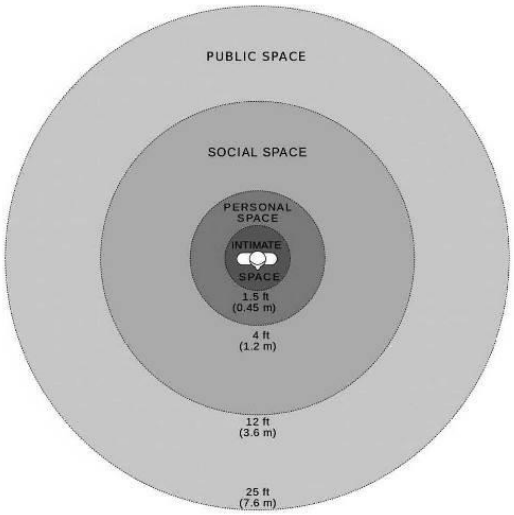
Figure 1. Categories of interpersonal space developed by Edward T. Hall (1966).



Intimate distance refers to high physical and sensory involvement, such as to embrace and touch. Personal distance refers to special conversations and interactions between friends or family members. Social distancing refers to interactions with friends and colleagues, such as in a work context. Public distancing is necessary when talking to a group of people. Through the definition of different distances, it will result in the existence of individual areas that are defined according to the types of interactions and relationships that are practiced (Torre, 2020).

Implementation of physical distance restrictions in public spaces plays an important role in controlling or slowing the spread of the coronavirus during the COVID-19 pandemic (CDC, 2020; Su et al., 2021). The policy for handling the COVID-19 pandemic will increase the personal distance by at least 180 cm (Jasinski, 2020). The expansion of interpersonal space with new physical distance restrictions will most likely lead to changes in social behavior in public spaces and the way these spaces are used.

Regarding the spread of the COVID-19 pandemic, Su et al. (2021) suggest that the longer people stay at an unsafe distance, the higher the risk of infection. The duration factor in the study conducted by Su et al. (2021) against pedestrians who are at an unsafe distance is also an important factor that must be taken into account. To describe the degree of gathering of pedestrians in public spaces, Su et al. (2021) defines the concept of a gathering group.

Figure 2 shows pedestrians in a gathering group having a distance from one or more people in the same group, but less than a safe distance (for the measurement of the safe distance threshold, it is set at 2 meters). According to the number of pedestrians in a group, the degree of gathering is divided into six levels, from 0 to 5 (shown in Figure 2). To facilitate an integrated assessment, Su et al. (2021) considers a single person as a congregating group with a congregating degree of 0. During a pandemic, the greater the number of people in the congregating group, the higher the risk of cross-infection (Su et al., 2021).

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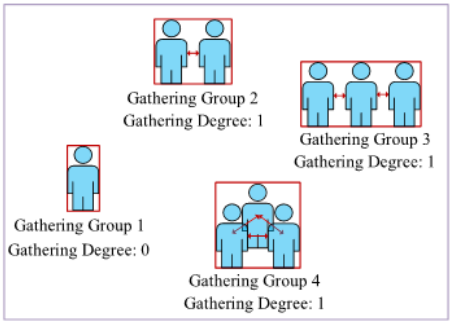
Figure 2. The relationship between groups of people gathered with the determination of the degree of gathering (Su et al., 2021).



The Number of the Gathering Group	Gathering Degree
1	0
2-6	1
7-12	2
13-20	3
21-30	4
More than 30	5

Categorization of Open Space

In general, there are two methods used in the categorization of open space, i.e. typology and classification. Typology refers to the type of open space regardless of the characters in it such as 'squares', 'plaza', 'atrium/indoor/marketplaces', 'streets', 'residential', 'parks', 'markets', and so on (Nicol & Blake, 2000). The character of open space is influenced by various factors such as location, level of development, main function, related to land use, and city form (Berrill & Environment & Land Management Pty Ltd., 2012). Classification is used when space characters are included in the categorization. The open space classification method generally includes three approaches: 1) the function of the open space, 2) the hierarchy of service areas (who will use the open space), and 3) the character (open space display) of the landscape or environment (Rutherford, 2012).

Each open space is assigned a functional classification to reflect its primary use (Jafrin & Beza, 2018). The three main functions of open space (Rutherford, 2012) are as recreation spaces, sport spaces, and nature spaces. Open space as a recreation space provides a place for informal play and physical activity, relaxation, and social interaction. Recreation spaces promote physical and mental health through activities that provide relaxation, entertainment or stimulation. Open space as a sports space provides a place for formal and structured sports activities such as team competitions, physical skill development, and training. Open space as a natural space provides a setting where people can enjoy nearby nature, protect local biodiversity, and natural values of the area. The nature space will provide opportunities for recreational activities such as walking, cycling, picnicking, playing, watching, or exploring nature.

The open space hierarchy is basically defined by the geographic area served (catchment), size, level of use and significance. Four categories of open space hierarchies are local open spaces, neighborhood open space, district open space, and regional open scale (Rutherford, 2012). Local Open Spaces (LOS) are usually small parks that serve the recreational needs of residents directly. Neighborhood Open Space (NOS) serves as the recreational and social focus of a community. District Open Space (DOS) is principally designed to provide organized formal sports. The design and function of the DOS should take into account the principles of biodiversity and the objectives of environmental management. DOS caters to multiple neighborhoods with visitors coming from the surrounding area. Regional open space serves to help preserve local biodiversity and natural values of the area.

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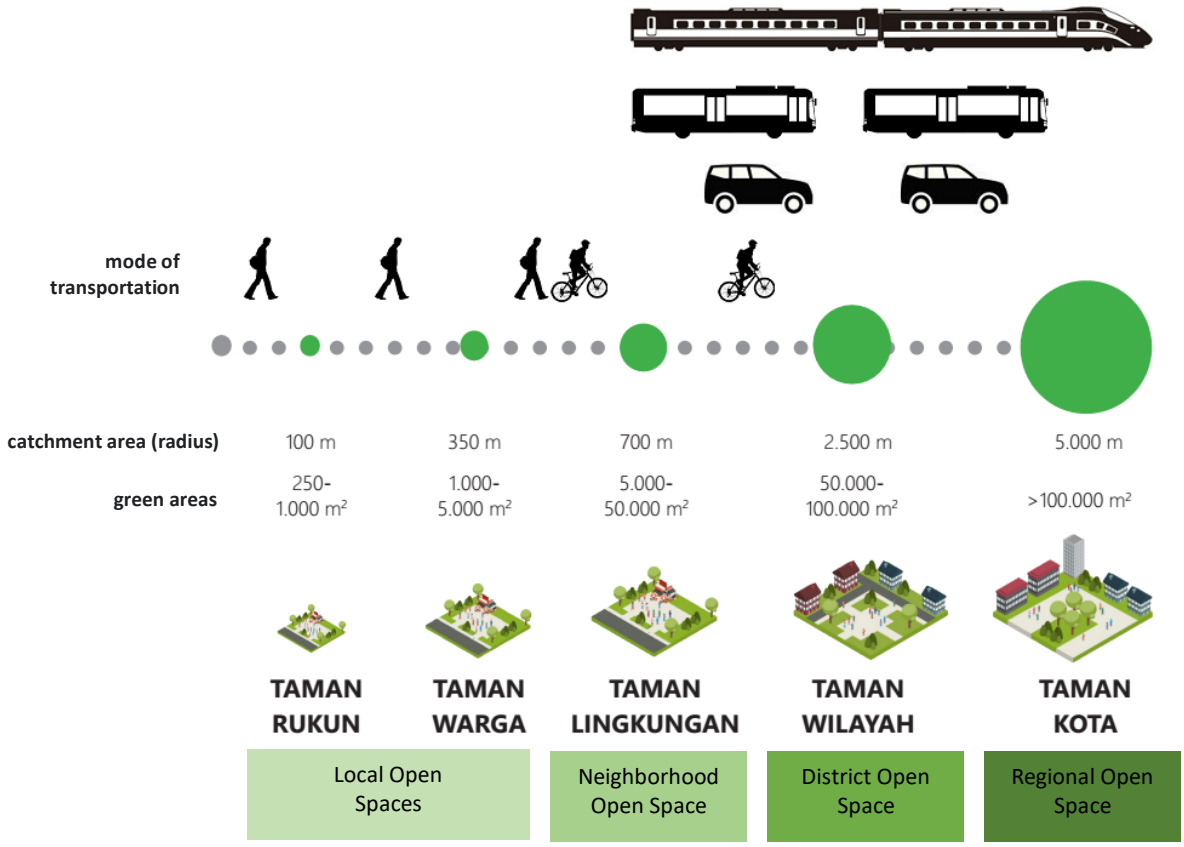
Each open space is defined by a landscape/environment classification that reflects its primary physical setting (Delgado, 2006). Landscape or environment classifications are proposed to assist site differentiation such as determining the type of experience suited to planning, management, and marketing objectives. Landscape characters are used to determine the desired vegetation (Nochian et al., 2015).

Figure 3. Category of Green Open Space in Jakarta



According to the Jakarta Province Green Open Space Masterplan 2018-2038, the division of the Green Open Space category in Jakarta is based on green areas, catchment area (radius), and mode of transportation to achieve green open space (shown in Figure 3).

The Potential of Urban Green Spaces in Jakarta

Before the pandemic, Jakarta residents generally preferred to use malls and modern shopping places as a place to relax and socialize. Besides being considerably clean, it also has a cool temperature because of the many air conditioners installed. Now central air conditioning is avoided because it has the potential to spread the virus. During the pandemic, urban green space can replace the role of the mall as a new place to socialize. Urban green spaces have been shown to provide measurable mental health benefits and contribute to general psychological well-being (Grahn & Stigsdotter, 2003; Nielsen & Hansen, 2007). Reports of epidemiological studies have identified positive effects of urban green spaces on the physical and mental health of citizens (de Vries et al., 2003; Guite et al., 2006; Maas et al., 2006; van den Berg et al., 2010). However, during this pandemic, control is still needed, especially the number of visitors to maintain physical distancing.

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Because of the pandemic and restrictions on movement, the self-sufficient and 15-minute compact city is a model that could contain the spread of the virus as all residents can have all their needs met—be they for work, school, shopping, health, leisure or culture—within 15 minutes of their own doorstep, not having to venture across the city (*United Nations-Habitat*, 2020). Weng et al. (2019) explore the significance of 15-min walkable neighborhoods that cater for the need of all the demographics. The Need for 15-Minute City focuses on other dimensions related to ecological sustainability, promoting social interaction and citizen participation, and addressing automobile dependency by emphasizing the proximity of all basic services (Moreno et al., 2021). This provides an opportunity for the use of urban green space on a neighborhood scale to further develop. Kuo (2001) suggests a significant relationship that occurs in individuals who have better access to green spaces, indicating an effect on reducing the level of individual mental fatigue.

Jakarta Provincial Government has open spaces development program on a neighborhood scale, including Child-Friendly Integrated Public Spaces or Ruang Publik Terbuka Ramah Anak (RPTRA) and Taman Maju Bersama (TMB). RPTRA is an open space that was built to facilitate various activities of women and children who live in a very densely populated city environment, such as a place for playing and learning for children, social interaction for residents, consultation and education for residents, evacuation sites, and places for economic activities organized by Pokok Pemberdayaan dan Kesejahteraan Keluarga (PKK) women group (Regulation of the Governor of DKI Jakarta Province Number 196 of 2015). RPTRA development is aimed at densely populated areas with a ratio of one RPTRA for each Rukun Warga (RW). There are 184 RPTRAs that have been inaugurated by the Jakarta Provincial Government (Prakoso & Dewi, 2017).

Currently, the development and implementation of government program policies are getting better by focusing on the factors of meeting the needs and achieving social welfare of the community (Sahlan, 2020). Therefore, the needs and happiness of the community become one of the important elements of the policy considerations of the program.

Taman Maju Bersama (TMB) is an urban green open space concept that facilitates the interactive activities of city residents and prioritizes community participation from the planning process to utilization to create sustainability. TMB is urban green spaces on a neighborhood scale that seeks to encourage community participation in the provision, use, and maintenance of green space (City Park and Forest Service Office of DKI Jakarta Provincial Government, 2020).

Green open spaces that are active on a neighborhood scale can be felt in a community garden. Gardens or parks that used to be enjoyed only visually are now starting to turn into active public spaces that involve community participation. According to Saldivar-Tanaka & Krasny (2004), the concept of a community garden helps personnel relations in the community become closer because all members are involved. Two qualitative researches examining community garden programs emphasize the importance of interacting with green spaces in facilitating social cohesion in communities. First, Armstrong (2000) conducted a study that analyzed data from 20 park programs, and highlighted the role of park programs in solving other community problems, especially in disadvantaged areas. Second, Milligan (2004) conducted a study that analyzed data obtained from Focus Group Discussions and semi-structured interviews with elderly gardeners. The results emphasize the role of interacting with green spaces in providing an understanding of achievement, satisfaction, aesthetic pleasure, and social networking facilitation.

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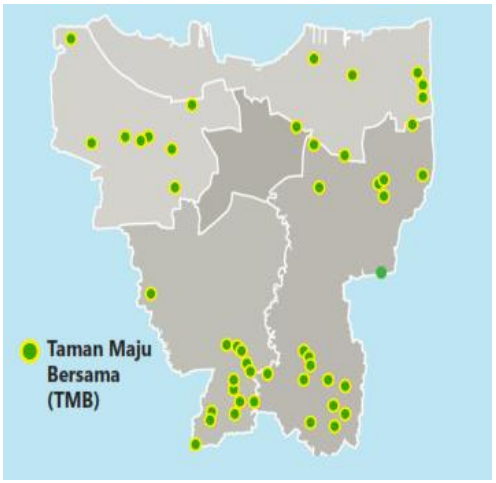
TMB is planned for 53 points spread across various areas on the neighborhood scale in Jakarta (shown in Figure 4), especially in densely populated areas (City Park and Forest Service Office of DKI Jakarta Provincial Government, 2020). The principles of Taman Maju Bersama i.e.: 1) functions ecologically as the lungs of the city and also ecologically social (citizen interaction, socialization, recreation, and other activities); 2) involves community participation in the planning, development, utilization, and management of the park; 3) strengthens community cohesion in solving various community problems.

Figure 4. Masterplan of Taman Maju Bersama in Jakarta



A comprehensive and integrated urban design process needs to involve community participation to ensure that the overall strategic vision of the plan takes into account public health aspects from the planning stage to the development stage (Horney et al., 2020). Community participation will influence policymaking, as well as create a system of social control concern people's lives. Thus, development should be more directed according to the community's need, because the community is more aware of their existing problems and needs (Dhari, 2020).

Social empowerment is a process of developing a sense of autonomy and self-confidence, both through individual and collective actions to change social relationships and institutions (Sulthanah, 2019). Community empowerment is a development process where local communities have the initiative to start the process of empowerment activities for mutual prosperity. Community empowerment aims to build, train, mobilize, provide motivation and awareness to the community both independently and together to strive prosperity (Retnowati et al., 2020)

The Focus Group Discussion (FGD) process of Taman Maju Bersama is shown in Figure 5. Focus Group Discussion (FGD) can be simply interpreted as a discussion that is carried out systematically and focused on a particular issue or problem. FGD is a form of qualitative research in which a group of people is asked for their opinions about a concept, service, idea, and situation with certain conditions (Dhari, 2020).

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Figure 5. Focus Group Discussion (FGD) activities (City Park and Forest Service Office of DKI Jakarta Provincial Government, 2020)

FGDs were carried out starting from the preliminary design phase to the final design phase divided into three meetings involving residents living around the park location and providing the widest possible access for the community. The facilities at Taman Maju Bersama can vary, including a sports field, a library, an infiltration, urban farming, jogging track, skatepark, amphitheater, children's playground, and other facilities based on FGD results.

The Ecotherapy Approach in Urban Green Space Design

The opportunity of green space uses as a therapeutic space during the COVID-19 pandemic is relevant and has a great opportunity to help the mental health recovery process for city residents. Activities interacting with green spaces can lead to positive changes in various psychological parameters including stress, concentration, self-esteem, depression, and aggression (Wilson et al., 2009). Hansmann et al. (2007) conducted a study surveying visitor (n = 164) to urban forests and urban parks in Zurich and found a significant reduction in self-rated stress between before and after the visit.

Ecotherapy promotes public health and mental health through the interaction of people with green spaces (Burls, 2007; Utami, 2014). Ecotherapy aims to facilitate healing and achieve well-being (a healthy mental state, including physical, mental, and emotional states), based on a harmonious relationship with ecology (Burls, 2007). Ecotherapy is a term given to various types of programs that aim to improve mental and physical well-being through outdoor activities in nature (Rinihapsari, 2019). Ecotherapy is an approach that rests on the idea that humans have a deep relationship with their environment and with nature itself. Failure to maintain these connections can have a particularly negative impact on mental health. Ecotherapy views that outdoor activities that are participatory and in synergy with nature will have therapeutic effects that educate a person.

According to Burls (2007), the use of an ecotherapy approach, which is based on a harmonious relationship with ecology, has the potential to reduce psychological symptoms that include anxiety, frustration, and depression so that it can achieve individual health (at the micro-level), public health and environmental health (at the macro-level). At the micro-level it refers to people who need to restore health through the 'therapeutic' environment in which the recovery process takes place (ecotherapy). At the macro-level, it involves various parties in the wider environment, both socially and ecologically, directly and actively, so that it will provide a healthy space for the community (ecohealth) as a result of these activities. The ecotherapy approach in urban green spaces design has the concept of reconnecting humans with nature, whether through activities in parks, gardening, interaction with animals, walking outdoors (Chalquist, 2009; Utami,

Print ISSN: 2622-0989 / Online ISSN: 2621-993X
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2014), so that it will encourage the release of endorphins to helps people feel calmer and sleep better.

Ecotherapy-based activities can be considered as forms of intervention in the design of relevant urban green spaces during the COVID-19 pandemic. The ecotherapy that will be discussed is a socio-ecological strategy that becomes a combined approach to promote emotional and psychological health (Wilson et al., 2009; Utami, 2014), through increasing community participation so as to realize the sustainable use of green spaces that are safer and healthier. The ecotherapy-based activities that were discussed included horticultural therapy such as gardening and physical therapy such as sports activities. Gardening is one of the ecotherapy-based activities that is recommended to make individuals avoid stress by increasing interaction with nature (Utami, 2014). The benefits of these ecotherapy-based activities: (1) providing opportunities for people to continue to express themselves and reduce stress levels during the pandemic, (2) providing pleasant interaction experiences in urban green space that adapted to the health protocol for handling COVID-19.

Since the Jakarta Provincial Government imposed an extension of the implementation of micro-based community activity restrictions in May 2021, activities in public areas and other places that can cause crowds, including the urban green spaces, are limited to a maximum visitor capacity of 50% and implementation of stricter health protocols (Regulation of the Governor of DKI Jakarta Province Number 615 of 2021) such as wearing masks, maintaining distance, and not being allowed to create crowds.

Jakarta Provincial Government's policy on handling COVID-19 only limits the types of community social activities and the number of maximum visitors' capacity to congregate, but there is no specific urban green space design standard in controlling social behavior to slow the spread of COVID-19. Therefore, this research aims to complement some considerations on the urban green space design ideas which are including: 1) responding to opportunities for utilizing green spaces up to a neighborhood scale (service radius up to 700 meters, land area up to 50,000 m^2, with 15-minute walkability from home); 2) seeing the opportunity for an ecotherapy approach as a space program intervention in the design of urban green spaces that encourages therapeutic activities to help restore the mental health of city residents; 3) responding to the policy of expanding interpersonal physical distance limits which are likely to cause changes in social behavior in public spaces, especially urban green spaces.

RESEARCH METHOD

The research method is a qualitative method through case studies. Qualitative research according to Groat & Wang (2013) has the main principle for making in-depth observations on the substance of interactions between individuals and groups, through an inventory of differences in respondents' perspectives in interactions and other respondents outside the interactions that have been carried out.

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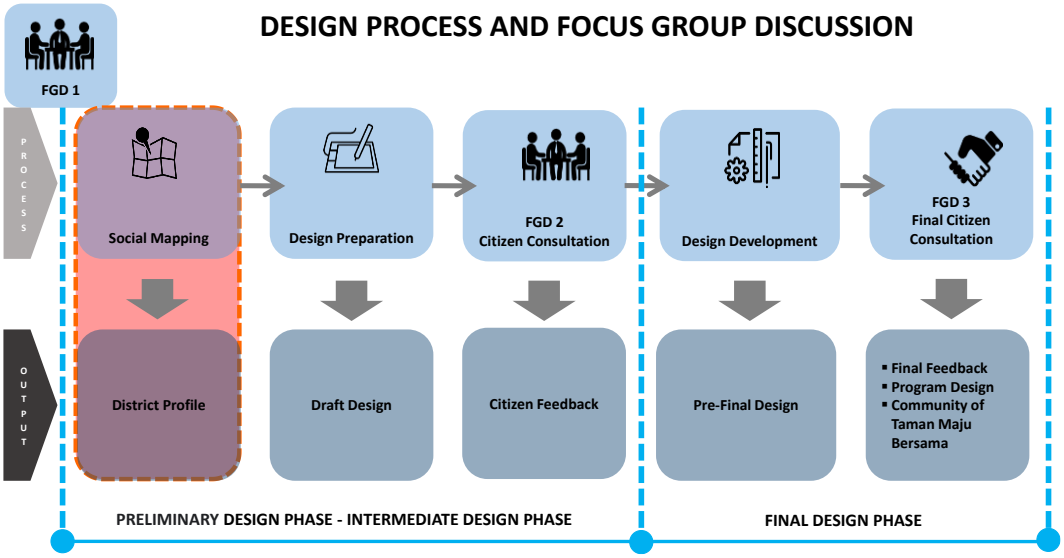
Figure 6. Illustration of Focus Group Discussion (FGD) activities



A case study approach is needed to provide an in-depth understanding of a case or several cases regarding existing space programs or activities in Jakarta's green spaces. The research question is: how will the restrictions on the use of public space and physical distancing as the main policies for handling COVID-19 affect the design of green spaces in Jakarta in the future?

The data collection carried out involves various sources of information, such as observations, interviews, audio-visuals, documents, and reports. Interviews were conducted to explore resident's opinions towards the existing condition of green spaces in their residential area through Focus Group Discussion (FGD). Then the aspirations of the residents are summarized and become the basic concept of Taman Maju Bersama design which is needed by the residents (shown in Figure 6).

RESULTS AND DISCUSSION

The case study was carried out at two locations of Taman Maju Bersama which in 2020 had conducted a Focus Group Discussion (FGD) process at the planning stage. The results of the resident's aspirations in the FGDs complemented the idea of designing urban green spaces as a process of interaction with various user needs and desires.

Taman Maju Bersama Ragunan

Taman Maju Bersama Ragunan located on Jl. SD 07 Pagi RT 006/09, Kelurahan Ragunan, Kecamatan Pasar Minggu, South Jakarta, with an area of ± 2.665 m^2. The existing condition of the land is still vacant land with the rest of the demolition of the previous building. The service radius of this park is 150 meters surrounded by residential areas, elementary school, mosque, and offices (shown in Figure 7).

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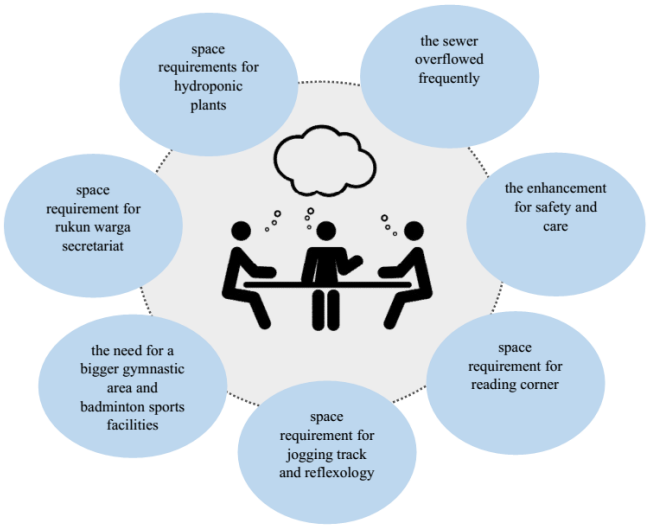
Figure 7. Analysis of the site context

Based on the result of FGD, the space requirements needed by residents can be seen in Figure 8. Space requirement for hydroponic plants as a gardening area accommodates an ecotherapy approach to provide an outdoor space for participatory and educational activities for residents.

Jarrott et al. (2002) suggest that gardening can evoke memories, stimulate the senses, and promote beneficial social interactions and physical activity (in the form of exercise). In addition, giving people the opportunity to utilize learned skills and engage in activities such as playing, reminiscing, and experiencing sensory stimulation, can all contribute to improving cognitive function (Nishii, 2011).

Based on the community's aspiration as shown in Figure 8, the proposed space program to be provided includes a plaza, seating area, hydroponic media room, jogging track, reflexology's path, outdoor gym equipment, children's playground, shelter for multipurpose room, security guardhouse, toilet, reading corner.

Figure 8. Problems and space programs at Taman Maju Bersama Ragunan.



Furthermore, FGD results will be continued on the zoning concept, site plan, and design (shown in Figure 9).

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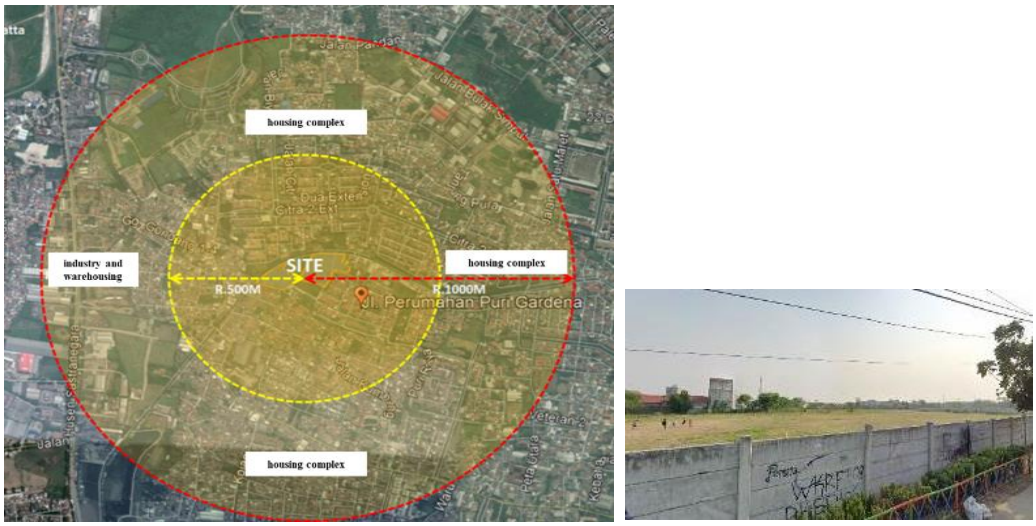
Print ISSN: 2622-0989 / Online ISSN: 2621-993X
DOI: https://doi.org/10.32535/jicp.v4i1.1123

Figure 9. Zoning concept, site plan, and design of Taman Maju Bersama Ragunan. (City Park and Forest Service Office of DKI Jakarta Provincial Government, 2020)

Taman Maju Bersama Puri Gardenia

Taman Maju Bersama Puri Gardenia is located in Puri Gardenia Housing 2 RT 07 RW 01, Kelurahan Kalideres, Kecamatan Pegadungan, West Jakarta, with an area of ± 14.866 m^2. The existing condition of the land is still vacant land. The service radius of this park is 500 meters surrounded by residential areas and industrial and commercial areas (shown in Figure 10).

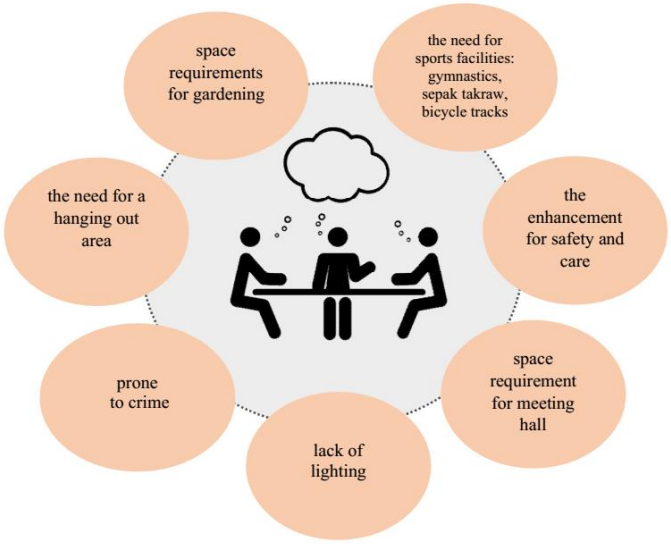
Figure 10. Analysis of site context.



Journal of International Conference Proceedings (JICP) Vol. 4 No. 1 (2021)
Print ISSN: 2622-0989 / Online ISSN: 2621-993X
DOI: https://doi.org/10.32535/jicp.v4i1.1123

Based on the FGD results, the residents expressed their space requirements as can be seen in Figure 11. Taman Maju Bersama Puri Gardenia accommodates urban farming area in space programs (Figure 11) as an implementation of an ecotherapy approach that seeks to provide outdoor space for participatory activities and synergize with nature so that it is expected to have an educational therapeutic effect for residents.

Figure 11. Problems and space programs at Taman Maju Bersama Puri Gardenia.



Urban farming can affect the welfare of the residents who participate because it also strengthens social relations and increases a sense of togetherness (Cuddy, 2018). Furthermore, FGD results will be continued on the zoning concept, site plan, and design of Taman Maju Bersama Puri Gardenia (shown in Figure 12).

Figure 12. Zoning concept, site plan, and design of Taman Maju Bersama Puri Gardenia. (City Park and Forest Service Office of DKI Jakarta Provincial Government, 2020)

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We found that the approach taken in the Taman Maju Bersama design process was sufficient to consider opportunities for therapeutic activity spaces that interact with nature such as gardening areas. However, the proposed design has not considered health protocol policies for handling COVID-19, such as the application of interpersonal physical distancing in public spaces of at least 2 meters. This can be a consideration for the improvement of urban green space design standards by Jakarta Provincial Government in the future new normal period.

If we look at the social activities that are highly recommended during this pandemic, the community highly expected the sports activities and sunbathing to increase their immune system remains strong. The selected places should not be too crowded for sport's activities, such as walking, running, cycling, etc. yet, in urban areas such places were normally crowded; therefore, we must be able to maintain a safe physical distance from other people.

Figure 13. Domino Park in New York (Cutieru, 2020).

According to several design implementations that have been carried out in other countries such as Domino Park in New York, as shown in Figure 13 we need a design that intentionally creates a series of painted circles to ensure visitors follow the rules of physical distancing (Cutieru, 2020). Another precedent in Figure 14 shows a design that maintains physical distancing when doing sports in public spaces.

Figure 14. Social distancing yoga domes by Lmnts Outdoor Studio (Cutieru, 2020).

CONCLUSIONS

The impact of the COVID-19 virus outbreak presents an opportunity to integrate a public health perspective into the concept of urban green space design standards because public health criteria are a major consideration that should not be ignored. This is an opportunity to improve urban green space design standards that need to be considered by the Jakarta Provincial Government in the future. Some

considerations should be included: 1) the opportunity to improve urban green space on a neighborhood scale (15-minute walkability from home) as a therapy space during the COVID-19 pandemic to help the mental health recovery process for Jakarta's residents; 2) the potential for an ecotherapy approach, especially on spatial program interventions in the design of urban green spaces, is expected to be able to present community participatory activities and synergize with nature; 3) consideration of health protocol policies for handling COVID-19, such as the application of a new interpersonal physical distance limit in public spaces of at least 2 meters affects changes in behavior and interactions of people in public spaces.

Further discussion: Will the temporary transformation seen during the pandemic inspire more permanent changes to urban green space design standards?

Acknowledgement

This research is funded by Excellence Basic Research of Higher Education or *Penelitian Dasar Unggulan Perguruan Tinggi* (PDUPT) Number: 8/AMD/E1/KP.PTNBH/2020 (2nd Year).

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