JPSTD
Journal of Placemaking and Streetscape Design
JPSTD 2(1): 43–51
ISSN 3025-5449

Institute for Advanced Science, Social and Sustainable Future
MORALITY BEFORE KNOWLEDGE

The role of green open spaces in the mental health and happiness of urban communities

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Received Date: July 20, 2024 Revised Date: July 31, 2024 Accepted Date: July 31, 2024

ABSTRACT

Background: Mental health is the most important thing in human life, but in reality in Indonesia the level of mental health disorders is still high. People who live in urban areas are vulnerable to mental health disorders such as anxiety, stress and depression which are caused, among other things, by high work pressure and lack of recreational activities. **Method:** This article uses a non-experimental correlational method, collecting secondary data from various sources and journal articles without experimental manipulation. The focus is on urban communities. **Findings:** Difficulty accessing natural things, such as rural environments, even something "green". is one of the factors that makes urban residents easily experience depression. Depression can cause decreased energy, sleep disturbances, changes in appetite, and other physical problems, therefore fulfilling recreational needs that are cheap and easily accessible through public open spaces can be a solution to reduce people's stress levels. **Conclusion:** Green open space (RTH) provides an opportunity to escape from fatigue, work pressure, city crowds so that people can release their stress by immersing themselves in nature and connecting themselves with the natural environment. RTH has many positive benefits so its existence is very necessary, especially in densely populated residential areas. **Novelty/Originality of this article:** This study proposes a model for integrating green open space (GOS) into urban planning that considers physical aspects and therapeutic functions for mental health. This model combines evidence-based GOS design with community mental health programs, creating a 'green healing zone' that can be accessed and optimally utilized by city residents to reduce stress and improve mental well-being.

KEYWORDS: green open space; mental health; urban society.

1. Introduction

Mental health is vital for everyone, everywhere. In Indonesia, the need for mental health is very high, but the response given is still lacking and inadequate. Based on Basic Health Research (Riskesdas) 2018, it shows that more than 19 million people aged over 15 years' experience mental emotional disorders, and more than 12 million people aged over 15 years' experience depression. Mental health problems in Indonesia are related to the high prevalence of people with mental disorders. In 2021 the number of mental health disorders will increase, where Indonesia has a prevalence of people with mental disorders of around 1 in 5 of the population, meaning that around 20% of the population in Indonesia has potential mental health problems (Rokom, 2021). The Indonesian National Adolescent Mental Health Survey (I-NAMHS) reports that 1 in 3 teenagers 10-17 years old in Indonesia have mental health problems, while 1 in 20 teenagers 10-17 years old suffer from mental

Cite This Article:
Tanwir, S. S., Huda, A. S., Latif, A., & Syafi'i, A. (2024). The role of green open spaces in the mental health and happiness of urban communities. Journal of Placemaking and Streetscape Design, 2(1), 43-51. https://doi.org/10.61511/jpstd.v2i1.2024.1031

disorders, this number is equivalent to 15.5% of Indonesian teenagers or a total of 2.45 million teenagers (Gloriabarus, 2022).

People who live in urban areas are vulnerable to mental health disorders such as anxiety, stress and depression. According to data from the Ministry of Health of the Republic of Indonesia, 70% of health problems occur in urban areas and 30% occur in rural areas. Mental health disorders are defined as health problems that affect thinking, feelings, behavior, mood, or a combination of these problems. Meanwhile, depression is a mood disorder that affects a person's thoughts, feelings and behavior. A person experiencing depression may feel sad, anxious, lose interest in activities they usually enjoy, feel worthless, or have recurring negative thoughts about themselves, life, or death. Depression can cause decreased energy, sleep disturbances, changes in appetite, and other physical problems (Indonesian Ministry of Health, 2019). This condition can occur occasionally or last a long time (chronic) due to increased stimuli such as population density, noise, contrasting views, chaos, pollution, and other things. People who live in big cities have difficulty accessing natural things, such as rural environments, even something "green". This could be another explanation why city residents are more susceptible to mental health disorders (WHO, 2022).

According to WHO data, among 100 cases of death in young people throughout the world, 1 of them occurs due to mental health disorders (WHO, 2022). Good mental health is not just the absence of mental disorders but also includes psychological well-being involving various aspects of daily life. One factor that is increasingly recognized as important in influencing the mental health of urban communities is the fulfillment of recreational needs that are cheap and easily accessible through public open spaces. Green open space (RTH) is one form of government implementation in providing public open space. Based on the Regulation of the Minister of Agrarian Affairs and Spatial Planning / Head of the Land Agency of the Republic of Indonesia Number 14 of 2022, green open space (RTH) is an elongated area/lane and/or cluster whose use is more open, where plants grow, both those that grow naturally and those deliberately planted, taking into account aspects of ecological function, water absorption, economics, social culture and aesthetics. Meanwhile, public green open space is green open space that is owned, managed and/or obtained by the district/city regional government or the special capital city regional government through collaboration with the government and/or the community and is used for the public interest (BPN, 2022).

Green open spaces such as city parks, recreation parks and other green areas provide various physical and psychological benefits for city residents. Green open spaces provide opportunities to escape from fatigue, work pressure, city crowds so that people can release their stress by immersing themselves in nature and connecting themselves with the natural environment. RTH has many positive benefits so its existence is very necessary, especially in densely populated residential areas (Danurdara, 2019). This is supported by the results of research published in the journal "Environmental Science and Technology" by the University of Exeter in England which shows that residents who live in green environments have a lower risk of depression or anxiety than residents who live in environments without green (Tambunan et al., 2021).

Other research conducted by Koohsari et al. (2022) shows that green open spaces naturally have many benefits for a person. Apart from enabling activities and recreation, green open spaces can also facilitate social interaction between users, which in turn can have a positive impact on community social ties. Every positive activity carried out by people living in a green environment can help reduce their depression (Koohsari et al., 2015). Meanwhile, Tambunan et al (2021), who conducted research in the Bekasi area, Indonesia, found that the risk of depression decreased in 96,7% of people who visited public green open spaces (Tambunan et al., 2021).

2. Methods

The methodology used in this article is a correlational, non-experimental method. The research variable data was obtained not through experimental manipulation but by collecting secondary data from various sources, as well as reviewing articles from journals. The focus of the discussion is on urban communities.

3. Results and Discussion

3.1 *The extent of green open space in several big cities in Indonesia*

The provision of green open space in an area must consider various aspects of function, including: ecological, water absorption, economic, socio-cultural, aesthetic, and disaster management (BPN, 2022). Based on data from SIPSN of the Ministry of Environment of the Republic of Indonesia, in 2022 the area of green open space in several large cities is presented in Table 1. below:

Table 1. Area of green open space in several large cities in Indonesia

City	Green open space area (Km ^{2})	% Area
Medan	26.50968	10.0
Pekanbaru	26.0568	10.76
Batam	2.50275	0.06
DKI Jakarta	7.47342	1.16
Bandung	282.44849	16.03
Surabaya	0.11504	0.03
Bali	1,384	1.08

(SIPSN Ministry of Environment and Forestry, 2022)

From the data above, the green open space area of big cities in Indonesia is still below the standards set in the ATRBPN Ministerial Decree No. 14 of 2022, namely 30% with a breakdown of 20% for public green open space and 10% for private green open space. Providing green open space is the responsibility of the city government as a form of fulfilling people's rights to obtain public facilities that will support their mental health (Ariyani, 2022).

Several things that hinder the fulfillment of green open space in accordance with government requirements in cities in Indonesia are due to various obstacles, including: (1) Limited land availability is the main obstacle in developing green open spaces (Elena, 2019); (2) The high price of land is also an inhibiting factor in the process of managing Green Open Space (RTH) in several cities in (Rohima, 2022) Indonesia ;(JPI, 2021) (3)The disparity between existing and supposed green open space standards is an obstacle in the provision and management of green open space in Indonesia(Rohima, 2022); (4) Participation that has not been carried out optimally by both the private sector and the community is also an inhibiting factor in the green open space management process in several cities in Indonesia. (Rohima, 2022). (5) The absence of sanctions for local governments that fail to meet green open space targets is also one of the inhibiting factors in fulfilling green open space in Indonesia(JPI, 2021) (JPI, 2022).

3.2 The level of happiness of people in big cities

Green open space is one of the factors that can influence the level of happiness of people in big cities in Indonesia. Green open space can provide ecological, social and economic benefits for society, such as reducing air pollution, increasing aesthetics, improving health and creating space for social interaction. However, the availability of green open space in big cities in Indonesia still does not meet national and international standards. According to data from the Central Statistics Agency (BPS), the average per capita green open space area

in 34 Indonesian provinces in 2020 was only 9.3 square meters, far below the national standard of 20 square meters and the WHO standard of 9 square meters (BPS, 2021a).

Based on the results of research conducted by Suryani et al. (2019), there is a positive relationship between the availability of green open space and the level of happiness of people in big cities in Indonesia. This research uses data from 10 large cities in Indonesia, namely Jakarta, Bandung, Surabaya, Medan, Makassar, Palembang, Semarang, Yogyakarta, Denpasar and Balikpapan.

The results of the research measure the level of people's happiness using the Subjective Happiness Scale (SHS) which consists of 4 questions, and the availability of green open space uses data from the Central Statistics Agency (BPS). The research results show that the average level of happiness for people in big cities in Indonesia is 5,04 out of a maximum scale of 7. The city with the highest level of happiness is Denpasar with a score of 5,55, while the city with the lowest level of happiness is Jakarta with a score of 4,64. The city with the highest availability of green open space is Balikpapan with a percentage of 28,77%, while the city with the lowest availability of green open space is Jakarta with a percentage of 3,59%. The Happiness Index is a subjective measure of development offered by BPS to see the public's perception of what they feel in life. everyday life. BPS has carried out studies on the level of happiness several times, namely trials in 2012 and 2013, then surveys measuring the level of happiness (SPTK) 3 times, in 2014, 2017 and 2021. The approaches used are life satisfaction, affection and eudaimonia (12) . In 2021, Indonesia's Happiness Index is 71,49, with an urban happiness index of 71,73 and a rural population of 71,17 (BPS, 2021b).

Based on 2021 SPTK data, there is a positive relationship between the area of green open space per capita and the Happiness Index in large Indonesian cities. Large cities that have green open space per capita above the national average, such as Jakarta, Bandung, Surabaya and Makassar, also have a Happiness Index above the national average. On the other hand, large cities that have green open space per capita below the national average, such as Medan, Palembang, Semarang and Denpasar, also have a Happiness Index below the national average (Maulidin, 2022). This shows that green open space can have a positive impact on the level of happiness of people in big cities in Indonesia.

Therefore, efforts need to be made to increase the availability and quality of green open space in big cities in Indonesia, so that people can experience the benefits optimally. Some steps that can be taken are : (a) allocate sufficient budget for the development and maintenance of RTH. Sufficient budget can be used to purchase land, plant trees and plants, provide facilities and equipment, pay labor, and carry out monitoring and evaluation. According to a study conducted by the Ministry of Environment and Forestry (KLHK), the average cost of developing green open space in Indonesia is around IDR 1,5 million per square meter, while the cost of maintaining green open space is around IDR 150 thousand per square meter per year. Therefore, there needs to be commitment and consistency from the central and regional governments to allocate sufficient budget for RTH in the APBN and APBD. (b) Integrating green open space in city spatial planning, the process that regulates the use and management of space in the city in accordance with the vision, mission, goals and city development strategies. Urban spatial planning must pay attention to environmental, social, economic, cultural and political aspects. Green open space is one of the environmental aspects that must be considered in city spatial planning, because green open space can provide benefits for ecosystem balance, climate change mitigation, public health and quality of life. Therefore, there is a need for integration between green open spaces and other aspects in city spatial planning, so that green open spaces can be placed in strategic locations, in accordance with the needs and potential of the community, and not in conflict with the interests of city development. (c) Involving community participation in green open space management in planning, implementing, monitoring and evaluating green open space management activities. Community participation can increase community awareness, responsibility and sense of ownership of RTH. Community participation can also increase the effectiveness, efficiency and sustainability of green open space management, because the community can provide input, resources and solutions that are appropriate to

local conditions. Several forms of community participation in RTH management are as follows: 1) Information participation, namely the public gets information about RTH from the management, such as location, area, type, function and benefits of RTH. 2) Consultation participation, namely the community providing input, suggestions or criticism about RTH to the management, such as the community's needs, hopes or complaints about RTH. 3) Collaborative participation, namely the community working together with the management in carrying out green open space management activities, such as planting, maintaining, monitoring or utilizing green open space. 4) Empowerment participation, namely the community is empowered by the management to manage RTH independently, such as forming a community group managing RTH, receiving capital, technical or legal assistance, or obtaining RTH management rights. (d) Educate the public about the importance of green open space for their lives. Community education is a process that provides knowledge, skills, attitudes and values related to RTH to the community. Public education can increase public knowledge, awareness and appreciation of RTH. Community education can also increase community behavior, participation and advocacy towards RTH. Several methods of public education about green open space are as follows: 1) Formal education, namely education carried out through formal educational institutions, such as schools, colleges or courses. Formal education can use curriculum, materials or media related to RTH, such as books, videos or games. 2) Non-formal education, namely education carried out through non-formal educational institutions, such as community organizations, NGOs, or mass media. Non-formal education can use activities, programs or campaigns related to RTH, such as seminars, workshops, competitions or festivals. 3) Informal education, namely education carried out through daily social interactions, such as family, friends or neighbors. Informal education can use examples, stories or testimonials related to RTH, such as experiences, benefits or impact of RTH

3.3 The impact of green open space on people's psychology

The availability of green open space can help reduce depression in urban areas. According to Tambunan et al (2022), the existence of green open space can naturally help someone to gain benefits because apart from doing activities and exercise, green open space can also create social interaction between its users. Interaction and socialization in society can create a good impact on community social ties. All positive activities carried out by users of green open spaces can reduce a person's level of depression (Tambunan et al., 2021). This is also in accordance with the results of research by Nugraha et al (2023) which found that activities carried out in green open space areas, especially city parks, can restore mood and increase lost enthusiasm or energy (Nugraha et al., 2023). Based on research (11), 50% of people who come to RTH aim to relax and relieve fatigue, so that psychologically, mental stress is reduced and they become happier (Wulandari et al., 2020).

One form of public open space in urban areas is the existence of city parks. Parks are often recreational areas for many people. Natural environments are a choice for most people when on vacation and recreation, but such areas are difficult to find in urban areas (Kusmaryani, 2001), even though city parks are the easiest alternative place for members of urban communities to interact with the natural surroundings. Natural scenery has many psychological benefits, apart from being the lungs of the city which makes the city more comfortable to live in, it is also beneficial for the people of the city themselves. Bell et al., 2001 found that the creativity of children who played in areas of grass and trees was twice as high as in barren areas (Bell et al., 1996). Meanwhile, based on research from Nugraha et al (2023), the more often people visit city parks, the more mental health will improve (Nugraha et al., 2023).

City parks can be used to improve the mental health of city dwellers since they serve the following functions: 1) Providing opportunities for people to engage in physical activity, relaxation, seek peace and escape from the hot city, thereby reducing stress and improving mental and physical health (Kirana, 2019); 2) Neutralize pollution and hot air in urban areas, so that it can become a comfortable and humane place for city residents (Kusmaryani,

2001); 3) Increasing physical activity, by providing space for local residents (Mashar, 2021); 4) alternative places to meet the needs of the natural environment in urban communities (Kusmaryani, 2001).

A study conducted by Barton & Pretty (2010) showed that walking in nature for 30 minutes can reduce levels of cortisol (stress hormone) and improve mood and self-esteem (self-esteem) for people who experience depression, this is because green open space can provide good stimulation for the senses, thoughts and feelings of people who are stressed by city life. RTH can also provide a healing effect, namely the ability to restore focus, concentration and memory that are disturbed by stress (Mashur & Rusli, 2018). R TH also applies the Healing Environment concept where Healing Environment is a concept that contains three main aspects related to the healing process from depression, namely: a) Aspects of the natural environment. The natural environment is considered to provide positive energy for human psychology, which provides comfort and relaxation for the human mind. b) Psychological aspects. The Healing Environment concept in its application can provide positive suggestions for human mental health. These positive suggestions can foster a sense of optimism and healthy hope for humans. c) Aspects of the five human senses. The Healing Environment concept must be able to provide stimulation for the five human senses through sight, smell, hearing, taste and touch, which are realized in natural elements.

In health science, good mood and cognition can prevent and control increases in cortisol (stress hormone). The natural environment and the artificial environment have an influence in creating a unified environment that is conducive to the healing process, not only physical but also mental conditions. The approach is through aspects of sensory stimulation which include hearing, sight, smell, taste and touch. Through the human senses, the Healing Environment Concept focuses on building positive stimuli on human psychology through; visual atmosphere, aroma, sound and texture of Nature (Mashar, 2021).

4. Conclusions

Based on this research, it can be concluded that green open space has a very important role in improving the mental health and happiness of urban communities and the following conditions also exist: 1) The disparity between existing and supposed green open space standards is an obstacle in the provision and management of green open space in Indonesia; Participation that has not been carried out optimally by both the private sector and the community is also an inhibiting factor in the green open space management process in several cities in Indonesia; 2) The average per capita green open space area in 34 Indonesian provinces in 2020 was only 9.3 square meters, far below the national standard of 20 square meters and the WHO standard of 9 square meters, there is a positive relationship between the availability of green open space and the level of happiness of people in big cities in Indonesia; 3) The research results show that the average level of happiness for people in big cities in Indonesia is 5.04 out of a maximum scale of 7; 4) The city with the highest level of happiness is Denpasar with a score of 5.55, while the city with the lowest level of happiness is Jakarta with a score of 4.64.

Acknowledgement
Thank you to lecturer M. Firdaus Noor Alaudy, Mr Ahmad Syaeful Huda and Abdul Latif for their help in writing and correcting this article, hope it can benefit the readers of the article.

Author Contribution
Not available.

Funding
This research received no external funding.

Ethical Review Board Statement
Not applicable.

Informed Consent Statement
Not applicable.

Data Availability Statement
Not available.

Conflicts of Interest
The authors declare no conflict of interest.

Open Access

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