

# GREEN OPEN SPACES AS AN ALTERNATIVE FOR ENHANCING THE PSYCHOLOGICAL WELL-BEING OF URBAN COMMUNITIES: A SYSTEMATIC LITERATURE REVIEW (SLR)

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## Abstract

**Background Behind:** Environmental issues have become a global concern with increasing impacts over the past few decades. Rapid urbanization has brought various negative effects on urban environments. Green open spaces (GOS) serve as a strategic solution to address these challenges. These spaces in urban areas are filled with plants and vegetation to support ecological, social, cultural, economic, and aesthetic benefits. **Objective:** This research aims to answer questions regarding green open spaces as an alternative for enhancing the psychological well-being of urban communities. **Method Study:** The method employed is a systematic literature review using the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) approach to filter topics, subtopics, and journals that meet specific criteria. **Results:** The findings of this literature review indicate that green open spaces (GOS) play a crucial role in improving the psychological well-being of urban communities. Green open spaces act as a key element in creating environments that support mental health, reduce stress, enhance mood, and provide restorative effects for individuals exposed to green environments.

**Keyword:** Green Open Spaces (GOS), Psychological Well-Being, Systematic Literature Review (SLR)

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## Introduction

Environmental issues have become a global concern with increasingly significant impacts over the past few decades (Aqilla, 2024). Various phenomena such as global warming, air pollution, ozone layer depletion, and environmental degradation continue to show a substantial increase. These conditions not only affect the physical health of the environment but also influence the overall quality of human life.

Environmental problems occur not only in rural areas but also in urban settings. Urban environments in Indonesia face significant challenges in maintaining and improving their quality. Population growth, rapid urbanization, industrialization, and high mobility have placed immense pressure on urban environments (Utami, 2023).

Rapid urbanization has brought numerous negative impacts on urban environments. Major cities face serious issues such as air pollution and rising temperatures due to the urban heat island (UHI) effect. Green open spaces (GOS) are a

strategic solution to these problems. The presence of GOS in urban areas provides various benefits, including ecological, social, and psychological advantages.

Green open spaces are areas or corridors open to the public where plants naturally grow or are intentionally cultivated. GOS are also often considered essential spaces for the community to engage in physical activities. Beyond serving as the "lungs" of urban areas, green open spaces also play a critical role in health and well-being (Suci, 2022).

Results interviews with child fire victims in Green Open Spaces (GOS) are areas in urban environments filled with plants and vegetation to support ecological, social, cultural, economic, and aesthetic benefits (Digdowiseiso & Ria, 2023). Ecologically, GOS help absorb carbon dioxide (CO<sub>2</sub>), reduce air temperature, and improve air and soil quality. Psychologically, GOS provide spaces for the community to relax, exercise, and enhance social connections, positively

impacting mental well-being.

However, it has been proven that green open spaces (GOS) management and provision are often overlooked in urban planning. For instance, the availability of GOS in many cities in Indonesia remains far below the minimum standard of 30% of the total area, as recommended by Law No. 26 of 2007 on Spatial Planning. This highlights the need for further research into the role of GOS in addressing environmental issues and improving the quality of life for urban communities. Given the broad scope of GOS development policies in enhancing urban ecological quality, safeguarding urban ecosystems, and creating harmony between natural and built environments, exploring their benefits for the urban population (Digdowiseiso & Ria, 2023).

Therefore, this study aims to address research questions using a Systematic Literature Review (SLR) approach with the PRISMA methodology, focusing on green open spaces as an alternative to improving the psychological well-being of urban communities.

By employing the Systematic Literature Review (SLR) method, this research will identify and analyze studies conducted in this field and examine the benefits of green open spaces as a solution to urban environmental challenges, particularly from ecological and psychological perspectives. Thus, this study is expected to provide strategic recommendations for the sustainable management and development of green open spaces.

By understanding green open spaces as an alternative for enhancing the psychological well-being of urban communities, this study is expected to provide sustainable recommendations for the management and development of GOS in urban areas. This research can serve as a foundation for governments and urban planners in formulating policies that support sustainable urban planning, such as expanding GOS areas to improve environmental quality, enhance thermal comfort, and reduce health risks caused by pollution. Moreover, this study contributes to improving the quality of life for communities.

## Method

This study employs the Systematic Literature Review (SLR) method. It can also raise public awareness about the importance of green spaces as areas that serve ecological functions and support psychological well-being by providing spaces for relaxation, recreation, and social interaction. These positive impacts are expected to contribute to creating more livable cities. It refers to specific research methodologies or developments to collect and evaluate studies on a particular topic (Wahyudin & Rahayu, 2020). This research employs the PRISMA method (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) to screen and select articles. This research approach is more focused and systematic, based on predetermined inclusion and exclusion criteria (Page et al., 2021).

Next, the keywords "Green Open Spaces" AND "Psychological Well-Being" were entered into the Google Scholar database. The subsequent step involved screening articles not meeting the inclusion and exclusion criteria. Relevant articles were imported into the Mendeley Reference Manager application in RIS (Research Information System) format.

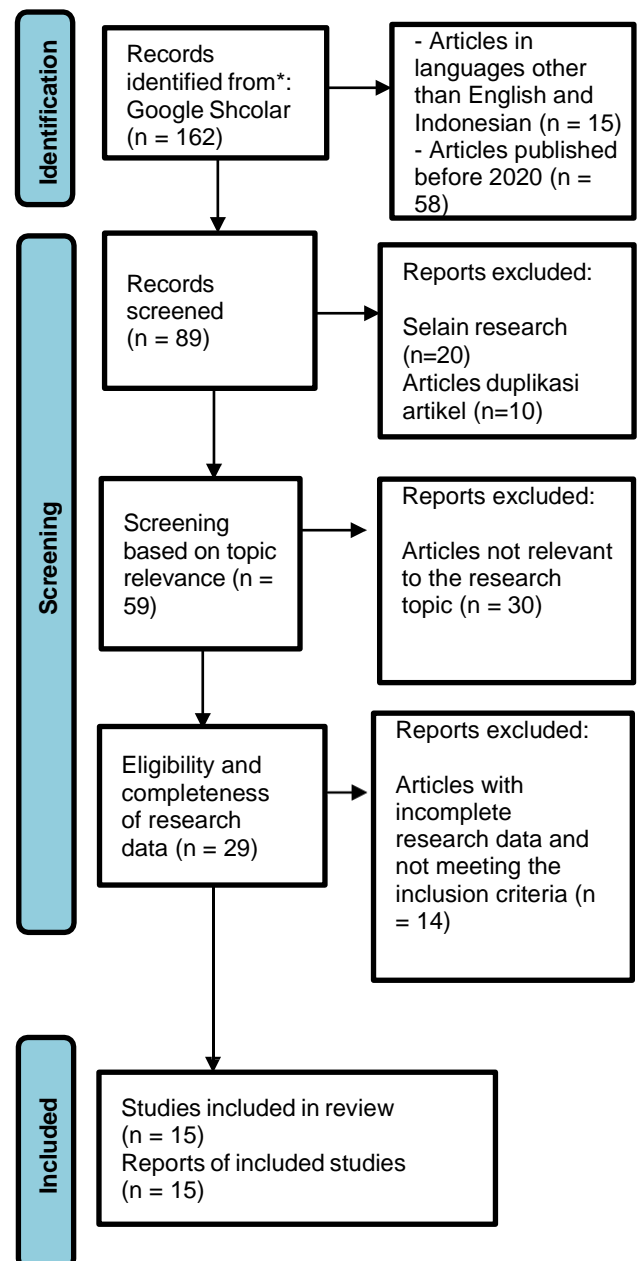
A PRISMA diagram was created using the PRISMA Flow Diagram, resulting in 15 articles that met the research criteria. The inclusion and exclusion criteria table, along with the PRISMA diagram, are described as follows:

**Tabel 1. Criteria Inklusi and Eksklusi**

| Criteria   | Inklusi     | Eksklusi                                    |
|------------|-------------|---|
| Population | Research    | Research                                    |
|            | involving   | involving only                              |
|            | urban       | rural or                                    |
|            | communities | suburban communities without urban elements |

|                   |   |   |
|-------------------|---|---|
| Intervention      | The management of green open spaces, such as city parks, green corridors, or playgrounds, which contribute to psychological well-being. | Technology-based management or other programs that do not involve community elements.       |
| Comparison        | Studies comparing communities with access to green open spaces (RTH) with communities without access.                                   | Studies that do not measure the specific effects of the presence or design of green spaces. |
| Outcome           | Studies that discuss psychological well-being, such as stress reduction, increased happiness, and others.                               | Studies that do not discuss psychological well-being and focus only on physical benefits.   |
| Study Design      | Mix Method  | Studies that are neither quantitative nor qualitative.                                      |
| Publication Years | 2020-2024   | < 2020  |
| Language          | Studies language Indonesia or English.  | Studies in languages other than Indonesia or English.                                       |

**Tabel 2. Diagram PRISMA**



## Results And Discussion

### Result

Out of a total of 162 articles obtained using the Systematic Literature Review (SLR) analysis, 15 articles that meet the research criteria will be selected.

Table 1. Characteristics Respondents

Tabel 3. The Result Artikel With Criteria

| No | Penulis             | Tahun | Judul   | Jurnal  |    |                  |      |  |
|----|---------------------|-------|---|---|----|------------------|------|--|
| 1  | Tambunan et al.,    | 2021  | Pengaruh Ruang Terbuka Hijau Terhadap Psikologis Masyarakat di Kota Bekasi Khususnya Kecamatan Jatiasih | ARSITEKTURA: Jurnal Ilmiah Arsitektur dan Lingkungan Binaan |    |                  |      | n Untuk Kesejahteraan Masyarakat: Sejuknya Udara, Sehatnya Jiwa dalam Upaya Pelestarian Lingkungan di Desa Barugbug Kecamatan Padarincan |
| 2  | Leuwol et al.,      | 2023  | Pengaruh Kualitas Lingkungan Terhadap Kesejahteraan Psikologis Individu di Kota Metropolitan            | Jurnal Multidisiplin West Science                           | 7  | Cahyanti, et al  | 2024 | Pengembangan Taman Mini di Area Tanah Berpasir untuk Meningkatkan Ruang Terbuka Hijau  |
| 3  | Arfani & Trimarsuti | 2024  | Efektivitas Pengelolaan Ruang Terbuka Hijau Wisdom Park UGM bagi Pemulihan Urban Stress di Yogyakarta   | Journal of Infrastructure Policy and Management (JIPM)      | 8  | Meilani et al.,  | 2024 | Analisis Jasa Lingkungan Ruang Terbuka Hijau Kecamatan Kajen, Kabupaten Pekalongan, Jawa Tengah  |
| 4  | Mashar              | 2021  | Fungsi Psikologis Ruang Terbuka Hijau   | Jurnal Syntax Admiration                                    | 9  | Rohima           | 2022 | Faktor Penghambat Pengelolaan Ruang Terbuka Hijau (RTH) Di Kota Jambi  |
| 5  | Puspitasari et al., | 2023  | Ruang Terbuka Hijau (RTH) Dalam Keseimbangan Pembangunan Perkotaan Kabupaten Sragen                     | Journal of Comprehensive Science (JCS)                      | 10 | Amirah & Martana | 2023 | Penerapan Tanaman Aromatik Melalui Pendekatan Arsitektur Biofilik dalam Mengatasi  |
| 6  | Ratulangi et al.,   | 2024  | Pendampingan Penghijauan  | Jurnal Ragam Pengabdian (JURAGAN)                           |    |                  |      | <i>Bureaucracy Journal : Indonesia Journal of Law and Social-Political Governance</i><br><br>Prosiding Temu Ilmiah                       |

|    |                 |      |  |  |    |  |
|----|-----------------|------|--|--|----|--|
|    |                 |      | Urban<br>Stres   |  |    |  |
| 11 | Mustafa         | 2024 | Penerapan Prinsip Arsitektur Hijau Pada Desain Permukiman Ramah Lingkungan di Perkotaan                              | Jurnal Cahaya Mandalika  | 15 | Rasyida 2021   |
|    |                 |      |  |  |    | Hubungan antara Persepsi terhadap Kualitas dan Pemanfaatan Ruang Terbuka Hijau dengan Kesejahteraan Psikologis Anak Tataloka |
| 12 | Vujovic et al., | 2021 | Urban Heat Island: Causes, Consequences, and Mitigation Measures with Emphasis on Reflective and Permeable Pavements | Civil Eng  |    |  |
| 13 | Budiman         | 2022 | Penerapan Ruang Terbuka Hijau di Karawang  | Nusantara: Jurnal Pendidikan, Seni, Sains dan Sosial Humaniora |    |  |
| 14 | Putri et al.,   | 2024 | Revitalisasi Taman Desa Pasiran Sebagai Upaya Peningkatan Kualitas Lingkungan Kehidupan Sosial                       | Inovasi Sosial: Jurnal Pengabdian Masyarakat                   |    |  |

### Discussion

This study aims to address research questions regarding green open spaces as an alternative to improving the psychological well-being of urban communities. A harmonious and balanced environment determines a nation's quality of life. Every environment utilization should achieve harmony, alignment, and balance between humans and their environment. Environmental preservation based on the ecological values of local wisdom within a contemporary context must be conducted integratively, highlighting the necessity of developing green open spaces (GOS) to ensure their sustainability (Dana et al., 2024).

The utilization of open spaces also significantly impacts the quality of urban environments. Sustainable architectural design can reduce carbon footprints and create a healthy and comfortable environment for city residents. Therefore, designing open spaces that adhere to sustainability principles is critical to balancing sustainable urban development and maintaining a high-quality climate (Syahrums, 2024).

Psychological Well-Being is described as a combination of conditions that positively impact and function optimally in both individual and social life. Psychological well-being is related to the condition where an individual can accept themselves and their past life, self-development or growth, the belief that their life is meaningful and has a purpose, the quality of positive relationships with others, the ability to manage their life and environment

effectively, and the ability to make decisions for themselves (Pedhu, 2022).

In this context, developing Green Open Spaces (GOS) in urban areas positively impacts the surrounding community, particularly improving air quality. Green Open Spaces can help absorb pollutants like carbon dioxide and produce oxygen, thus improving the air quality in urban environments. GOS also provides spaces for walking, jogging, or exercising, which promotes a healthy lifestyle and reduces the risk of non-communicable diseases. The development of Green Open Spaces is a long-term investment that supports environmental health and improves the overall quality of life for the community.

This aligns with research by Tambunan et al. (2021), which states that the availability of Green Open Spaces has a significant impact on the psychological well-being of the community, particularly in reducing depression in urban areas, such as in the Jatiasih District of Bekasi. According to their study, about 96.7% of urban residents recognized that the availability of Green Open Spaces and visiting public green areas positively reduced depression in urban areas.

Research by Mashar (2021) emphasizes the importance of the psychological function of Green Open Spaces to alleviate the noise, congestion, and chaos that can cause stress or depression. As the name suggests, Green Open Spaces are open natural areas filled with green parks, ornamental plants, and shade-giving trees that provide a refreshing atmosphere for visitors.

Further, the study by Puspitasari et al. (2023) highlights the importance of optimizing the planning and development of Green Open Spaces to minimize future environmental problems, which can also positively affect the community's psychological well-being. A well-planned development process ensures that the implementation is effective and maximizes the benefits for the people.

Therefore, Green Open Spaces (GOS) play a crucial role in enhancing the psychological well-being of urban communities by providing an environment that supports mental, physical, and social health. Green areas can help reduce stress, improve mood, and give a sense of comfort. They also offer therapeutic effects that help individuals recover from mental fatigue caused by the hectic urban lifestyle, ultimately improving the quality of

life.

## **Conclusion**

Based on this literature study, it can be concluded that Green Open Spaces (GOS) play a vital role in enhancing the psychological well-being of urban communities. Research shows that GOS is critical in creating environments that support mental health, reduce stress, improve mood, and provide therapeutic effects for individuals exposed to green spaces.

The development and strategic management of GOS are essential steps in creating more ecologically and psychologically livable cities. This study also supports the recommendation for integrating GOS into sustainable urban planning policies, involving the roles of local governments, communities, and the private sector in ensuring the optimal function of GOS to improve the quality of life, particularly in urban areas.

GOS can help mitigate the negative impacts of urbanization, such as air pollution, disturbances, and the urban heat island effect (increased temperatures due to dense urban buildings), all contributing to enhanced psychological comfort. Strategically placed GOS can also improve the overall quality of the living environment and support urban ecosystems.

## **Suggestion**

This study using the systematic literature review method, this study highlights the importance of local governments and urban planners in developing sustainable urban planning policies by expanding the coverage of Green Open Spaces (GOS) in urban areas, setting minimum targets in line with national standards. Furthermore, policies should encourage the development of environmentally friendly green infrastructure to support the ecological functions of GOS.

This research can also contribute significantly to developing the sustainable urban planning concept. It could be strengthened by a multidisciplinary approach that includes psychology, urban planning, and ecology. This will provide a more comprehensive perspective in understanding the impact of green open spaces on the psychological well-being of urban

communities.

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