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ASSESSING THE PREFERENCE AND UTILIZATION OF GREEN SPACES FOR SOCIAL HARMONY IN PESHAWAR

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Abstract

This study aims to assess the preference and utilization of green spaces for fostering social harmony in Peshawar, Pakistan. Utilizing a simple observational approach, the research focuses on Hayatabad areas within the city. By visiting green & non green areas and conducting direct observations, the study seeks to determine the level of enjoyment and the number of people present in green spaces compared to non-green areas. This straightforward methodology aims to provide valuable insights into the perceived value and actual usage of green spaces for social activities and community interaction. By identifying areas with higher levels of engagement and enjoyment in green spaces, the research aims to highlight the potential role of such spaces in promoting social cohesion and harmony within urban settings like Peshawar. The findings of this study can inform urban planning efforts and policy decisions aimed at enhancing the availability and accessibility of green spaces to foster a more cohesive and peaceful community environment.

Keywords: Green spaces, Social harmony, Social interaction, Urban planning, Peshawar

Introduction

Peshawar, a city steeped in history nestled amidst the Hindu Kush mountains, thrives as a cultural and economic hub for Pakistan's Khyber Pakhtunkhwa province (Government of Khyber Pakhtunkhwa, 2023). The rapid pace of urbanization has profoundly transformed cities worldwide, bringing both opportunities and challenges. While urban growth fosters economic development, innovation, and cultural exchange, it also poses significant obstacles to maintaining social harmony within diverse urban populations (World Bank, 2020). As cities expand, they become more heterogeneous, incorporating individuals from various ethnic, religious, and socioeconomic backgrounds. This diversity, while enriching, can create tensions if not managed effectively, making the preservation of social harmony increasingly complex. Social harmony, defined by UNESCO (2017) as a state of peaceful coexistence, mutual respect, and cooperation among individuals and groups, is critical to a city's overall well-being. It not only fosters an environment of understanding and inclusivity but also contributes to sustainable urban development. When social harmony is nurtured, it promotes collaboration across different sectors of society, encourages civic engagement, and strengthens the social fabric that binds communities together. On the contrary, the lack of it can exacerbate inequalities, contribute to social unrest, and weaken the resilience of urban areas in the face of economic, environmental, and political challenges.

In the context of Peshawar, a historically significant city in Pakistan, the need to foster social harmony is particularly vital. Peshawar has long been a melting pot of cultures, shaped by its strategic location as a gateway between Central and South Asia. Today, with rapid urbanization, the city faces complex dynamics stemming from its growing population, socio-political shifts, and the pressures of modern urban life. These changes are accompanied by an increasing

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diversity of the city's inhabitants, making it essential to create a social environment where different communities can live together in peace and mutual respect.

Nurturing social harmony in Peshawar involves addressing issues such as equitable access to resources, inclusive urban planning, and creating platforms for dialogue among diverse groups. Such measures not only help in mitigating potential conflicts but also enhance a collective sense of belonging and shared identity. In doing so, Peshawar can strengthen its social cohesion, build resilient communities, and navigate the multifaceted challenges brought by urbanization. By focusing on fostering cooperation, understanding, and respect among its residents, Peshawar can emerge as a more inclusive and harmonious urban environment in the face of its growing diversity.

A compelling solution to the challenges of urbanization and social harmony lies within the natural environment itself: green spaces. These include parks, gardens, urban forests, and other public green areas, which act as essential components of urban infrastructure. These spaces offer much more than aesthetic appeal; they provide opportunities for relaxation, recreation, and social interaction, while serving as a vital connection between urban dwellers and the natural world (Fuller et al., 2007). The integration of green spaces into city planning has garnered increasing attention for their wide-ranging benefits, particularly in promoting mental and physical well-being, social cohesion, and environmental sustainability.

Research has consistently demonstrated the multifaceted advantages of green spaces, with numerous studies showing their capacity to reduce stress, improve mental health, and encourage physical activity (Kuo et al., 2001; van den Berg et al., 2010). These benefits are particularly crucial in densely populated urban environments, where residents often face the psychological pressures of fast-paced city life. Green spaces offer a refuge from urban stressors, enabling individuals to unwind and recharge. The positive effects on mental health are not limited to individuals; they ripple outward, influencing the broader community by fostering a sense of calm and well-being that permeates the urban fabric.

Moreover, green spaces have been recognized for their role in promoting social interaction and community building. Public parks and gardens act as communal spaces where people from various cultural, socioeconomic, and ethnic backgrounds can gather and engage with one another. These settings provide a neutral, inclusive environment where social barriers are diminished, and people can connect on a personal level, irrespective of their differences. By facilitating such interactions, green spaces foster a sense of community belonging, promoting social inclusion and reducing social isolation.

In cities where diversity is often accompanied by social friction, green spaces can serve as powerful tools for bridging divides and enhancing peaceful coexistence. They act as catalysts for interaction, where people of different backgrounds can come together, share experiences, and build meaningful connections. The informal, organic interactions that occur in green spaces contribute to a stronger sense of community, cultivating mutual respect and understanding. In this way, green spaces not only provide environmental and health benefits but also play a critical role in nurturing social harmony within diverse urban populations. As urban planners and policymakers seek solutions to the challenges

posed by rapid urbanization, integrating green spaces into the urban landscape emerges as a practical and holistic strategy for enhancing social cohesion and fostering resilient, harmonious cities.

The potential of green spaces to enhance social harmony can be understood through several key mechanisms. Firstly, the calming effect of nature is well-documented, with numerous studies showing that exposure to green environments significantly reduces stress hormone levels and promotes overall well-being. This reduction in stress creates an atmosphere where individuals are more likely to engage in positive social interactions, fostering a sense of connection and cooperation among community members (Fuller et al., 2007). By offering an escape from the pressures of urban life, green spaces encourage relaxation and contribute to a more peaceful and harmonious social dynamic.

Green spaces also provide a platform for informal gatherings and unstructured social interactions. Unlike formal meeting places or structured events, public parks and gardens create opportunities for spontaneous encounters between people from different walks of life. These spaces act as neutral grounds where social barriers—whether cultural, economic, or generational—are less pronounced, allowing for greater understanding and empathy between diverse groups (Kuo et al., 2001). The organic nature of these interactions promotes social integration and builds bridges between communities, making green spaces an essential component in fostering social cohesion in urban environments.

Additionally, physical activity in green spaces contributes to social harmony through the release of endorphins, which are natural mood elevators. Activities such as walking, jogging, or playing sports in parks not only benefit physical health but also enhance mental well-being. The endorphins released during exercise help elevate moods, making people more likely to engage in positive, cooperative social behaviors. The act of exercising in a shared public space also fosters a sense of community, as individuals bond over shared activities, whether they are team sports, yoga sessions, or casual strolls.

Finally, the aesthetic appeal of well-maintained green spaces plays a subtle but crucial role in fostering a sense of community pride. Visually pleasing environments uplift the mood of residents, contributing to a more positive social atmosphere. Attractive and well-kept public spaces encourage people to spend time outdoors, enhancing opportunities for social interaction. Moreover, the aesthetics of a shared green space can inspire residents to take ownership of their environment, leading to community-driven initiatives for upkeep and preservation. (Hartig et al., 2014). This sense of collective responsibility not only strengthens community bonds but also instills pride in the shared urban landscape, further promoting social harmony.

By integrating these spaces into urban planning, cities can create environments that naturally foster community building, reduce social tensions, and promote peaceful coexistence. (White et al., 2013).

Peshawar, with its deep-rooted cultural heritage and diverse population, offers a distinctive case study for investigating the role of green spaces in promoting social harmony. The city's historical significance as a crossroad of civilizations, combined with its growing urbanization, presents both challenges and opportunities

for fostering social cohesion. As Peshawar continues to expand and diversify, the strategic incorporation and enhancement of green spaces throughout the urban landscape could play a pivotal role in nurturing a more cohesive, inclusive, and peaceful environment for its residents.

The cultural diversity and socio-political complexities of Peshawar make it an ideal setting to explore how urban green spaces can serve as catalysts for social integration and mutual understanding. By providing neutral and aesthetically pleasing environments, green spaces can break down social barriers and create opportunities for interaction among people from various backgrounds. The positive effects of green spaces, from stress reduction to promoting physical activity and social interaction, can be particularly valuable in a city like Peshawar, where the challenges of modern urban life are often juxtaposed with traditional communal practices. (Jennings and Bamkole, 2019)

This research aims to delve into the potential of green spaces to foster social harmony in Peshawar. Employing a simple observational approach, the study seeks to compare how residents utilize green spaces versus non-green areas and to assess the perceived value these spaces hold within the community. By observing social interactions, patterns of use, and resident feedback, this study will provide insights into how urban green spaces can be leveraged to enhance community cohesion and social well-being in a rapidly urbanizing city. Ultimately, the findings will contribute to broader urban planning strategies that prioritize social harmony alongside environmental sustainability, guiding Peshawar's path towards a more inclusive and peaceful urban future.

Methodology

This study employed a simple observational approach to investigate the preference and utilization of green spaces for fostering social harmony within Hayatabad, a governmental township in Peshawar, Pakistan. Hayatabad was chosen as the case study area due to its relatively homogenous population and limited external variables that might influence social interaction patterns. This selection aimed to isolate the potential impact of green spaces on social harmony within a more controlled environment.

Data was collected through direct observations and surveys. Observations were conducted at different times of the day and week to account for variations in usage patterns. The number of people present in the green spaces and non-green areas were counted, and their activities were noted. Surveys were conducted to gather information on residents' preferences and perceptions of the green spaces.

The data collected was analyzed to determine the level of enjoyment and the number of people present in green spaces compared to non-green areas. Statistical tests were used to identify any significant differences in the usage and preference of green spaces versus non-green areas.

The results were interpreted to understand the role of green spaces in promoting social harmony. Areas with higher levels of engagement and enjoyment in green spaces were identified, and the potential implications of these findings for urban planning and policy decisions were discussed.

Here are the steps of the research methodology.

1. Selection of Case Study Area:

- Hayatabad, a government township in Peshawar, was chosen due to its relatively homogeneous population and controlled environment, minimizing external variables that could influence social interaction.

2. Data Collection (Observations):

- Direct observations were conducted at different times of the day and week. The number of people present in green and non-green areas was counted, and their activities were noted to analyze the usage patterns.

3. Data Collection (Surveys):

- Surveys were conducted to gather residents' perceptions and preferences for green spaces compared to non-green areas, providing insight into their value in promoting social harmony.

4. Data Analysis:

- The data was analyzed to determine the levels of engagement, enjoyment, and the number of people using green versus nongreen areas. Statistical tests were applied to identify significant differences in usage patterns.

5. Interpretation of Results:

- The results were interpreted to understand the role of green spaces in fostering social harmony, focusing on areas with higher levels of engagement and enjoyment.

6. Urban Planning Implications:

- The findings were discussed in relation to potential urban planning and policy decisions, particularly regarding the strategic incorporation of green spaces to enhance social cohesion in Peshawar.



Figure 1. Research framework

Data collection occurred over a two-week period, with observations conducted during three time slots:

Morning (9:00 AM - 11:00 AM)

Afternoon (1:00 PM - 3:00 PM)

Evening (5:00 PM - 7:00 PM)

Green Spaces:

Bagh-e-Naran Park (Adjacent Non-Green Area: Nearby Residential Area)

Hayatabad Sports Complex (Adjacent Non-Green Area: Busy Road)

Shalman Park (Adjacent Non-Green Area: Commercial Market)

Tatara Park (Adjacent Non-Green Area)

Phase 6 Park (Adjacent Non-Green Area: Market)

A	В	С	D	Е
Location	Date (Weekday/Weekend)	Morning (Avg. People)	Afternoon (Avg. People)	Evening (Avg. People)
Bagh-e-Naran Park (Large)	WD (03/01/2023)	50	180	350
Bagh-e-Naran Park (Large)	WE (03/04/2023)	70	220	400
Hayatabad Sports Complex	WD (03/01/2023)	20	40	60
Hayatabad Sports Complex	WE (03/04/2023)	30	60	80
Shalman Park	WD (03/01/2023)	40	45	70
Shalman Park	WE (03/04/2032)	50	65	90
Tatara Park	WD (03/01/2023)	30	30	50
Tatara Park	WE (03/04/2023)	40	45	65
Phase 6 Park	WD (03/01/2023)	3	10	25
Phase 6 Park	WE (03/04/2023)	5	15	30

Figure 2.Social activity levels in Hayatabad's green spaces (parks) and adjacent non-green spaces

Analysis & Discussion

The data presents a compelling narrative about the critical role of green spaces in attracting visitors and fostering social interaction within urban environments like Hayatabad. A clear trend emerges from the analysis: green spaces consistently attract more visitors than non-green areas, regardless of the time of day or day of the week. This pattern underscores the intrinsic value of urban green spaces not just as aesthetic elements but as essential social hubs that contribute to the well-being and cohesion of the community.

Visitor Trends in Green Spaces: The trend is most evident in Baghe-Naran Park, the largest green space in the study. On weekdays, Bagh-e-Naran attracts a significant number of visitors: an average of 50 in the morning, 180 in the afternoon, and 350 in the evening. These numbers see a noticeable uptick on weekends, rising to 70 in the morning, 220 in the afternoon, and 400 in the evening. This increase in foot traffic during weekends is likely due to residents having more free time for leisure and social activities, reinforcing the notion that green spaces are sought-after destinations for relaxation and interaction.

Smaller parks, such as Shalman Park, exhibit similar trends, though the numbers are understandably lower. On weekdays, Shalman Park sees an average of 40 visitors in the morning, 45 in the afternoon, and 70 in the evening. These figures rise to 50, 65, and 90, respectively, on weekends. Despite its smaller size, the park still plays a vital role in providing a space for community gathering and interaction. The consistent attraction of visitors across different parks, regardless of their size, highlights the universal appeal of green spaces.

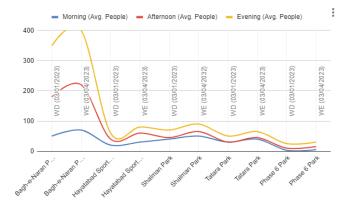


Figure 3. Size of a park and the number of visitors,

The data also implies that there is a direct relationship between the size of a park and the number of visitors, assuming the days and times are consistent. In other words, larger parks tend to attract more visitors than smaller ones when the day of the week and time of day are held constant.

Park Size and Visitor Numbers: One of the most significant findings from the data is the

direct correlation between park size and the number of visitors. Larger parks, such as Bagh-e-Naran, consistently attract more visitors compared to smaller parks like Shalman Park, assuming that the day of the week and time of day remain constant. This relationship underscores the importance of allocating larger green spaces within urban areas, as they can accommodate more visitors and, by extension, provide more opportunities for social interaction and community engagement.

Implications for Social Harmony: The data suggests that green spaces serve as more than just recreational areas; they are crucial for promoting social harmony. By attracting large numbers of visitors, these spaces provide neutral ground where people from diverse backgrounds can come together, share experiences, and engage in unstructured social interactions. The fact that visitor numbers peak in the evenings and weekends, times typically associated with socializing and leisure, further supports the idea that green spaces are vital for fostering community ties and promoting peaceful coexistence in urban settings.

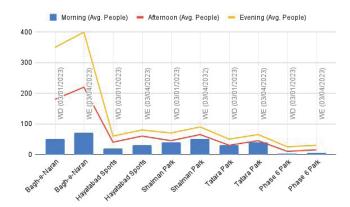


Figure 4. Number of visitors in green spaces

Urban Planning and Policy Implications: Given the clear relationship between green spaces, visitor numbers, and social interaction, urban planners and policymakers should consider the expansion and strategic placement of green spaces in cities like Hayatabad. Prioritizing the development of large, accessible parks can significantly enhance the social fabric of the community by providing residents with common spaces for leisure, recreation, and interaction. Additionally, the findings highlight the need for equitable distribution of green spaces across urban areas to ensure that all residents, regardless of socioeconomic status, have access to these vital social hubs.

The results of this study can also inform policies aimed at increasing social cohesion and reducing social tensions in rapidly urbanizing environments. By incorporating more green spaces into the urban landscape, cities can foster a sense of belonging and

connectedness among residents, leading to more harmonious and peaceful communities.

Green spaces, on average, see a higher number of visitors compared to non-green spaces throughout the week. This suggests a potential preference for parks and other green areas for social interaction, relaxation, or physical activity.

Weekends generally show a higher average number of people in both green and non-green spaces compared to weekdays, reflecting increased leisure time availability.

Evening time slots might show the highest average number of people in both green and non-green spaces, followed by afternoons and mornings. This suggests a potential preference for outdoor activities during cooler evening hours.

The larger park (Bagh-e-Naran) might consistently attract more visitors compared to the smaller park (Phase 6 Park) across all days and times, highlighting the potential influence of park size on visitor numbers.

Conclusion

In conclusion, the research underscores the pivotal role that green spaces play in fostering social activity, enhancing community well-being, and contributing to the overall quality of urban life. The study's findings demonstrate that green spaces, particularly larger parks, attract significantly more visitors than non-green areas, suggesting that these spaces are crucial hubs for social interaction. Moreover, the evidence indicates that well-maintained parks not only serve as physical spaces for relaxation and recreation but also act as catalysts for building social connections, breaking down barriers between different community groups, and fostering a sense of belonging.

The relationship between park size and visitor numbers, as revealed by the data, highlights the importance of thoughtful urban planning. Parks that offer a variety of amenities cater to diverse age groups and interests, making them more attractive and multifunctional. This makes them ideal spaces for promoting social harmony, as they facilitate a range of activities, from casual socializing to structured events, which can further strengthen community ties.

Regular maintenance and the active programming of events within parks are also critical to their sustained success as social hubs. Clean, safe, and inviting environments, coupled with organized community events, can enhance the social value of these green spaces, creating opportunities for interaction, engagement, and a sense of ownership among residents. This not only promotes individual well-being but also contributes to broader social cohesion, as residents feel more connected to their community.

Given the findings of this study, urban policymakers and planners should prioritize the creation, maintenance, and strategic development of green spaces to support both physical and social health within urban environments. (Maas et al., 2009). As cities grow and evolve, green spaces must remain central to urban planning efforts, ensuring they continue to offer inclusive, accessible, and engaging environments that foster a harmonious and connected community.

Recommendations

Increasing access to well-maintained and programmed green spaces can be a valuable investment for urban communities, as these spaces have been shown to promote social activity, physical health, and mental well-being (Kerishnan & Maruthaveeran, 2021). The presence of quality green spaces has been associated with a range of positive outcomes, including decreased rates of obesity, cardiovascular disease, and mental health issues. (Young et al., 2022) In a study of urban parks in Kuala Lumpur, researchers found that the restorative environment provided by these green spaces can help alleviate stress and foster a sense of self-restoration and rejuven ation (Mohamad & Hussein, 2020).

Furthermore, research suggests that the biodiversity of green spaces can influence their psychological restorative benefits. (Wood et al., 2018) A study in Bradford, UK found that urban parks with greater biodiversity were associated with stronger self-reported measures of psychological restoration, such as feeling "away from everyday life" and preferring the site (Wood et al., 2018). This highlights the importance of considering both the quantity and quality of green spaces in urban planning.

In light of these findings, the following recommendations are suggested for urban planning in Hayatabad and similar contexts

The study provides preliminary evidence that green spaces play a significant role in promoting social activity within communities. The findings indicate that access to well-maintained parks and green areas is crucial for fostering social interactions and improving residents' overall quality of life. Expanding access to these spaces encourages residents to engage in outdoor activities, whether through organized sports, casual gatherings, or recreational pursuits like walking, jogging, or picnicking. (White et al., 2013). These interactions not only help strengthen community ties but also contribute to a healthier lifestyle by providing opportunities for physical activity and mental relaxation. Therefore, urban planners and policymakers should prioritize the development of new green spaces and the enhancement of existing ones, ensuring they are accessible to all community members. (Maas et al., 2009)

The study suggests that larger parks tend to attract more visitors, which emphasizes the importance of size in park development. Future park planning should carefully consider the size of new green spaces and their potential to accommodate larger crowds. However, mere size is not sufficient; the incorporation of a variety of amenities and features is equally essential. Parks should be designed to cater to diverse age groups and interests, incorporating facilities such as playgrounds, sports fields, walking trails, fitness stations, picnic areas, and quiet zones for relaxation. Additionally, amenities such as restrooms, drinking fountains, and seating areas enhance the overall user experience. By providing a range of features, parks can become multi-functional spaces that serve as social hubs for the entire community, thereby maximizing their social value and promoting long-term engagement. (Sugiyama et al., 2008)

Regular maintenance of green spaces is critical to ensuring they remain clean, safe, and inviting for visitors. Parks that are well-maintained not only attract more visitors but also foster a sense of pride and ownership among community members. Investment in maintenance should include routine cleaning, landscaping, repairs to facilities, and the safety of play areas. (Jennings and Bamkole, 2019).

Moreover, proactive programming can further enhance the social value of parks. Organizing community events, workshops, recreational activities, and cultural programs within these spaces can create opportunities for social interaction and strengthen community bonds. For instance, hosting seasonal festivals, fitness classes, or educational workshops can draw people to the parks and encourage them to engage with one another. Such initiatives can also foster a sense of belonging and commitment to the park, as residents actively participate in the stewardship of their shared environment. By promoting a vibrant community life through well-maintained and programmed green spaces, cities can significantly enhance social cohesion and well-being.

In conclusion, prioritizing the creation and maintenance of green spaces, considering park size and amenities, and investing in regular maintenance and programming are vital steps toward fostering social activity and community well-being. As urban environments continue to evolve, ensuring the availability of accessible and engaging green spaces will be essential for cultivating social connections and promoting healthier lifestyles among residents.

Data availability statement

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding author.

Author contributions

The author confirms being the sole contributor of this work and has approved it for publication.

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Externally peer-reviewed.

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References and note:

- Fuller, R. A., Irvine, K. N., Devine-Wright, P., Warren, P. H., & Gaston, K. J. (2007). Psychological benefits of greenspace increase with biodiversity.
- Hartig, T., Mitchell, R., De Vries, S., & Frumkin, H. (2014). Nature and health. Annual Review of Public Health, 35, 207-228. https://doi.org/10.1146/annurev-publhealth-032013-182443.
- Jabbar, M., Yusoff, M. M., & Shafie, A. (2021). Assessing the role of urban green spaces for human well-being: a systematic review¹.
- Jennings, V., & Bamkole, O. (2019). The Relationship Between Social Cohesion and Urban Green Space: An Avenue for Health Promotion. International Journal of Environmental Research and Public Health, 16(3), 452. https://doi.org/10.3390/ijerph16030452.
- Kerishnan, P. B., & Maruthaveeran, S. (2021). Factors contributing to the usage of pocket parks—A review of the evidence. Urban Forestry & Urban Greening, 58, 126985.
- Maas, J., Van Dillen, S. M. E., Verheij, R. A., & Groenewegen, P. P. (2009). Social contacts as a possible mechanism behind the relation between green space and health. Health & Place, 15(2), 586-595. https://doi. org/10.1016/j.healthplace.2008.09.006.
- Mohamad, N. A., & Hussein, H. (2020). Perceived Effect of Urban Park as A Restorative Environment for Well Being in Kuala Lumpur. International Journal of Built Environment and Sustainability, 8(1), 69–79.
- Rega-Brodsky, C. C., Aronson, M. F. J., Piana, M. R., Carpenter, E. S., Hahs, A. K., Kotze, D. J., Lepczyk, C. A., Moretti, M., Salisbury, A. B., Williams, N.

- S. G., Jung, K., Katti, M., MacGregor-Fors, I., MacIvor, J. S., La Sorte, F. A., Sheel, V., & Threfall, C. G. (2022). Urban biodiversity: State of the science and future directions⁶.
- Sugiyama, T., Leslie, E., Giles-Corti, B., & Owen, N. (2008). Associations of neighborhood greenness with physical and mental health: Do walking, social coherence and local social interaction explain the relationships? Journal of Epidemiology & Community Health, 62(5), e9. https://doi. org/10.1136/jech.2007.064287.
- White, M. P., Alcock, I., Wheeler, B. W., & Depledge, M. H. (2013). Would you be happier living in a greener urban area? A fixed-effects analysis of panel data. Psychological Science, 24(6), 920-928. https://doi. org/10.1177/0956797612464659.
- Wood, E., Harsant, A., Dallimer, M., De Chavez, A. C., McEachan, R. R. C., & Hassall, C. (2018). Not All Green Space Is Created Equal: Biodiversity Predicts Psychological Restorative Benefits from Urban Green Space. Frontiers in Psychology, 9. https://doi.org/10.3389/fpsyg.2018.02320.
- World Health Organization. Regional Office for Europe. (2016). Urban green spaces and health.
- Young, A., Tucker, E. L., Fernandez, M., White, D., Brookover, R., & Harris, B. (2022, December 8). An Optimization Approach to Improve Equitable Access to Local Parks.
- Zhao, X., Yusoff, M. M., & Shafie, A. (2022). Biodiversity in Urban Green Space: A Bibliometric Review on the Current Research Field and Its Prospects⁵.