

Socioeconomic Disparities in the Use and Perception of Urban

Green Spaces:

Case Study of Surquillo, Lima

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Tabla de contenido

Abstract.....	4
Introduction.....	5
Literature review	6
Methodology	12
Results.....	21
Discussions.....	27
Conclusions	28
Works Cited	¡Error! Marcador no definido.

List of Figures

Figure 1. Map of Surquillo’s two sectors.....	9
Figure 2. Map of Surquillo with socioeconomic indicators.....	12
Figure 3. Map of Surquillo Data Crime.....	13
Figure 4. Map of Surquillo bus stops and avenues	14
Figure 5. Frequency of Sports and Exercise Facility Usage in Public Green Spaces by Socioeconomic Sector	23
Figure 6. Perception of Safety in Public Green Spaces by Socioeconomic Sector.....	24
Figure 7. Motivations for Increased Park Usage by Socioeconomic Sector.....	25
Figure 8. Park Usage Activities by Socioeconomic Sector	26

Abstract

This study examines the impact of socioeconomic factors on the use and perception of urban green spaces in the Surquillo district of Lima, Peru. Surquillo is divided into two sectors with contrasting socioeconomic profiles: Sector A (middle class) and Sector B (lower-income area). While both sectors belong to the same district, there are notable differences in the quantity, quality, and maintenance of green spaces relying an online survey and literature review, the study reveals that citizens of Sector A report feeling safer and use parks -more frequently and for sports and exercise. In contrast, Sector B citizens face poorly maintained parks, lack of safety, and insufficient green spaces, limiting park usage to family and community events. The findings show that more focused investments in infrastructure, maintenance, and security are particularly needed in lower-income areas to support access to green spaces, reinforce social cohesion, and contribute to public health and quality of life equitably for all citizens. This research highlights the critical role of urban green spaces in integrated community well-being and the importance of addressing socioeconomic disparities to create more inclusive and sustainable urban environments.

Keywords: Urban green spaces, park safety, perceptions, socioeconomic disparities.

Introduction

Urban green spaces are essential for health, livable cities, and offer a better quality of life. They offer places for exercise, relaxation, spending time with family, and community connections, which of which can improve both physical and mental well-being. However, not everybody has the same access to these benefits. Socioeconomic differences can deeply influence how people use and perceive green spaces in their neighborhoods. Also, the role of urban green spaces in mitigating health disparities is well-documented. For instance, Mitchell and Popham (2008) demonstrate that access to green spaces significantly reduces socioeconomic inequalities in health outcomes.

This study takes a glance at this reality in the Surquillo district of Lima, Peru. The focus is on two contrasting areas: Sector A, where middle class's families live, and Sector B, home to lower-income groups. By comparing these two sectors, we can see how economic conditions shape not just the quality of urban parks but also how people interact with them.

Through surveys, focus groups, and observations, we found notable differences. In Sector A, parks are well maintained, well-lit, and generally feel safe. This encourages citizens to visit frequently, often for activities like sports and exercise. On the other hand, parks in Sector B face issues such as poor maintenance, inadequate lighting, and safety public spaces. These problems mean that citizens use parks less often.

Despite these differences, citizens in both sectors expressed a common desire: they want better maintained parks, safer spaces, and infrastructure that caters to everyone, including areas for pets and children. Their shared concerns underline how important green spaces are to communities, regardless of income levels.

This study highlights the urgent need to address these disparities. By investing in targeted improvements and involving communities in the process, cities like Lima can ensure that everyone, not just the privileged, has access to green spaces where they feel safe and great, welcome, and reconnected. Such efforts can help construct stronger, healthier, and more equitable urban communities.

Literature review

Research examining the relationship between green spaces and violent crime has emphasized the critical role of perceived safety in urban environments. Studies consistently demonstrate that perceived safety significantly predicts park and green area usage, underscoring the importance of addressing safety concerns to encourage utilization (Bogar & Beyer, 2016; Garcia et al., 2016). Recent studies emphasize that perceived safety is a primary determinant for the equitable use of urban green spaces. Peters et al. (2010) found that marginalized groups often avoid parks due to fear of crime, highlighting the need for inclusive design and safety measures. For instance, comparative studies highlight that while safety is a universal concern, its impact is disproportionately greater in low-income communities, where insecurity levels are generally higher due to insufficient infrastructure and maintenance (Jennings et al., 2016; Rigolon, 2016). Additionally, research by Cohen et al. (2016) shows that improving environmental conditions, such as lighting, maintenance, and surveillance in parks, can significantly reduce crime rates and increase public usage. Similarly, work by Wolch et al. (2014) reveals that green space interventions, if not carefully planned, can lead to gentrification, displacing vulnerable populations and undermining social equity goals. These findings underline the dual challenge of improving safety perceptions while simultaneously addressing structural inequalities to ensure equitable access to green spaces for all socioeconomic groups.

In cities of the Global South, access to urban green spaces often reflects broader socio-economic disparities. A study by Rigolon et al. (2018) focused on Latin American cities such as Mexico City, Buenos Aires, and Santiago, providing crucial insights into this dynamic. They found that safety concerns were a common barrier to park use across all socio-economic groups. However, in low-income areas, additional factors, such as poor maintenance and limited accessibility, exacerbated the underutilization of green spaces. These findings suggest that efforts to improve green space access must address both safety and infrastructure challenges to be effective.

Further, a systematic literature review of urban forestry research in Latin America and the Caribbean revealed that combining physical improvements to parks with community engagement programs can yield significant benefits. Such initiatives not only increase the utilization of green spaces but also reduce perceptions of insecurity, particularly in areas historically regarded as unsafe. This evidence highlights the potential of integrated strategies to transform urban green spaces into assets that enhance community well-being and safety.

Together, these studies illustrate a consistent pattern: while the presence of green spaces is essential, their utility and impact are heavily mediated by social and environmental factors such as safety, maintenance, and accessibility. Addressing these interconnected issues is critical to maximizing the potential of urban green spaces to mitigate violent crime and foster safer, more inclusive communities.

Use

The use of public parks and green spaces is significantly influenced by perceptions of safety. If people feel that these spaces are unsafe, they are afraid to visit them, even though green

spaces offer too many benefits to physical health, social cohesion, and overall well-being (Jennings et al., 2016).

Use of urban green spaces is impacted by people's perceptions of safety: The use of public parks and green spaces is closely tied to how safe people feel in those environments. If a space is perceived as unsafe, people are less likely to use it, even if it offers substantial benefits to health, social cohesion, and quality of life.

Crime Rates and Presence of Criminal Activities: High crime rates or frequent reports of criminal activity in or near parks can deter people from using these spaces. This includes both violent crimes and property crimes, such as theft or vandalism (Garcia et al., 2016).

Lighting and Visibility: Parks that are poorly lit or have hidden areas where visibility is limited can foster a sense of danger. Adequate lighting and open sightlines contribute significantly to making people feel secure (Bogar & Beyer, 2016).
Maintenance and Cleanliness: Poorly maintained parks, with broken infrastructure, overgrown plants, and litter, tend to create an impression of neglect. This can lead citizens to associate such spaces with unsafe conditions and higher risks of crime (Loukaitou-Sideris & Stieglitz, 2002).

Presence of Other People: The number of other users in a park also plays a role in shaping perceptions of safety. Parks that are frequently used, especially by families or organized groups, tend to feel safer than empty or deserted spaces (Jennings et al., 2016).

Law Enforcement and Security Measures: The visible presence of police patrols or private security can either improve or reduce feelings of safety, depending on whether people view law enforcement as protective or as a sign that the area is prone to danger (Garcia et al., 2016).

The socioeconomic profile of a neighborhood can influence both actual safety and the perception of it. In lower-income areas, citizens might perceive parks as more dangerous due to a combination of crime, lack of investment in security, and poor infrastructure maintenance (Loukaitou-Sideris & Stieglitz, 2002).

What is safety?

Safety, in this context, refers to a combination of physical security, emotional comfort, and a general sense of well-being. It includes freedom from threats of violence, crime, accidents, and environmental hazards within public spaces (Bogar & Beyer, 2016).

Key elements of safety:

Physical safety: Freedom from harm, injury, or crime in the park.

Environmental safety: Well-maintained surroundings with clean, functional facilities, free from potential hazards like broken equipment or overgrown vegetation.

Psychological safety: A feeling of comfort and confidence in using public spaces without fear of harassment or danger (Jennings et al., 2016).

What is not safe?

Unsafe conditions are those where people feel vulnerable to crime, violence, accidents, or environmental hazards. Factors contributing to a lack of safety include:

Criminal activities such as theft, vandalism, or violent encounters (Garcia et al., 2016).

Neglect in maintenance, leading to dilapidated infrastructure or hazardous conditions (e.g., broken lights, trash buildup) (Loukaitou-Sideris & Stieglitz, 2002).

Social tensions or conflict in public spaces, which could deter families or vulnerable groups from visiting.

Isolation or emptiness in the park, especially after dark, which can create a sense of vulnerability (Jennings et al., 2016).

Examples

Socioeconomic Factors: In many low-income neighborhoods, parks are often underfunded, leading to inadequate security measures and poor maintenance, contributing to a perception of unsafety. In contrast, parks in wealthier areas might have better infrastructure, lighting, and amenities that encourage more usage and, in turn, enhance the perception of safety (Loukaitou-Sideris & Stieglitz, 2002).

Examples

Income Disparities and Park Maintenance: In neighborhoods with higher average income levels, local governments and private organizations tend to invest more in park maintenance, security, and amenities. As a result, these parks are more frequently used and are seen as safer.

On the other hand, parks in low-income neighborhoods often face underinvestment, leading to poor maintenance, fewer amenities, and higher crime rates, which can deter use (Rigolon, 2016).

Educational Attainment and Awareness of Park Benefits: Higher educational levels are often associated with increased awareness of the health and social benefits of using green spaces. In middle-class or affluent communities, citizens may be more inclined to use parks for recreational purposes, organized activities, or relaxation, due to a better understanding of their importance for physical and mental health. In contrast, lower levels of education in disadvantaged communities may limit the perceived value of these spaces, especially if they are seen as unsafe or poorly maintained (Jennings et al., 2016).

Social Capital and Community Engagement: Communities with strong social capital—networks of relationships, trust, and cooperation—tend to have more organized activities in parks, such as sports, fitness classes, and cultural events. This increases park usage and enhances safety through social interaction. In low-income areas, however, social capital may be weaker, limiting organized activities and discouraging park usage due to a perceived lack of community involvement and ownership (Garcia et al., 2016).

Real Estate Development and Gentrification: In some cases, investments in green spaces, particularly in low-income areas, can lead to gentrification, where rising property values push out longtime citizens. While this may improve the quality of parks and enhance safety, it can

also lead to displacement and inequitable access to green spaces for lower-income populations (Wolch et al., 2014).

Transportation and Accessibility: In low-income neighborhoods, access to parks can be limited due to a lack of transportation options. Citizens might live far from well-maintained parks, and public transportation routes may not easily connect to green spaces. This creates barriers to park use, particularly for individuals without personal vehicles (Rigolon, 2016). In contrast, wealthier neighborhoods often have more parks within walking distance and better transportation infrastructure.

Statement of Sustainability +Problem Statement

This study focuses on addressing the lack of sustainable construction practices in Peru, where high costs have limited their implementation. The district of Surquillo in Lima, which exhibits stark socioeconomic disparities between its affluent Sector A and underserved Sector B, provides a unique case study for exploring sustainable urban solutions. Sector A benefits from well-maintained infrastructure, while Sector B faces challenges such as insufficient green spaces, poor maintenance, and safety concerns. These disparities highlight the need for developing inclusive, sustainable urban planning strategies that reduce environmental impact, improve infrastructure, and foster social cohesion. By implementing sustainable practices, this research aims to demonstrate the potential of green urban development in creating equitable and environmentally conscious communities

Methodology

Research Question

How are the uses of urban green spaces impacted by perceptions of safety?

Methods

Study Design

Literature Review: The literature review was chosen to provide a comprehensive understanding of existing research on green spaces, safety, and their relationship with socioeconomic disparities. By analyzing prior studies, the review establishes a theoretical framework and identifies gaps that this study seeks to address. Data was collected from academic journals, reports, and case studies focused on urban green spaces in similar socio-economic contexts.

Surveys: Surveys were used to gather quantitative and qualitative data on the needs, preferences, and perceptions of citizens in Surquillo. Participants were identified through random sampling within both Sector A and Sector B, ensuring a diverse representation of demographics and socioeconomic backgrounds. Surveys were administered both in-person and online, using structured questionnaires designed to capture key variables such as safety perceptions, park usage, and desired amenities. Data analysis was performed using statistical tools to identify patterns and differences between the two sectors.

Participant Observation: Direct observation was conducted in various green spaces across Surquillo to understand how public spaces are utilized and how citizens interact with one another. This method allowed for real-time insights into behaviors, usage patterns, and environmental conditions that might not be fully captured in surveys or focus groups.

Observations were carefully made at different times throughout the day and week to capture how park usage varied.

Focus Groups: Focus groups were organized to gain in-depth insights into the experiences and opinions of citizens regarding green spaces. Participants were recruited from diverse socioeconomic sectors to ensure a balanced representation. Group discussions were moderated using a semi-structured guide, encouraging open dialogue about safety, maintenance, and accessibility. The qualitative data collected from these discussions were thematically analyzed to complement and enrich the quantitative findings from the surveys.

Study site

Surquillo is a district in Lima, Peru, that is divided into two distinct sectors (neighborhoods): one with a lot of green spaces and another with lower (Figure 1). This division has led to clear economic and social differences between the two areas.

The area with more green spaces (Sector A) is home to citizens from middle-class and upper-class socioeconomic backgrounds. This area has higher usage rates of the parks, with a variety of activities taking place. The parks in Sector A are well-maintained and offer a variety of amenities, such as playgrounds, sports fields, and walking trails (INEI,2017).

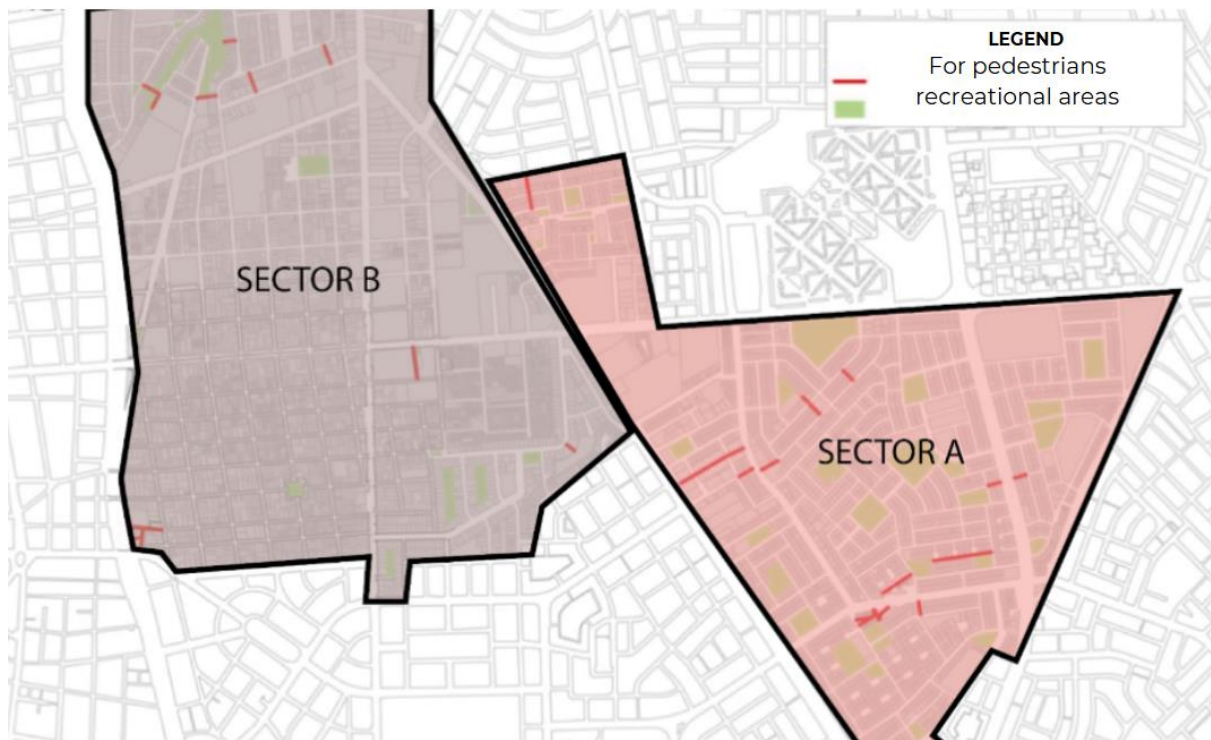


Figure 1. Map of Surquillo’s two sectors.

In contrast, the area with fewer green spaces (Sector B) is home to citizen from low-income socioeconomic backgrounds. Surquillo is a good area to study the dynamics between urban park use and perceptions of safety because of its diverse socio-economic background.

Main Economic Activities and Potentialities of the Territory

The Peruvian Association of Real Estate Companies (ASEI) has identified the districts with the highest demand and supply of real estate projects in Lima Metropolitan Area. According to an ASEI report, as of September 2024, ten districts account for 81% of the total demand for new homes. Jesús María leads with a 12% share of sales, followed by Cercado de Lima and Santiago de Surco, each with 10%. Other notable districts include Miraflores (9%), San Miguel (8%), San Isidro (8%), Lince (8%), Pueblo Libre (6%), La Victoria (5%), and Chorrillos (5%). Asociación de Empresas Inmobiliarias del Perú. (2024).

Regarding the supply of real estate projects, the area known as Lima Top, which includes districts such as Barranco, La Molina, Miraflores, San Borja, San Isidro, and Santiago de Surco, leads with 349 projects for sale. It is followed by Lima Moderna, encompassing Jesús María, San Miguel, Lince, Magdalena del Mar, Pueblo Libre, and Surquillo, with 323 projects. Agencia Andina (2024). The information about the demand and supply of real estate projects in Lima is essential for this research as it highlights the socioeconomic dynamics of urban development and their implications for equitable access to resources such as green spaces. By understanding which districts attract more investments and how they differ in terms of infrastructure and amenities, the study can better contextualize the disparities between Sector A and Sector B in Surquillo. This broader perspective helps to frame the challenges faced by lower-income areas, such as insufficient green spaces and maintenance, and aligns these observations with broader urban trends in Lima, enhancing the analysis of socioeconomic inequities and their impact on urban living conditions.

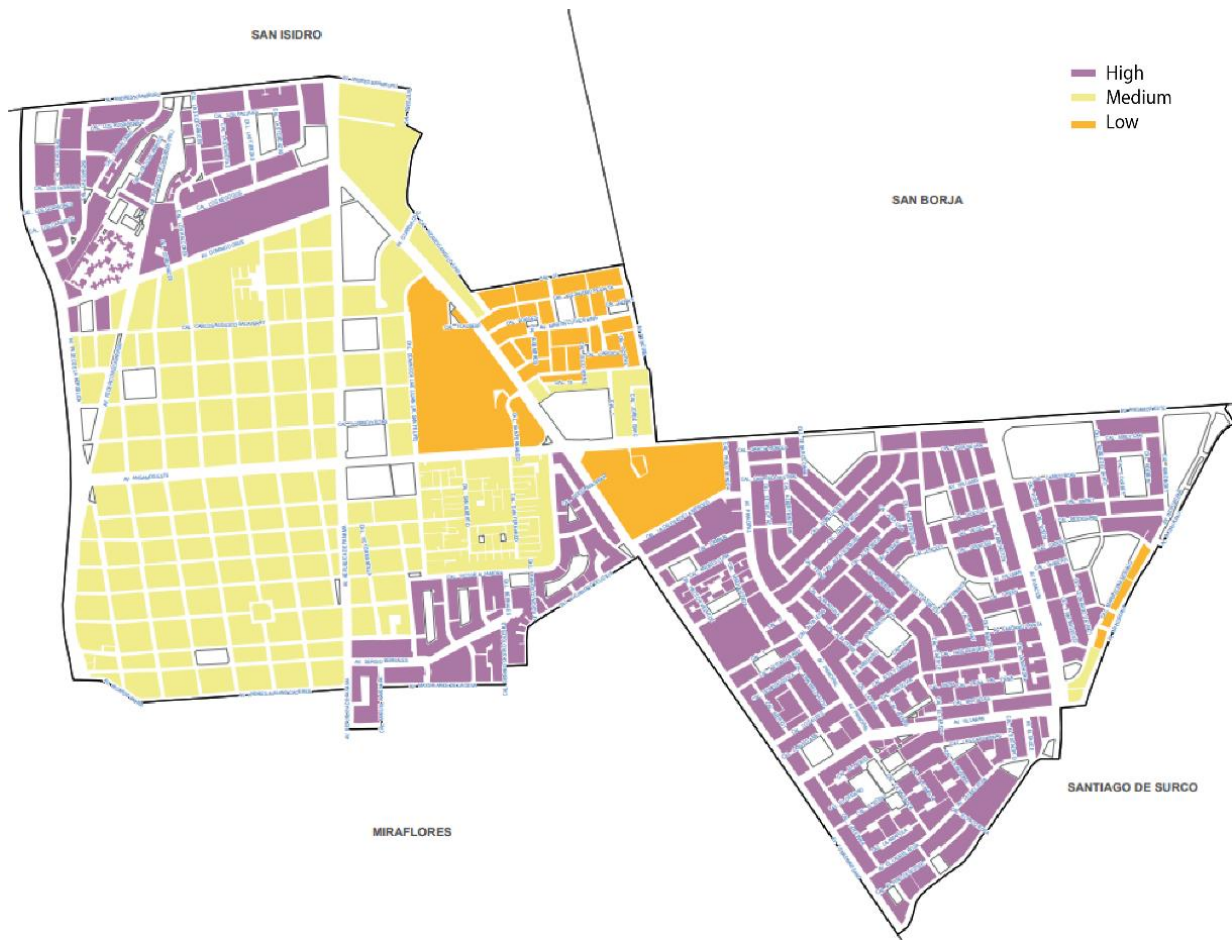


Figure 2: Map of Surquillo with socioeconomic indicators.

In Sector B, there is a part where the socioeconomic level is high; this may be since the districts surrounding the upper area are districts with high socioeconomic levels as well, such as San Isidro, San Borja, Miraflores, and Surco Nuevo (Santiago de Surco).

Regarding Surquillo, although it does not lead in the number of "A1" projects, it has experienced remarkable growth in its real estate offerings. By the end of February 2021, Surquillo's inventory consisted of 1,516 homes distributed across 41 projects, reflecting significant momentum in the district's real estate development (El Comercio, 2021). This relates to the real estate economy of Sector A, unlike Sector B. **Crime Distribution**

According to data from the National Institute of Statistics and Informatics (INEI, 2023), the district of Surquillo in Lima, Peru, shows a concerning concentration of crimes such as theft

and armed robbery in specific areas. The analysis, illustrated in the Crime Distribution Map by Sector, reveals that the most affected areas tend to align with less frequented urban spaces that lack adequate lighting and maintenance.

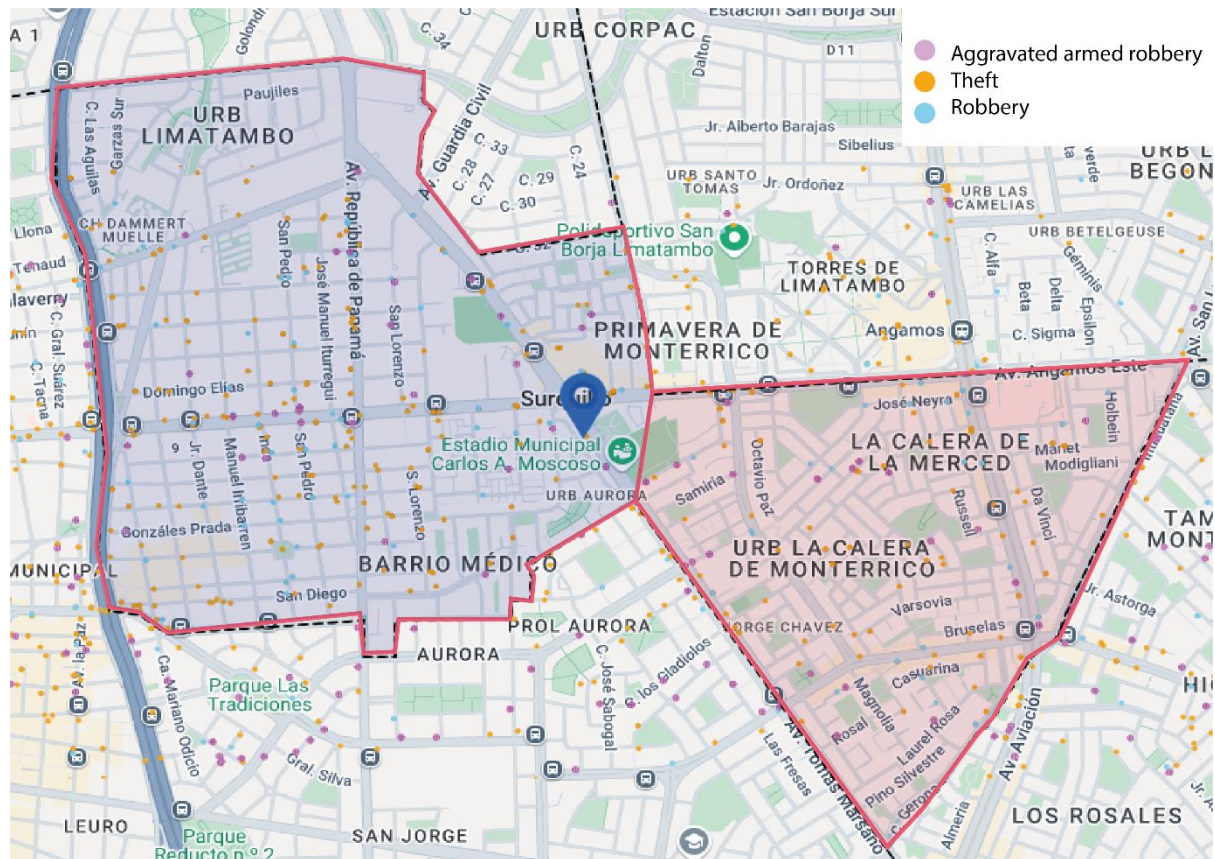


Figure 3: Map of Surquillo data crime, recovered and edited from INEI (2023).

Understanding this information is essential for identifying the most dangerous zones in the district, as it enables the design of targeted strategies to mitigate these risks. For example, it is evident that areas with a high incidence of theft often feature poorly lit streets, limited pedestrian activity, and visible neglect. These conditions not only foster criminal behavior but also discourage the use of public spaces, thereby impacting social cohesion and residents' quality of life.

From this correlation, it can be hypothesized that urban interventions aimed at improving lighting, encouraging pedestrian traffic, and revitalizing public spaces could significantly

reduce crime rates. Such an integrated approach could not only enhance safety but also promote greater use of parks and green areas, providing social and health benefits for the community.

In conclusion, the data highlights the importance of addressing urban inequalities in Surquillo, with a special focus on improving infrastructure and safety in its most vulnerable sectors. These efforts could transform critical zones into safe and inclusive spaces for all residents.

Mobility and Connectivity

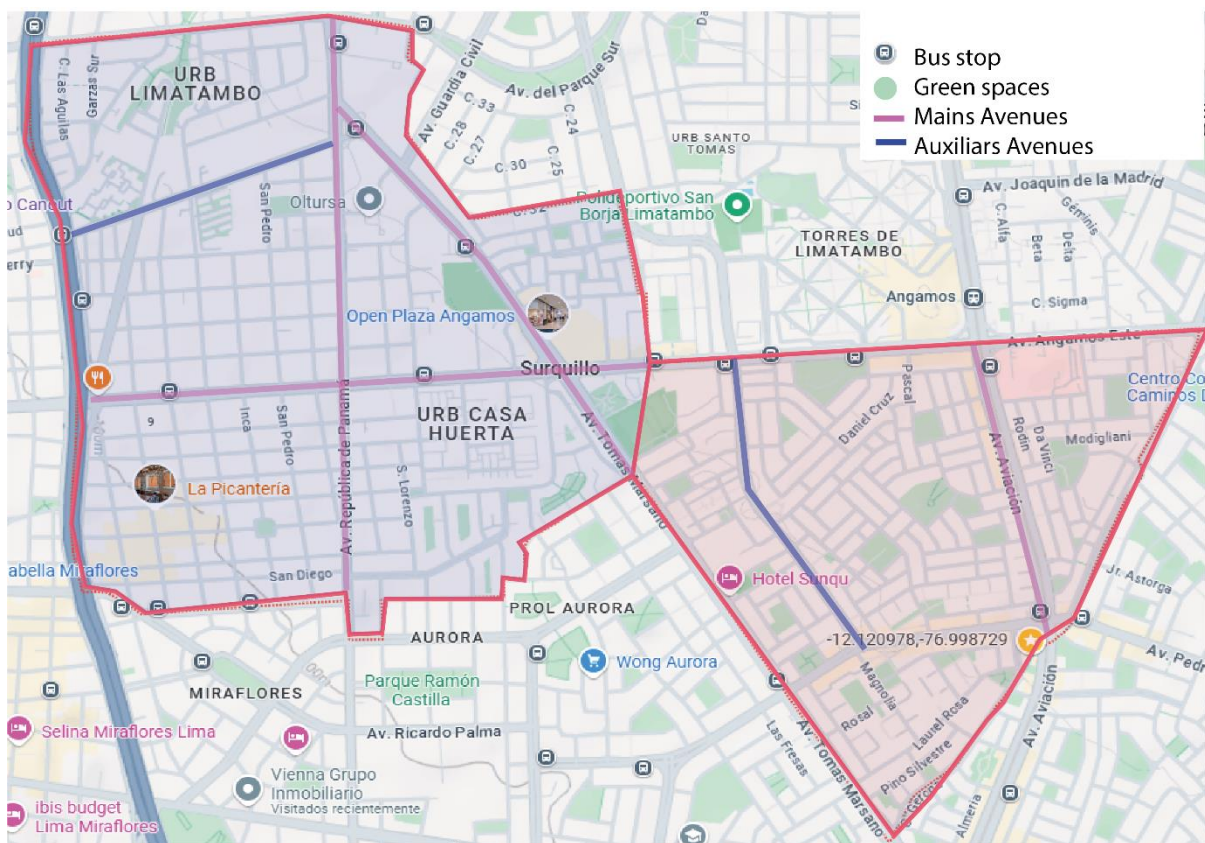


Figure 4: Map of Surquillo bus stops and avenues, edited from Google maps (2024).

The analysis of the Mobility and Connectivity map for Surquillo reveals differences between Sector A and Sector B. Despite Sector B having a higher density of bus stops and auxiliary roads, it lacks green spaces compared to Sector A. This difference can be attributed to Sector

A being a high-density residential area, where private spaces and pedestrian mobility are prioritized over vehicular traffic.

In Sector A, fewer main avenues and public transportation stops reflect the residents' preference for using private vehicles or walking. This aligns with the socioeconomic characteristics of the area, which promote a quieter, less trafficked environment. In contrast, Sector B, with its more extensive network of roads and bus stops, caters to a population reliant on public transport, highlighting the need for connectivity to surrounding districts and essential services

Understanding these dynamics is essential for urban planning and sustainable development. By comparing the mobility patterns and infrastructure of these two sectors, we can identify gaps in accessibility and equity. For instance, the lack of green spaces in Sector B may limit opportunities for recreation and community interaction, which are essential for well-being and social cohesion. Conversely, the private nature of Sector A may reduce its residents' engagement with shared public spaces, highlighting a potential need for community-oriented initiatives.

From a policy perspective, this comparison serves to emphasize the importance of balancing infrastructure development with green space preservation. While connectivity is vital for economic activity and accessibility, ensuring equitable access to recreational areas is equally important. Investments in green spaces for Sector B could enhance its residents' quality of life, foster social cohesion, and align with broader urban sustainability goals.

In summary, the most notable differences between the two are:

Real Estate Investment

Sector A: Stands out for its A1 real estate projects, which are homes aimed at a high-income segment, with higher prices and better urban infrastructure (green areas, pedestrian pathways,

and recreational spaces). This attracts investors and citizens with higher incomes, consolidating the area as a hub for high-end economic development. The presence of higher-income citizens likely fosters the development of premium businesses, restaurants, and more sophisticated services. This creates an economic ecosystem oriented toward high-end consumption.

Sector B: The absence of A1 category real estate projects suggests that housing supply may focus on more affordable homes targeting middle- to low-income audiences. This limits the flow of high-value investments into the area. Economic activities are likely more tied to basic services, small businesses, and local shops. This may indicate a more informal or less sophisticated economy, aimed at meeting the needs of a moderately income population.

Infrastructure and Public Services

Sector A: Benefits from greater recreational and pedestrian areas, which enhance quality of life and economic appeal. These infrastructure investments can also raise land value and stimulate commercial activity.

Sector B: With fewer recreational and pedestrian areas, it might face limitations in urban quality of life and attractiveness for investments. The lack of connectivity and adequate services could hinder its economic development.

Results

Sports spaces

Most of the low-income participants were females ages 20 to 35. Even though half of all respondents indicated that they used sports and exercise facilities only occasionally, 4 of the low-income participants reported never using them. On the other hand, there are 14 respondents from the middle class that use it daily.

How often do you use sports or exercise facilities in Surquillo's public green spaces?

The results show a clear disparity in park usage between middle-class and low-income areas. In middle-class neighborhoods, 13 respondents reported using sports or exercise facilities daily, highlighting better accessibility and usability of parks. Conversely, in low-income areas, only 3 respondents indicated daily use, reflecting limited access to quality sports facilities or safety concerns. Both groups occasionally use parks at similar rates, but the significantly lower daily usage in Sector B emphasizes the need for improvements in infrastructure and security.

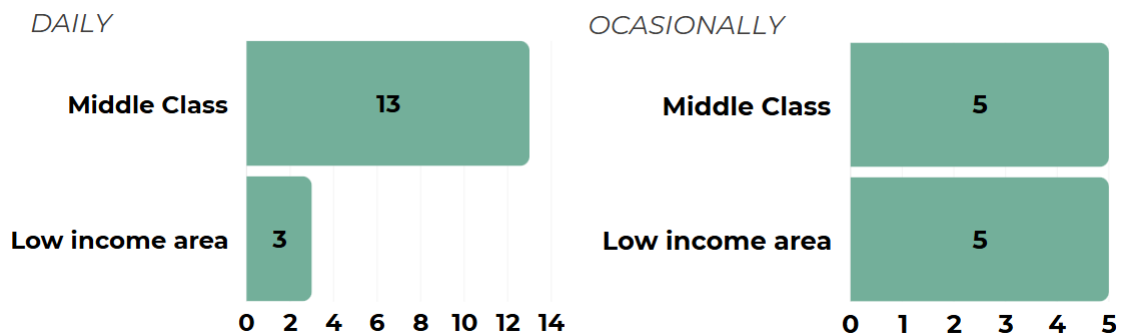
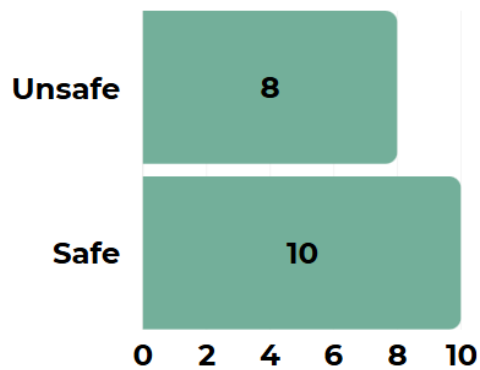


Figure 3. Frequency of sports and exercise facility usage in public green spaces by socioeconomic sector.

How safe do you feel when using Surquillo's green spaces, especially at night or when the park is less crowded?

Safety perceptions also vary significantly between sectors. While 10 citizens from middle-class areas feel safe using parks, 8 feel unsafe, especially at night or when parks are less crowded. In low-income areas, 8 respondents reported feeling unsafe, with no notable sense of security expressed. This reinforces the importance of addressing safety concerns through enhanced lighting, regular patrolling, and community engagement to improve trust and encourage park usage.

MIDDLE CLASS



LOW INCOME AREA

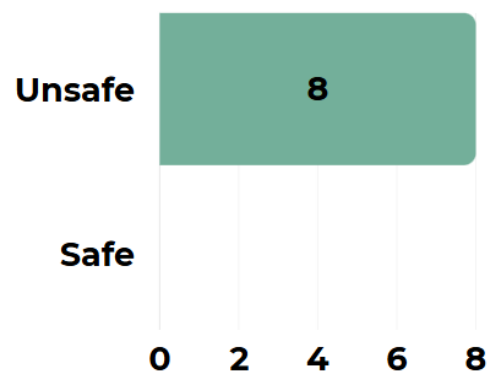


Figure 4. Perception of safety in public green spaces by socioeconomic sector.

Are there sufficient pet-friendly areas in Surquillo parks?

15 from the middle class believe there are sufficient pet-friendly areas, while in the low-income area 7 of them disagree. In low-income areas, a smaller percentage of respondents perceive there to be sufficient pet-friendly spaces in parks. This may be due to limited resources and infrastructure compared to parks in middle-class areas, which are generally better equipped for pet activities. Low-income respondents tend to prioritize basic park amenities over pet-specific facilities.

The middle-class respondents are more likely to appreciate pet-friendly amenities. This could be because parks in middle-class areas are generally better equipped to cater to such activities, whereas low-income neighborhoods may lack the resources or infrastructure to support pet-specific facilities like dog parks or walking paths for pets.

What would motivate you to use parks more frequently?

11 from the middle class indicated that increased safety would motivate them to use parks more often. Safety is the most critical factor for both socioeconomic groups, but middle-class

participants also expressed a need for better sports and exercise facilities. This suggests that middle-class respondents view parks as spaces not only for leisure but also for maintaining physical health. In contrast, low-income participants might prioritize security improvements over additional amenities due to their greater concerns about crime and safety because all of the respondents agree.



Figure 5. Motivations for increased park usage by socioeconomic sector.

How would you feel safer in public parks?

Responses highlighted those increased police presence, more surveillance cameras, and enhanced lighting were key to improving the feeling of safety.

For low-income respondents, the presence of law enforcement (police and "serenazgo" patrols) is particularly important to mitigate the perception of insecurity. Middle-class participants, however, might feel safer with improved lighting and regular maintenance of the parks, emphasizing the physical environment over constant surveillance.

What activities would you like, or do you like to do in the public parks of Surquillo?

The third chart highlights the differences in activities within public parks. Middle-class citizens primarily use parks for sports (10 responses) and walking (5 responses), showcasing the availability of amenities that support active recreation. In contrast, low-income area

citizens predominantly use parks for family time or socializing (7 responses), with very limited use for sports or walking due to poor infrastructure. This points to the necessity of adding sports facilities, pet-friendly areas, and children’s play zones in Sector B to encourage diverse and active park usage.

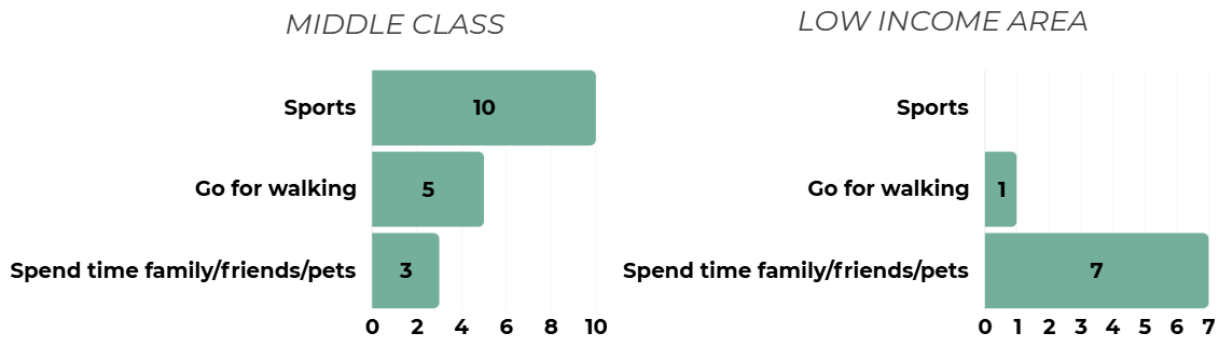


Figure 6. Park usage activities by socioeconomic sector.

The sector B has lower overall usage rates of the parks, with fewer activities taking place. The parks in Sector B are often poorly maintained and lack basic amenities. As a result, citizens in this area are less likely to use the parks, citing safety concerns and lack of transportation options as barriers to access.

In line with our findings, Kabisch et al. (2017) observed that poorly maintained parks in low-income areas often discourage frequent use due to perceptions of neglect and insecurity

Crimes

The findings align with prior studies, such as those by Schüle et al. (2019), which demonstrate that perceived safety in green spaces is a key determinant of their usage, particularly for women and marginalized groups. Parks with poor lighting and visibility are often associated with higher crime risks and lower visitation rates.

Case Study – Surquillo, Peru:

In Sector A, a wealthier area, parks are better maintained, well-lit, and offer diverse amenities, leading to a stronger sense of safety and higher usage rates (INEI, 2017).

In Sector B, a lower-income area, parks are poorly maintained, and citizens express concerns about crime, lack of lighting, and insufficient amenities, making them less likely to use these spaces due to perceived safety risks (Garcia et al., 2016).

These examples illustrate how socioeconomic conditions and park infrastructure intersect to either promote or limit the use of green spaces, depending on how safe they are perceived to be. Socioeconomic factors play a key role in shaping the use of urban green spaces by influencing both the physical characteristics of parks and people's sense of safety. These factors, such as income levels, education, and social capital, directly impact park accessibility, upkeep, and how people interact with these spaces".

The Perspective of Citizens

Citizens of Surquillo have mixed views on the parks in their neighborhood. Citizens in Sector A are generally satisfied with the parks, while citizens in Sector B are more likely to express dissatisfaction. The main concerns of citizens in Sector B are safety, lack of amenities, and maintenance.

Gap

As we can see on the map, there are more public green recreational areas in Sector A, which could be because the population in this sector falls within a socioeconomic range between B and A. In contrast, in Sector B, the socioeconomic level is between C and D, according to statistical data from the Surquillo municipality.

Discussions

The results reveal notable differences in park usage and perceptions of safety between middle-class and low-income citizens in Surquillo. Citizens in Sector A tend to use parks more frequently, primarily for sports or exercise, due to better-maintained infrastructure and diverse amenities. In contrast, Sector B citizens typically use parks for family or community activities, although they express a desire to use these spaces more regularly if safety and maintenance conditions improve.

Initially, it seemed that middle-class citizens feel safer due to the availability of numerous parks and activities. However, the findings show that half of the middle-class respondents do not feel secure at night. Data on crime also highlights that both sectors experience significant criminal activity, particularly in poorly lit and under-maintained areas. The lack of lighting and infrastructure, coupled with the absence of active use or organized activities, often leaves parks desolate and unsafe. This underscores that the mere presence of green spaces is insufficient if they fail to address the community's specific needs and concerns.

As highlighted in the literature review, perceptions of safety are crucial for the effective utilization of urban parks. Previous research emphasizes that well-lit, well-maintained parks with visible infrastructure foster greater community engagement and reduce perceptions of insecurity (Bogar & Beyer, 2016; Garcia et al., 2016). Conversely, poorly maintained, or

neglected parks in low-income areas exacerbate the sense of danger and discourage usage. These findings align with the observed disparities between Sectors A and B in Surquillo.

To create meaningful and impactful green spaces, urban planning must go beyond simply allocating land for parks. It requires a deep understanding of the community's needs and perspectives to ensure these spaces are not wasted due to insecurity or inadequate facilities. Parks should serve as tools to improve quality of life, satisfy the diverse needs of their users, and foster social cohesion. For Sector B, this involves addressing fundamental issues like safety, lighting, and basic infrastructure to transform parks into functional, inclusive, and vibrant spaces.

Conclusions

This research aligns with recommendations by Chiesura (2004), who argues that urban green spaces must be designed not only as recreational areas but also as spaces that promote social integration and community well-being. Parks and green spaces in Surquillo play a crucial role in improving the quality of life for its citizens, promoting social cohesion, physical and mental health, and community safety. However, socioeconomic inequality between Sectors A and B has led to significant differences in access, maintenance, and the perception of safety in these spaces. Improving urban green spaces requires a holistic approach that integrates safety, infrastructure, and active community engagement. The disparities between Sectors A and B in Surquillo demonstrate the importance of tailoring interventions to the unique needs of different socioeconomic groups. For parks to fulfill their potential as spaces that enhance quality of life, urban planners must prioritize investments in lighting, maintenance, and diverse amenities while involving the community in the planning process. By addressing these challenges, cities

like Lima can ensure that parks are not just green spaces but vital components of urban well-being, contributing to social cohesion, public health, and equitable access for all.

While parks in Sector A are better maintained, feature more infrastructure, and have higher usage rates, those in Sector B face challenges such as insecurity, poor lighting, and a lack of basic services. These limitations reduce their utility and the positive impact they could have on low-income communities.

To address these gaps, specific measures are recommended, such as improving security, increasing lighting, ensuring regular maintenance, and developing adequate infrastructure to meet the needs of each sector. Additionally, fostering community participation and increasing public and private investment in parks in Sector B will help create inclusive and functional spaces for all citizens.

With these actions, Surquillo can maximize the potential of its parks as spaces for recreation and social interaction, reducing inequalities and strengthening social cohesion across the district.

a. Limitations

Relying on self-reported data brought potential biases, as not all participants felt at ease sharing their opinions or fully engaged with the survey process, which may have impacted the accuracy of the responses. Additionally, the study focused on two socioeconomic sectors in Surquillo, limiting the generalizability of findings to other urban areas. The absence of longitudinal data also restricted the ability to observe changes over time or assess the long-term impact of park improvements on safety perceptions and usage. Expanding future research to include a broader sample and spatial analysis could provide deeper insights into these dynamics. The challenges

of conducting surveys in urban environments are echoed by Van Herzele and Wiedemann (2003), who note that participants' perceptions often differ from measurable indicators, emphasizing the need for triangulating data sources.

b. Future work

In the future, I would like to expand beyond the scope of this final project by conducting in-person interviews to explore perspectives better. This would help to understand them, qualitative insights and foster more meaningful connections with our users. Furthermore, design and implement campaigns that actively connect the community, creating opportunities for collaboration, awareness, and action.

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