

Final Project 1

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Project title

The Impact of Public Park Development on Social Relationships: A Study on Residents in Jeddah, Saudi Arabia

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Table of Contents

1. Chapter 1: Introduction.....	4
1.1. Research Background	5
1.2. Research Problem.....	8
1.2.1. Theoretical Gaps.....	8
1.2.2. Practical Gaps.....	9
1.3. Research Significance.....	10
1.3.1. At the theoretical level	10
1.3.2. At the practical level	11
1.4. Research Questions	12
1.5. Research Objectives	13
1.6. Research Hypotheses.....	14
1.7. Research Model	15
1.8. Research Methodology	17
1.8.1. Research Design.....	17
1.8.2. Sampling and Target Population.....	18
1.8.3. Data Collection.....	18
1.8.4. Research Tools	18
1.8.5. Validity and Reliability	19
1.8.6. Data Analysis	19
1.8.7. Ethical Considerations.....	19
1.9. Scope of The Study	20
1.9.1. Limitations of the Study.....	21
1.10. The Suggested Project Structure	22
References	24

Table of Figures

Figure 1 Research Model.....	16
Figure 2 Research Onion	17
Figure 3 Project Structure.....	23

1. Chapter 1: Introduction

1.1. Research Background

Urban public parks play an increasingly vital role in enhancing the social fabric of cities. Globally, studies have consistently demonstrated that green public spaces contribute to residents' physical, psychological, and social well-being (Hartig et al., 2014; Kwon et al., 2021). For instance, research in the United States showed that parks not only foster physical and mental health but also serve as essential nodes for social interaction (Hartig et al., 2014). This aligns with evidence that well-designed urban green spaces facilitate social cohesion by enabling casual interactions and building community trust (Qi, Mazumdar, & Vasconcelos, 2024).

Theoretically, urban public parks are understood to function as critical enablers of social capital and cohesion. Empirical research demonstrates that green public spaces foster repeated interactions, trust, and place attachment—core elements of social cohesion (Qi et al., 2024). A 2024 systematic review concluded that accessibility, diverse amenities, and inclusive design are essential factors that enable parks to support everyday social engagement among varying age and cultural groups (Qi et al., 2024). Furthermore, parks that facilitate positive experiences across demographic lines can enhance social capital, leading to healthier and more resilient communities (Schwartz et al., 2019). These theoretical perspectives underscore the importance of evaluating public park development not only for environmental or physical health outcomes, but as a vehicle for nurturing robust social relationships—especially in large, diverse cities.

Jeddah, the commercial hub located along the Red Sea coast in western Saudi Arabia, is a sprawling metropolis covering approximately 1,756 km² (Jeddah Municipality, 2025). According to the most recent figures, the city's population stands at roughly 3.75 million as of 2022, making it the second-largest city in the Kingdom and the ninth-largest in the Middle East (WorldPopulationReview, 2025). The city's demographic composition is notably diverse: Saudi nationals constitute the majority, but expatriates from countries such as Indonesia, Pakistan, the Philippines, and other Arab and Asian nations collectively form over 40% of the population (Jeddah

Municipality, 2025). Jeddah experiences a hot desert climate with average daytime temperatures exceeding 37 °C in summer and mild, humid winters (Jeddah Municipality, 2025). These climatic conditions intensify the need for well-designed green spaces that can provide respite for residents and support outdoor social activities year-round.

Demographically, Saudi Arabia's population reached nearly 37 million in May 2025, with a national density of roughly 16 people/km² (WorldPopulationReview, 2025). However, population clusters around urban centers—including Jeddah—exhibit much higher density, reaching over 6,400 persons per square mile (approximately 2,500 per km²) (Jeddah Municipality, 2025). The multicultural nature of Jeddah, combined with its relatively young population, underscores the urgent need for communal venues that nurture social ties and inter-cultural understanding. Public parks can serve as inclusive platforms for connecting diverse groups, thereby supporting social integration and cohesion.

Within the Middle Eastern context, and particularly in Saudi Arabia, the development of public parks has become a strategic priority under Vision 2030, which emphasizes improving quality of life through urban revitalization. In Jeddah, efforts to expand and enhance park infrastructure support broader goals of walkability, community engagement, and sustainable urban growth (Alnaim, Dano, & Alqahtany, 2025; Almohandes & Mohamed, 2023). Empirical studies in Saudi settings, such as the Dammam Metropolitan Area, have highlighted that features like safety, maintenance, and accessible design in local parks are key drivers of social interaction among residents (Alnaim et al., 2025). Similarly, GIS analyses in Jeddah revealed disparities in walkable access to parks caused by urban form—such as street connectivity, block permeability, and park distribution—which directly affect residents' ability to utilize these spaces for social engagement (Addas & Maghrabi, 2020).

Complementary qualitative research in Jeddah has further explored how public open spaces contribute to social life, demonstrating cultural and demographic diversity in how these spaces are experienced (Addas & Maghrabi, 2020). However, while

existing studies have highlighted health, environmental, or general usability benefits, fewer have focused on social outcomes such as frequency and quality of interpersonal relationships within the park context. This signals a gap in both theory and practice, particularly regarding how parks influence social dynamics among specific population segments.

This research, therefore, seeks to contribute by examining how public park development projects in Jeddah influence social relationships among residents, with a refined focus on one accessible demographic subgroup, such as mothers. By leveraging a concise and validated questionnaire around social relationship constructs, this study will bridge the gap between urban planning initiatives and lived social experiences. It responds directly to the theoretical need for concrete empirical evidence linking park infrastructure and social outcomes (Qi et al., 2024), as well as the practical imperative of Vision 2030 to foster cohesive, healthy, and sustainable urban communities.

1.2. Research Problem

Despite growing recognition of the value of public parks in fostering community well-being, the relationship between park development and social relationships—particularly in urban contexts within the Gulf region—remains underexplored. While numerous studies have emphasized the physical and environmental benefits of green spaces, limited research has examined how public parks influence interpersonal social interactions, especially among specific demographic groups such as mothers. This lack of focused inquiry leaves a significant gap in our understanding of how urban design can enhance or inhibit community cohesion. Therefore, the central research problem guiding this study is:

To what extent does the development of public parks in Jeddah influence social relationships among local residents, particularly mothers?

This research aims to address this question by analyzing residents' experiences, perceptions, and patterns of interaction in newly developed or improved parks, thereby contributing to both theory and practice in urban planning and social development.

1.2.1. Theoretical Gaps

While urban planning literature has increasingly acknowledged the psychological and physical benefits of public green spaces, less attention has been paid to the specific social mechanisms that these spaces enable (Hartig et al., 2014; Qi et al., 2024). Most theoretical models of urban livability and sustainability reference parks in general terms but fail to articulate how these spaces foster trust, belonging, and repeated interaction—key ingredients of social capital (Schwartz et al., 2019). Furthermore, existing studies tend to view “community” as a homogenous entity, overlooking the nuanced ways in which different groups (e.g., mothers, children, elderly, expatriates) interact with public space. In the context of Saudi Arabia, theoretical frameworks that connect urban park development with measurable changes in social cohesion are still underdeveloped, leaving a notable conceptual gap. This research seeks to build on and extend existing theory by isolating social relationships as

a specific outcome of public park use, contributing new empirical insights to a growing but incomplete body of knowledge.

1.2.2. Practical Gaps

From a practical standpoint, Saudi Arabia's Vision 2030 has spurred rapid development of public infrastructure, including urban parks, as part of efforts to enhance quality of life. Yet the evaluation of such projects often focuses on physical access, green coverage, or user satisfaction, without delving into the social impact on communities (Al-Na'im et al., 2025; Almohandes & Mohamed, 2023). In cities like Jeddah—characterized by dense populations, diverse residents, and a harsh climate—well-planned public parks could play a key role in strengthening everyday social bonds. However, urban designers and policymakers currently lack localized data on how these spaces are actually used for social purposes. There is also a shortage of feedback from marginalized yet socially influential groups such as mothers, who often serve as facilitators of community interactions through their children. By examining the real-world social implications of park development, this study aims to inform more inclusive, community-driven urban design strategies in Jeddah and similar cities across the region.

1.3. Research Significance

Understanding how public park development affects social relationships is especially relevant in urban environments undergoing rapid transformation. This research contributes to the growing discourse on livable cities and social sustainability by examining the link between spatial planning and social interaction, focusing specifically on Jeddah, Saudi Arabia. By investigating how the design and development of public parks influence the quality and frequency of social relationships—particularly among mothers—this study provides new insight into how everyday environments shape human connection. The significance of this research lies in its ability to bridge a conceptual and practical gap in urban development discourse, especially within the Gulf context, where studies of social cohesion through public infrastructure remain limited.

1.3.1. At the theoretical level

At the theoretical level, this study advances the understanding of public park development as more than just an urban beautification effort. It frames parks as active social infrastructures capable of influencing interpersonal dynamics, trust-building, and social inclusion (Qi et al., 2024). While urban sociology and planning literature have addressed the importance of public space in general terms, this study isolates social relationships as a measurable outcome and investigates their development within the specific socio-cultural and environmental conditions of Jeddah. Furthermore, by focusing on a defined population—mothers—the study introduces a demographic-specific layer to social cohesion theory, challenging the assumption that public space serves all communities equally. These insights contribute to the refinement of theoretical models that address the social impact of urban design in non-Western, high-density, climate-sensitive cities like Jeddah.

1.3.2. At the practical level

On a practical level, the study aligns with Saudi Arabia's Vision 2030 objectives, particularly the Quality-of-Life Program, which prioritizes improved urban environments and stronger community bonds through inclusive public infrastructure. Urban planners and municipal authorities in Jeddah are investing heavily in park development projects, yet limited local data exists on how these projects shape residents' social experiences. This research provides decision-makers with empirically grounded recommendations to ensure that park designs are not only aesthetically pleasing or physically accessible but also socially functional. By highlighting the role of public parks in facilitating daily social interactions, especially for mothers who often act as community connectors, this study may inform more inclusive, family-centered park planning. Ultimately, it provides evidence to support policies that foster both physical and social well-being in Saudi urban environments.

1.4. Research Questions

This study seeks to address the following research questions, which are formulated to align with the research objectives and explore the relationship between public park development and social capital among visitors in Jeddah.

Main Research Question: What is the impact of public park development on social relationships among visitors in Jeddah?

Sub-Questions:

- To what extent do visitors of public parks in Jeddah report high levels of social capital, as measured by the PSCS-8 scale?
- How does the perceived development of public park infrastructure relate to the strength of social relationships among park visitors?
- Are there significant differences in reported social capital levels based on visitors' demographic characteristics, such as age, gender, or frequency of park visits?
- What role do public parks play in enhancing community bonding and bridging among diverse population groups in Jeddah?
- How can insights from visitor experiences support the planning of socially inclusive public spaces in alignment with Saudi Arabia's Vision 2030?

These research questions are designed to guide the empirical investigation and contribute to a deeper understanding of how public park environments influence social cohesion in urban Saudi settings

1.5. Research Objectives

The primary objective of this study is to examine the impact of public park development on social relationships among visitors in Jeddah, Saudi Arabia. To achieve this, the research aims to:

- Assess the level of perceived social capital (bonding and bridging) among public park visitors using the Personal Social Capital Scale (PSCS-8), focusing on key indicators such as sense of belonging, frequency of interaction, and willingness to engage with others.
- Investigate the relationship between visitors' perceptions of park development and the quality of their social relationships within these public spaces.
- Identify demographic variations (e.g., age, gender, and frequency of park visits) in social capital scores to understand which groups experience the most significant benefits from park development.
- Contribute empirical data to the field of urban planning and public health by linking physical improvements in public parks to social cohesion outcomes in urban environments.
- Support Vision 2030 objectives by providing evidence-based recommendations on how park infrastructure can foster community engagement, enhance quality of life, and promote socially inclusive public spaces in Saudi cities.

These objectives are designed to be measurable through quantitative analysis of survey responses and directly aligned with the research problem and methodology.

1.6. Research Hypotheses

Based on the theoretical framework and previous empirical findings, the following hypotheses are proposed to be tested in this study:

H1: There is a statistically significant positive relationship between the perceived development of public parks and the level of social capital among visitors in Jeddah.

H2: Visitors who report more frequent use of public parks will demonstrate higher scores on the PSCS-8 social capital scale compared to less frequent visitors.

H3: There are significant differences in social capital scores based on demographic variables such as age, gender, and occupation.

H4: The development of public parks contributes to enhancing both bonding and bridging forms of social capital among diverse groups in Jeddah.

These hypotheses are grounded in existing literature emphasizing the social benefits of urban green spaces (Peters et al., 2010; Wang et al., 2014), and are designed to support the research objectives and guide data analysis. Testing these hypotheses will contribute to understanding how well-designed public spaces can foster community cohesion, in line with the social goals outlined in Saudi Arabia's Vision 2030.

1.7. Research Model

The research model for this study illustrates the conceptual relationship between the development of public park projects in Jeddah and their influence on social relationships among community members. This model is grounded in previous literature that highlights how improvements in urban green spaces can promote interpersonal interactions, trust, and social cohesion (Peters et al., 2010; Jennings & Bamkole, 2019). The model reflects the theoretical premise that the enhancement of public infrastructure—such as parks—not only contributes to environmental and aesthetic value but also fosters opportunities for social engagement.

In this model, the independent variable is the development of public park projects, which encompasses various aspects such as increased accessibility, enhanced facilities, safety, and design features that encourage communal use. The dependent variable is social relationships, referring to the frequency, quality, and diversity of social interactions experienced by park visitors.

The model is designed to guide the research methodology, specifically the use of the PSCS-8 scale to quantitatively assess the levels of perceived social connectedness among park users. It also supports the hypothesis that park development initiatives are significantly associated with stronger social relationships in urban communities.

A simplified visual representation of the research model is presented below:

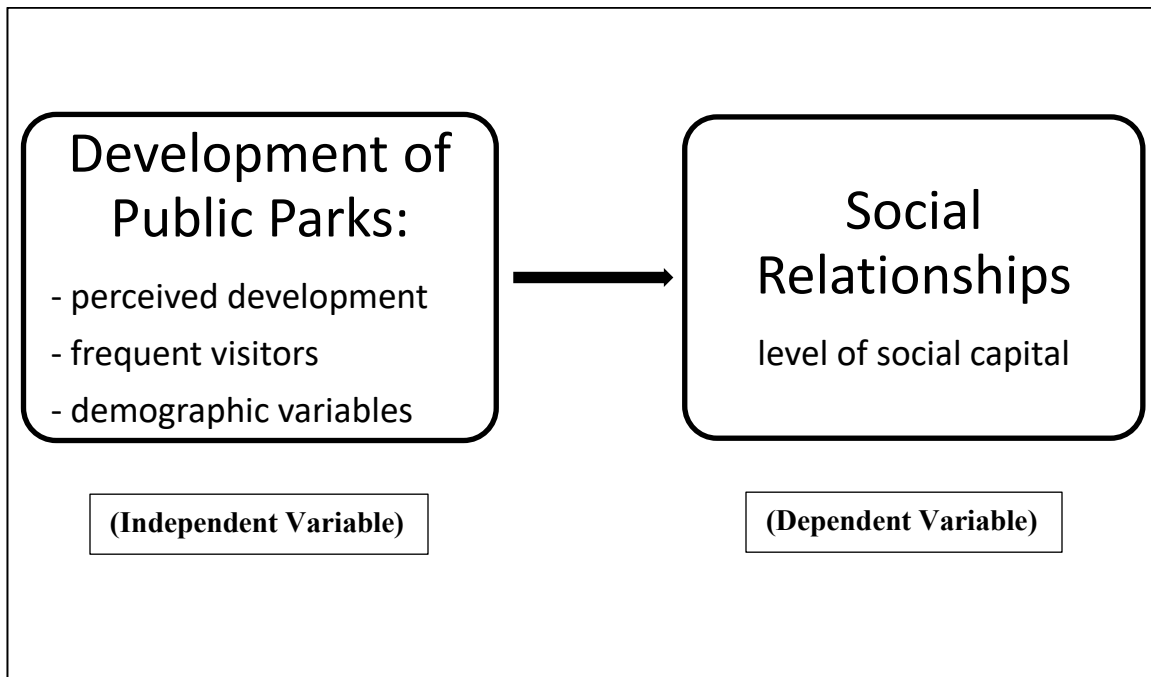


Figure 1 Research Model

This model aligns with the overarching research objectives and hypotheses by clearly defining the expected directional relationship between urban planning interventions and community-level social outcomes. Moreover, it provides a framework for data collection and analysis, supporting both theoretical exploration and practical evaluation aligned with Saudi Arabia's Vision 2030 objectives.

1.8. Research Methodology

The methodology of this research is designed to systematically investigate the impact of public park development on social relationships among visitors in Jeddah, Saudi Arabia. This study adopts a quantitative, cross-sectional approach to capture a broad understanding of the public's perceptions and behaviors. The methodology is structured to ensure validity, reliability, and relevance to both theoretical frameworks and Vision 2030 objectives, particularly those related to enhancing the quality of life and promoting social cohesion in urban environments.

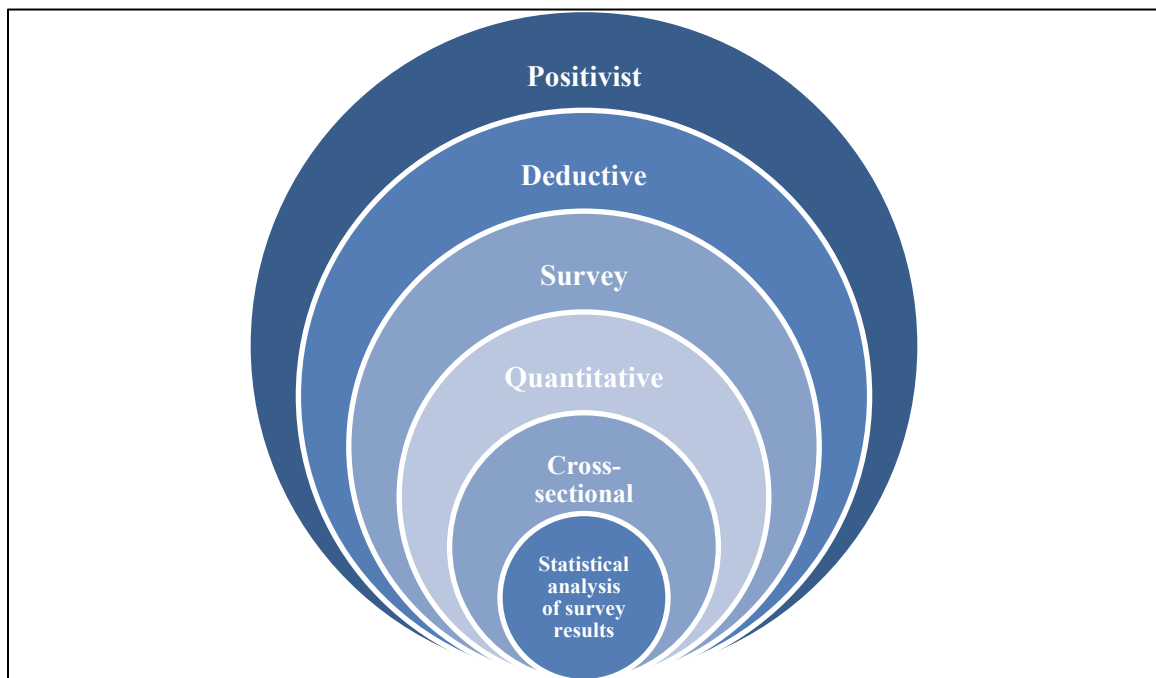


Figure 2 Research Onion

1.8.1. Research Design

This study employs a quantitative cross-sectional survey design, which allows for the collection of data from a large number of participants at a single point in time. The design is appropriate for examining the relationship between the independent variable (development of public parks) and the dependent variable (social relationships among park visitors). The choice of this design aligns with the study's objective to quantify perceptions and assess patterns of social interaction that emerge in response to physical

improvements in public park environments.

1.8.2. Sampling and Target Population

The target population for this study comprises adult visitors (aged 18 and above) to public parks in Jeddah. This inclusive approach ensures a diverse range of perspectives and helps capture the full spectrum of social dynamics observed in these spaces. A non-probability convenience sampling method is employed, where visitors who are present at the parks during the data collection period will be invited to participate. This method is practical and efficient for on-site research, especially when the goal is to collect perceptions in natural settings (Creswell & Creswell, 2018). The aim is to recruit a sample of at least 200 respondents, which is consistent with recommended thresholds for factor analysis and provides adequate statistical power for examining relationships between variables (Nunnally & Bernstein, 1994).

1.8.3. Data Collection

Data will be collected on-site at various public parks in Jeddah through a digital survey administered via Google Forms. Participants will access the questionnaire by scanning a QR code displayed on posters or flyers strategically placed at park entrances and common areas. This method facilitates ease of access and allows participants to complete the survey on their smartphones at their convenience, promoting higher response rates (Creswell & Creswell, 2018). The data collection period is expected to span approximately three weeks, ensuring a sufficient sample size for robust statistical analysis.

1.8.4. Research Tools

The main instrument used in this study is the Personal Social Capital Scale (PSCS-8). This instrument was developed by Wang and colleagues (2014) to measure individuals' perceived social capital in terms of bonding and bridging relationships. A validated and reliable scale was developed to measure perceived social bonding and cohesion in public spaces. The PSCS-8 consists of eight Likert-scale items, ranging

from "strongly disagree" to "strongly agree", and captures key aspects such as frequency of interaction, sense of belonging, and willingness to engage with others. The scale has demonstrated high internal consistency (Cronbach's $\alpha = 0.89$) and construct validity in previous studies on urban public spaces (Wang et al., 2014). The survey also includes a brief demographic section (age, gender, frequency of park visits) to enable subgroup analysis.

1.8.5. Validity and Reliability

To ensure validity, the questionnaire items are adapted directly from the PSCS-8 scale, which has undergone extensive psychometric testing. The content validity is preserved by maintaining the original wording and structure of the items. Face validity is ensured by conducting a pilot test with 10 participants who provide feedback on the clarity and relevance of the questions. Regarding reliability, the PSCS-8 has consistently shown strong internal consistency across different populations and settings, confirming its suitability for measuring social connectedness in urban park contexts (Qi et al., 2024).

1.8.6. Data Analysis

After collection, the data will be exported from Google Forms into Microsoft Excel and then imported into SPSS (Statistical Package for the Social Sciences) for analysis. Descriptive statistics (mean, standard deviation, frequency, and percentage) will summarize the demographic characteristics and responses to the PSCS-8 items. Inferential statistics, such as Pearson correlation and linear regression, will be used to assess the relationship between park development (measured through proxy questions related to perceived park quality) and social connectedness. The level of significance will be set at $p < 0.05$ (Creswell & Creswell, 2018).

1.8.7. Ethical Considerations

This study adheres to ethical research principles. Participation is voluntary, and all participants will provide informed consent before beginning the survey and have

their right to withdraw at any point without consequence. No personal identifiers (such as names or contact information) will be collected, and all data will be stored securely, ensuring anonymity and confidentiality. Ethical approval will be obtained from the appropriate university committee prior to data collection.

By integrating a rigorously tested measurement instrument with a representative and accessible participant base, this methodology is well-positioned to address the study's central objective: evaluating how public park development in Jeddah contributes to enhancing social relationships among city residents.

1.9. Scope of The Study

This study is empirically situated in the city of Jeddah, Saudi Arabia, with a focus on urban public parks as the central domain of investigation. Specifically, the research explores how the development of public parks contributes to enhancing social relationships among residents and visitors. The city of Jeddah has witnessed notable investment in its public spaces under the national Vision 2030 agenda, particularly through the “Bahja” initiative launched by the Ministry of Municipal, Rural Affairs, and Housing (MOMRAH) in collaboration with the Jeddah Municipality (MOMRAH, 2023).

The "Bahja" project seeks to transform neglected or underutilized areas into vibrant, green, and socially inclusive spaces. Examples include Prince Majid Park, Al-Saja Park, and other recently renovated recreational areas that now serve as focal points for community interaction, cultural events, and family activities (SPA, 2025a; SPA, 2025b). These parks were specifically designed to support the principles of human-centered urbanism, encouraging connectivity, safety, and social engagement among diverse population groups.

The geographical scope of the study includes various neighborhoods within Jeddah that house such public parks, providing a wide range of urban contexts—from densely populated districts to newly developed residential zones. The study population comprises adult park visitors who frequent these areas, regardless of gender, age, or socioeconomic status. Using a cross-sectional survey methodology, the research aims to capture a snapshot of current public engagement with these spaces and the perceived social

outcomes derived from park development.

In terms of its conceptual scope, the study centers on the relationship between park infrastructure development (independent variable) and social relationships (dependent variable), with a particular focus on interpersonal connection, sense of community, and public social behavior. The investigation is further aligned with the national Quality of Life Program under Vision 2030, which prioritizes the enhancement of public well-being through urban renewal and improved access to green spaces (SPA, 2025a).

While the study focuses on Jeddah as a case city, its findings may offer insights applicable to other Saudi urban centers undergoing similar transformations. Nevertheless, the results will be context-bound, reflecting the unique demographic, cultural, and spatial dynamics of Jeddah's public realm. Moreover, seasonal variation, accessibility differences across neighborhoods, and population mobility may introduce limitations to the generalizability of findings.

By focusing on the public parks developed under the Bahja project, this study provides a timely and relevant empirical foundation for understanding how physical urban transformations influence social capital, civic behavior, and community well-being within the Saudi Arabian context.

1.9.1. Limitations of the Study

While this study provides valuable insights into the social impact of public park development in Jeddah, it is subject to certain limitations. First, the cross-sectional nature of the data collection restricts the ability to draw causal inferences between park development and social relationship outcomes. Second, the study relies on self-reported perceptions collected through an online survey, which may introduce response biases or limit the representation of individuals with limited internet access. Additionally, the research is geographically confined to selected parks in Jeddah, and therefore the findings may not be generalizable to other Saudi cities with differing urban dynamics or park usage patterns. Lastly, factors such as seasonal weather conditions, special events, or temporary closures during the data collection period may have influenced visitor behavior and response rates.

1.10. The Suggested Project Structure

The proposed research project will be organized into five main chapters. This structure is designed to ensure clarity, coherence, and a logical progression from the research background to the final conclusions and recommendations.

Chapter 1: Introduction

This chapter will present the background of the study, define the research problem, and state the research objectives, questions, and hypotheses. It will also highlight the significance of the study, scope, limitations, and the rationale for focusing on public park development and its impact on social relationships in Jeddah.

Chapter 2: Literature Review

This chapter outlines the research design, methodology, and procedures employed in the study. It details the sampling strategy, data collection instruments—specifically the PSCS-8 scale—and techniques for ensuring validity and reliability. Ethical considerations are also discussed.

Chapter 3: Research Methodology

This chapter will explain the research design, including the quantitative cross-sectional approach, the sampling method, and the use of the PSCS-8 instrument for data collection. It will also describe how data will be collected using Google Forms through QR codes, and how validity, reliability, and ethical considerations are addressed.

Chapter 4: Statistical Analysis

This chapter will present the results of the data analysis using appropriate statistical tools. It will include descriptive statistics, reliability analysis, and tests of hypotheses. The findings will be organized in a clear and systematic manner, supported by tables and charts as needed.

Chapter 5: Discussion and Conclusion

This final chapter will interpret the results in the context of the research questions and literature. It will discuss the implications of the findings, draw conclusions, and provide recommendations for urban development stakeholders, particularly regarding the role of parks in enhancing social connectedness. Suggestions for future research will also be presented.

This structure is intended to guide the research process and ensure that all key aspects of the study are addressed in a systematic and academically rigorous manner.

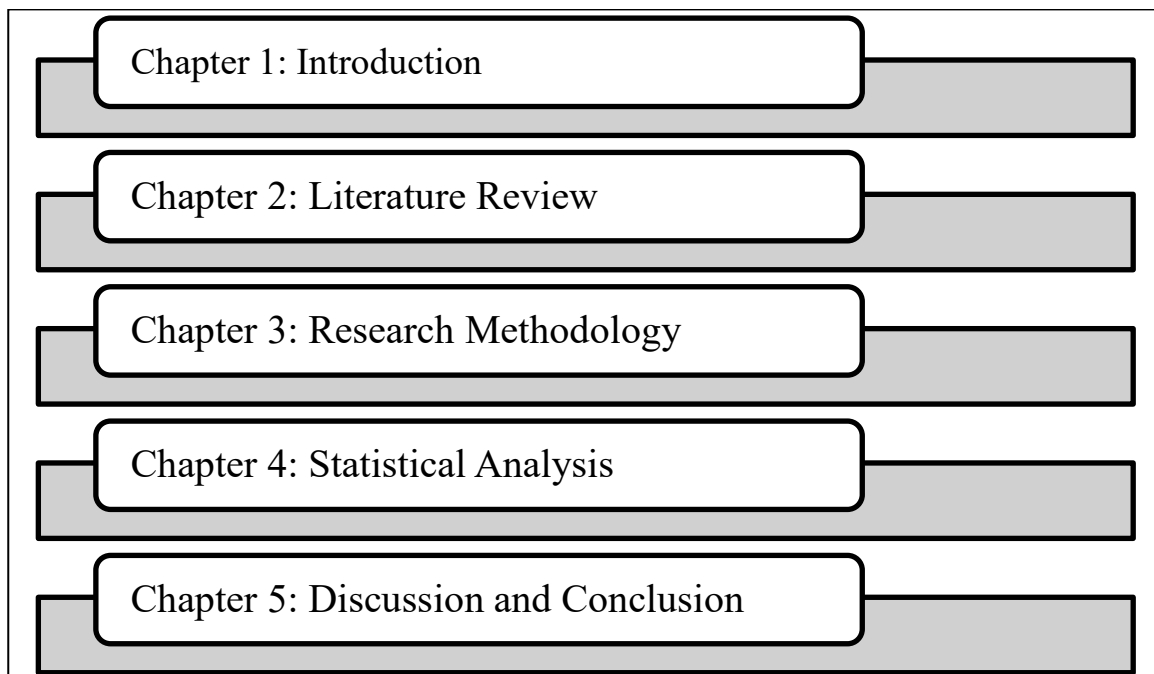


Figure 3 Project Structure

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