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A comparative Analysis of Street livability Based on the Location of Green Spaces in Gated Residential Communities in Lahore

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ABSTRACT

Rapid urbanization in cities like Lahore has led to challenges in the livability of residential streets, with factors such as overcrowding, traffic, poor infrastructure, and pollution impacting daily life. However, there is a growing focus on improving residents' quality of life, particularly in gated communities. Green spaces are essential for enhancing street livability, offering benefits like promoting social interaction, improving safety, and supporting mental well-being. This study compares three streets in different gated communities, each with a unique layout of green spaces, to assess how these spaces affect residents' experiences. By evaluating the physical conditions of streets through observational assessment and perceived livability by users through statistical analysis using SPSS, this study concludes that the streets with green spaces at the front and rear, tend to offer better livability through enhanced social interaction and pedestrian experience, though each has unique strengths and gaps. This research offers insights into optimizing street design and green space location, helping urban planners create more livable, people-focused urban planning.

Introduction

Lahore, Pakistan's second-largest city, has experienced rapid urbanization over recent decades, being driven by population growth, economic migration, and infrastructural development which is fundamentally reshaping its residential fabric (Ghafoor et al., 2022). This is manifested by the fact that the built-up area is increased by 584.20 percent from 1996 to 2017 (Abbas & Wakil, 2023). As the city expands to accommodate residents, urban sprawl has extended Lahore's boundaries far beyond its historic core, pushing residential and commercial development into agricultural lands (Shah & Abbas, 2015). While often seen as a symbol of economic progress, this rapid expansion has come at a significant cost to livability, particularly regarding environmental degradation, impact on public infrastructure and services, reshaped social

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inequality, and loss of green spaces (Samadkulov, 2024).

With the loss of green spaces, high-density residential areas face the urban heat island effect due to rising temperatures and air pollution, making summers increasingly harsh and living conditions difficult. (Azizi & Azizi, 2024). According to a World Bank report, Lahore's air quality is severely impacted by pollutants, with PM 2.5 levels far exceeding WHO standards. Around 38% of these fine particulates originate from vehicular emissions (Sánchez-Triana et al., 2014). Public infrastructure is often concentrated in wealthier neighborhoods or gated communities, and the residents in less affluent regions frequently experience disruptions in essential services, further adding to urban inequality (Babar, 2014). Urbanization has also changed the social dynamics of residential areas, as the emphasis has shifted towards individual interest offering one degree of privacy and security which contributes to weakening social bonds, isolation from social networks, and reduced neighborhood cohesion (Cermeño, 2021). According to Mercer's quality of living index of 2016, Lahore is ranked at the 199th place among 230 worlds' cities (Abbas & Wakil, 2023).

Livability refers to creating safe, socially stable, economically viable, and environmentally sustainable cities, balancing livelihood (Raji et al., 2016). At the micro level, the livability of streets holds significant importance as these serve as vital social corridors, linking neighborhoods and contributing to the overall livability of the urban environment. (Fang, 2023). In urban planning, street livability is shaped by the street's capacity to offer a safe, comfortable, and engaging environment for its users. (Alabed et al., 2021). In 1983, Donald Appleyard, in his book Livable Streets, suggested the design of residential streets that could serve the residents' rights. These suggestions define the role of streets as a sanctuary, a healthy environment, a community place, a neighborly territory, a place for play and learning, a green and pleasant land, and a unique historic place. (Appleyard, 2019).

The livability of residential areas in Lahore is largely compromised by traffic hazards, air pollution, noise pollution, inadequate pedestrian infrastructure, and loss of green spaces. (Azhar et al., 2024; Rosli et al., 2012). Among the key indicators of livability, green spaces play a vital role in improving residents' quality of life by offering opportunities for interaction, recreation, relaxation, and connection with nature. These also support overall well-being by promoting health, easing mental strain, and enhancing environmental quality (Adewolu, 2023). Accordingly, this research aims to analyze the impact of green spaces on the livability of residential streets in gated communities in Lahore.

Lahore has developed many gated communities to meet the growing demands for secure and modern living spaces, attracting local and expatriate residents seeking comfort and safety (Elsawy et al., 2019). Rahmaan's 2009 study, involving neighbourhoods from various income groups, found that 57% of residents moved to gated communities for a better living and social environment, 21% for security reasons, 13% preferred improved planning, and 19% chose proximity to relatives. These results indicate that quality of life, security, and family ties significantly influence residential choices (Rahmaan, 2009).

To assess the street livability in gated communities in Lahore is crucial to find out whether they are fulfilling the demands of the users. This research examines and compares the livability of residential streets featuring open green spaces as their primary physical attribute. The study will focus on different street layouts with green spaces, using selected gated residential communities as case studies. The objectives of this research are:

1. To identify and analyze the physical conditions of different street layouts with green spaces in gated communities of Lahore.
2. To assess the livability of the streets experienced by its residents statistically using different physical, social, and environmental indices of livability.
3. To identify which layout best supports a livable environment and how green space location affects overall comfort, satisfaction, social interaction, safety perception, and community identity among residents.

Literature Review

The livability of the environment experienced by its inhabitants can be measured from various livability indices. Studies across various contexts consistently highlight the importance of shared human priorities for quality living spaces. These studies show the key livability factors that should be considered for livability assessments (Leby et al., 2010). In *Great streets* (1995), Allan B. Jacobs highlights the need for streets to be pedestrian-friendly, with features like active storefronts, mixed-use buildings, and a human scale that makes people feel comfortable and engaged. In *Livable Streets* (1983), Donald Appleyard highlights how traffic impacts social life, findinga that residents of quieter streets are more sociable and satisfied compared to those living on busier roads. In *Human Aspects of Urban Form* (1977), Amos Rapoport

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emphasizes that the physical design of streets, including their connectivity, width, and the arrangement of spaces, has a direct impact on social behavior, accessibility, and the overall livability of a city. In *Emerging Concepts in Urban Space Design* (2003), Geoffrey Broadbent highlights that livable streets are those that are adaptable, encouraging a mix of uses and activities while maintaining a balance between movement and interaction. Developing the Parameters for Evaluating Contemporary Street Space: A Review Study, Yaseen (2021) summarizes the most discussed street livability parameters mentioned by different post-modernist urban planners in their publications. He then overlaps commonly and rarely mentioned traits and identifies 4 basic parameters that influence how these spaces are perceived and utilized such as pedestrian realm, sense of place, sense of safety & Security, and Robustness.

Table 1 Basic Livability Indices of livable streets, and their related traits source: (Yaseen, 2021)

Basic Parameters	**Pedestrian realm**	**Sense of Place**	**Sense of Safety and Security**	**Robustness**
Related Traits	Walkability & Comfort Traffic calming Measures Noise Control Maintenance	Sense of Enclosure Visual Stimulation Sense of Attachment Sociability	Security Safety & Mobility Legibility & Imageability Transparency Familiarity	Adaptability Diversity

Over the years, extensive research has been carried out to identify and assess the characteristics of livable streets in commercial and residential areas. These studies have used livability indices to evaluate streets in various cities worldwide, helping to pinpoint areas for improvement and enhance the overall livability of these spaces. Almatar (2024) suggested smart, people-friendly design changes to enrich culturally vibrant commercial streets, while noting the challenges of preserving heritage, addressing societal resistance, and ensuring inclusive urban planning. Mahendra & Saraswati (2023) & Alabed et al. (2021) suggested that enhancements in greenery, sidewalk quality, and traffic management are essential for improving the livability of the streets. Kazi et al. (2023) concluded that environmental quality, safety, and availability of public services are critical factors that influence residents' perception of livability. Elsawy et al. (2019) applied the Appleyard study to find an inverse relationship between traffic volume and livability indicators using three types of streets based on traffic density.

These studies either evaluate the street livability of entire neighborhoods or derive findings from residents' perceptions of selected residential or commercial streets and often highlight the value of green spaces, shade, safety, and walkability. However, there's a gap in research specifically examining how residents perceive streets with integrated green spaces in Lahore's gated communities. Examining different street layouts that incorporate green areas, the findings could yield valuable and comparable insights, helping identify which street layouts are more effective in enhancing user satisfaction. Understanding the comparative relationship between street layouts with green spaces and street livability indices helps create more vibrant and sustainable neighborhoods for residents.

Research Methodology

Data Collection and Survey Instrument

The study used a mixed-methods design approach to fulfill its objectives. It employed concurrent design to analyze the livability of three residential streets with distinct green space layouts within gated communities in Lahore. The research design combined a literature review, field surveys, and questionnaire-based assessments. The process began with a detailed literature review to identify relevant livability indices and indicators that urban planning researchers, such as pedestrian realm, sense of safety, traffic calming, and robustness, as most frequently discussed. These indices guided the design of the questionnaire and observational checklist used for data collection.

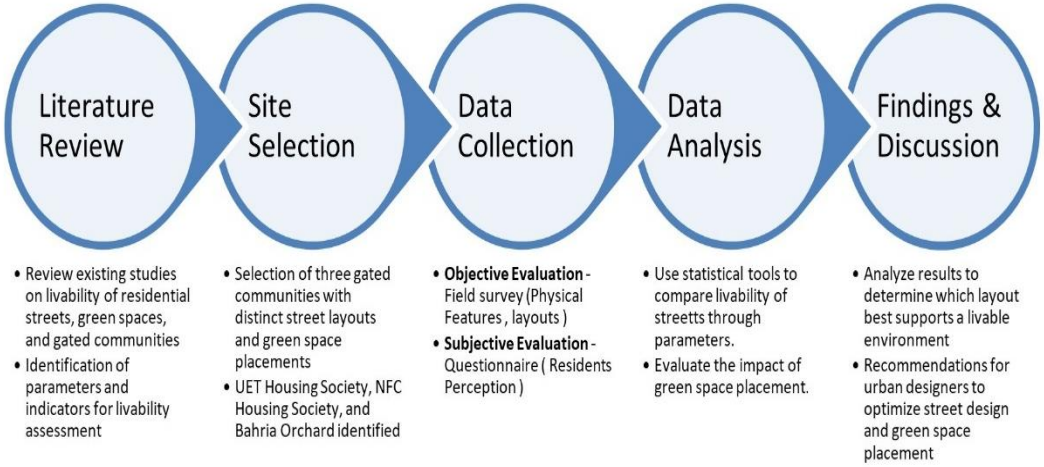

Figure 1 Theoretical Framework

Household Surveys

Household surveys were done for objective evaluation. These surveys involved observational assessments to document physical conditions such as street layout, vegetation, street width, pedestrian pathways, green space conditions, and overall street maintenance. Observations also focused on traffic flow, noise levels, and opportunities for social interaction. A comparative assessment was done to compare the impact of layout on streets' livability.

Questionnaires

Residents' subjective experiences and perceptions of livability were captured through a structured questionnaire, ensuring a mix of quantitative and qualitative responses. The responses were recorded from different age groups to ensure the representativeness and reliability of the findings. (Cronbach Cochran's formula was used to calculate the sample size for the survey. It calculated 75 houses in total based on the total population size. The face and content validity of the questionnaire was checked by experts. The reliability of the questionnaire was checked through Cronbach's Alpha using SPSS, which represented an internal consistency reliability coefficient (Cronbach's alpha =0.78). This coefficient shows that the questionnaire has a good construct and is highly reliable. SPSS was used to conduct statistical analysis of collected data and to evaluate the relationship between green space location within a street and residents' satisfaction with their living environment.

Site Selection

To conduct this research, residential streets from three middle-income gated communities, UET Housing Society, NFC Housing Society, and Bahria Orchard, are selected for their distinct street layouts, green space placement, and controlled environments. Each offers a different development style and range of amenities, making them ideal for exploring how design impacts livability factors like safety, comfort, and access to greenery.

- **Street A-NFC Housing Society Street:** A street that surrounds a green space in front of it. This street is closed at one end by a physical barrier to control access of vehicles into the street realm.
- **Street B- Bahria Orchard Street:** A street with green space at the rear of residences. The backyards of each house provide access to the green space through a light traffic road that connects all the houses from the rear. Narrow alleys placed at intervals of every two houses provide connectivity between the front and back streets.
- **Street C-UET Housing Society:** A street with green space attached to it at the end. A row of houses outlines both sides of the street. Though this street is the intermediate street of society with moderate traffic, it acts like a main artery that links it to the surrounding neighborhoods and their major circulation corridors.

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NFC Housing Society Street	Bahria Orchard Steet	UET Housing Society

Figure 2: Street maps and photos for the study area, Source: Google Earth, 2025, by Authors

Data Analysis

Objective Attributes:

The physical conditions of the three selected streets are evaluated through observations and interviews. Table 2 provides a comparative analysis of their physical characteristics, revealing the strengths and weaknesses of each street layout.

Table 2 Observational Assessments and Comparative Analysis of Livability of Residential Streets in Lahore (Objective Evaluation)

Livability Indices	Criteria	Indicators	Analysis of Streets					
			NFC Street (Green Space in front)	Eval.	**Bahria Orchard Street (Green Space at rear)**	Eval.	**UET Street (Green Space at the end)**	Eval.
Pedestrian Realm	Walkability & Comfort	Sidewalks	sidewalks along the green space	Poor	Wide and Comfortable	V.G	No defined sidewalks	N/A
		Landscape and Greenery	Abundance of trees and plants, No Hardscape	V.G	Landscape features- softscape and hardscape present in the green space	V.G	Minimal Trees and landscape elements present	Poor
		Paving Materials	No Pavement for sidewalk	N/A	Paved sidewalk along the green space	V.G	No Pavement for sidewalk	N/A
		Wheelchairs	No provision for wheelchair ramps	N/A	No ramps, but paved areas at road level allow the movement	Good	No provision for wheelchair ramps	N/A
		Pedestrian Crossings	No pedestrian Crossings	N/A	No pedestrian Crossings	N/A	No pedestrian Crossings	N/A
		Shading elements	large, canopied trees alongside walks, providing shade	V.G	A few trees and buildings shade the street	Poor	A few trees and buildings shade the street	Poor
		Cycling Lanes	No lanes, but safe to use for cycling	Good	No lanes, but safe to use for cycling	Good	No cycling lanes and unsafe	V. P
		Air pollution	Absence of smoke and dust particles, people's activities in green space and street	V.G	Absence of smoke and dust particles, people's activities in green space	V.G	Dust particles and smoke, vehicular movement, and people's activity were not observed	V.P

		Clean drinking water	No Installation	N/A	No Installation	N/A	No Installation	N/A
	Traffic Calming Measures	Traffic Speed	Low speed	Good	Low Speed	V.G	Medium Speed	Poor
		Speed Control Measures	Street bumps, Cul-de-sac, barrier, multiple turning points	V.G	Street bumps, a slight curve, Barriers	Good	Street bumps	Poor
		Streets Width	Narrow Street	V.G	Wide Street	Poor	Narrow Street	V.G
	Noise Control	Trees/Sound Barriers	Tall and large canopied trees are present in abundance along the street and in the houses	V.G	Low-height trees only at the rear of houses	Poor	Low-height trees at large intervals along the street	V. P
Sense of Place	Sense of Enclosure	Ratio of Building Height to Width	Building height is equal to the street width (human scale)	V.G	Building height is equal to the street width (human scale)	Poor	Building height is greater than street width (human scale)	V.G
		Street enclosure	Through Trees, Buildings, and layout	V.G	Felt through buildings	Poor	Through buildings and street width	Good
	Visual Stimulation	Archit ectural Style	Modern/ Diverse	Good	Modern/ Monotonous	V.G	Modern/ Diverse	Good
		Visual features	Tees, Green belts, Plants, Shrubs, Green space, Benches	Good	House facades, Pavement, plants, green space, Street lights	V.G	Green belts, Green Space	V.P
		Cleanliness & Maintenance	Clean streets and green belts, but no maintenance in the green space	Good	Well-maintained and clean streets and green spaces	V.G	Ill-maintained street and green space	V.P

	Sense of Attachment	Personal Experience/ Emotional Connection	Felt through people's activities on the street and their social connections	V.G	Felt through the maintenance and interaction of people in the green space	V.G	No sense of Attachment	V.P
	Sociability/Social Interaction	Street gathering nodes	Street bends, culd-e-sac, green space	V.G	Green Space, Paved Areas	Good	Green space is only for residents near the green space	V.P
		Seating Areas/Benches	Present in a green space	V.G	Present in a green space	V.G	Present in a green space	V.G
			Present on the street	V.G	Not present on the street	Poor	Not Present on the street	Poor
		Play Areas	Street and Green space act as a play space	V.G	Play Areas present in the green space	V.G	Play Area in green space	Good
		Traffic Control	Low traffic	V.G	Low Traffic	V.G	Medium Traffic	Poor
Sense of Safety and Security	Security	Visibility	Clear visibility, presence of terraces, doors, and windows	V.G	Clear visibility, presence of terraces, doors, and windows	V.G	Clear visibility, presence of terraces, doors, and windows	V.G
		Pedestrian Safety	Safe for elders and children	V.G	Safe for elders and children	V.G	Not Safe for children	V.P
		Natural surveillance	Highly observed by people	V.G	Partially observed by people	Good.	Vehicular traffic at small Intervals	V.G
		Street Lighting	Streetlights present	Poor	Well-lit at night	V.G	Streetlights present	Poor
		Security Cameras/Guards	No Security Guards, Cameras observed in individual houses	Poor	Security Guards and Individual Cameras	Good	Security Guards and Individual Cameras	Good
		Casual Interactions	Frequently observed	V.G	Sometimes Observed	Good	Not observed	V.P

	Safety & Mobility	Access	Easy Access through Walking and Car	V.G	Easy Access through Walking and Car	V.G	Easy Access by Car	Good
		Connectivity	Barriers & Cul-de-sac	V.G	Well-connected grid street, but less traffic	Poor	Well-connected grid street with continuous traffic	V.G
		Linkages	Permeable through one street	V.G	Permeable through the main road	Good	Permeable through several streets	V.P
	Legibility &Imageability	Street Layout	Support navigation	V.G	Support navigation	V.G	Doesn't support navigation	Poor
		Landmarks/Focal Points	Green Space	Poor	Entry Gate, Market Area, Squares	V.G	Water Tank, Small entry gate	Good
		Signage	Not Present	N/A	Present	V.G	Not Present	N/A
Robustness	Mixed-use Design	Recreational Facilities	Green space offers a Play area, sitting spaces, and rides	Good	Green space offers a Play area, jogging tracks, sitting spaces, a bird aviary, and rides	V.G	Green space provides a Play area, jogging tracks, sitting spaces, and rides	Good
		Parking facility	Along the green space	Good	Along the green space and outside the individual house	V.G	No Parking	V.P
		Street Pedestrian Users	Different ages and backgrounds	V.G	Different ages and backgrounds	V.G	Fewer users observed on the street	Poor
		Adaptability	Sports, Wedding Ceremonies, Horticultural Activity	V.G	No mixed use along the street	V.P	No mixed use along the street, Wedding Ceremonies in green space	Good
V.G=Very Good, V.P=Very Poor, N/A=Not Available; Likert Scale: V.G=4, Good=3,Poor=2,V.P=1,N/A=0								

The analysis, represented through bar graphs (Figs 3 and 4), highlights that NFC Housing Society Street, with its green space situated at the front, and Bahria Orchard Street, with green space positioned at the rear, stand out for livability, scoring 81% and 78% respectively. On the other hand, UET Housing Society Street, with its green space located at the end, falls significantly short of these benchmarks, scoring only 52%, indicating substantial room for improvement in fulfilling livability standards.

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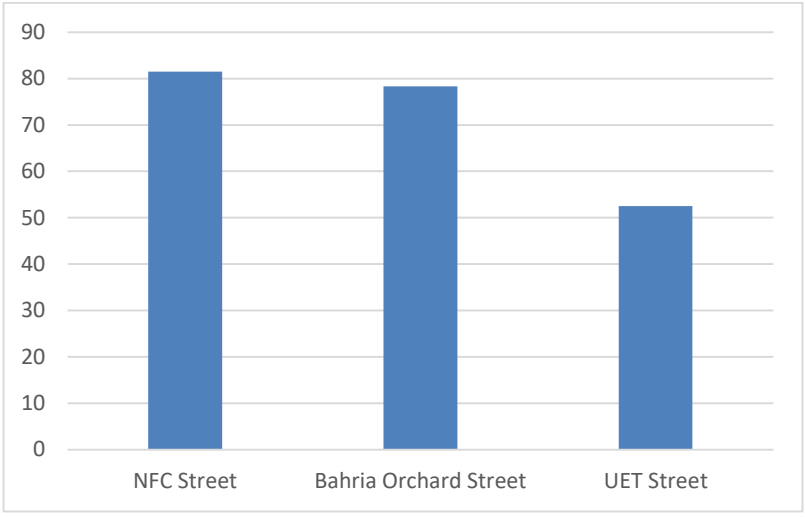

Figure 3 Total Percentage Evaluation of Livability Indices in each street

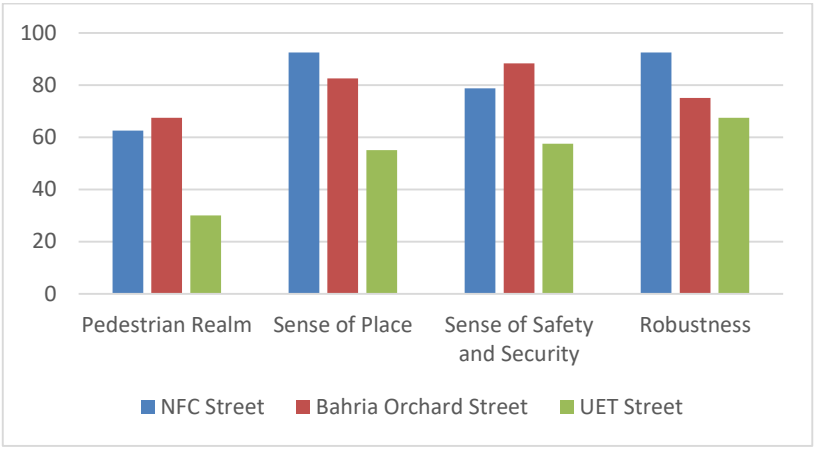

Figure 4 Percentage breakdown of Livability Indices in each street

The street layout in NFC, with its green space up front, reflects several urban qualities. Shaded by large, canopied trees, it offers a walkable and cyclist-friendly environment with clean air, though it lacks proper sidewalks and wheelchair access. Its enclosed layout, balanced proportions, street gathering nodes, natural surveillance, and low speed traffic promote social connection, a sense of belonging, and safety for all age groups. The green space remains versatile, supporting everything from casual gatherings to recreational activities, making it a vibrant part of the neighbourhood.

Bahria Orchard Street offers a safer and more pedestrian-friendly setting with its clean sidewalks, ample lighting, camera surveillance, and calm traffic. However, it falls slightly short in adaptability than NFC Street, with fewer mixed-use spaces and limited street-level interaction. Most social activity happens behind the street, which slightly reduces the sense of connection among residents.

UET Society Street struggles with poor pedestrian infrastructure and environmental discomfort, making it less welcoming. The lack of greenery, noise, and pollution affects its appeal, while limited lighting and unrestricted access create a sense of insecurity after dark. Despite good connectivity, it lacks the elements that foster emotional connection or a sense of safety.

Research findings indicate that the street layout and green space location have a direct impact on the physical conditions of the streets, and these physical conditions help to measure the livability of the streets.

Subjective Attributes

All the data variables of the four livability indices were converted into a Likert scale using SPSS. Four hypothesis statements were written to find the statistical comparison between these livability indices and the type of street layout. One-way ANOVA and Post Hoc test were conducted, and the overall score of each of the four livability indices against three streets separately was illustrated through a bar graph.

H1: There is a statistical difference in the pedestrian realm across the three types of streets with different locations of green spaces.

A one-way ANOVA was conducted to compare the effect of the street layout with varying locations

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of green spaces on the pedestrian realm through a set of twelve variables. A P-value of less than .05 was recorded, which indicates a statistical difference between indices and streets. Also, the post hoc test showed that the mean score of the pedestrian realm component for the street layout with green space at the rear was M= 2.48, SD=0.46. It was significantly different from the street layout with green space at the front, M= 2.06, SD=0.77, and the street layout with green space at the end, M= 1.73, SD=0.57, illustrated by the line graph shown in fig below. This reveals that the street that has green space at the rear shows more pedestrian realm than the streets that have green space at the front or the end.

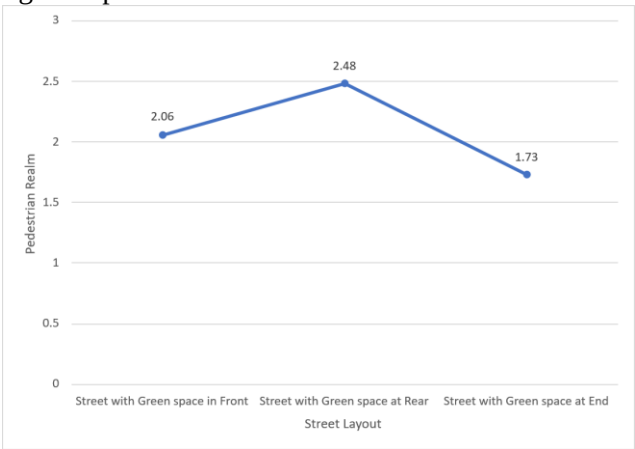

Figure 5 Illustrates a line graph for comparison between the street layout and the Pedestrian Realm,

H2: There is a statistical difference in the sense of place across the three types of streets with different locations of green spaces.

A set of four variables was included to measure the relation of sense of place with three street layouts. A P-value of less than .05 in the ANOVA test indicated the statistical difference between the three street layouts. Post-hoc test showed the Mean value of the sense of place component for street layout with green space at the end (M=2.40, S= 0.31) was significantly different from the mean value of the street layout with green space at the rear (M=2.87, S= 0.154) and street layout with green space in the front (M=2.40, S= 0.31), while there was no significant difference between street layout with green space in front and the one with green space at the rear, illustrated by the line graph shown in fig below.

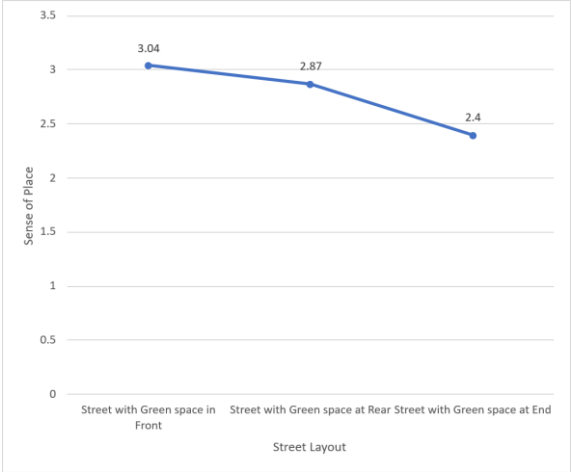

Figure 6 Illustrates a line graph for comparison between street layout and Sense of Place

H3: There is a statistical difference in the sense of safety and security across the three types of streets with different locations of green spaces.

To test this hypothesis, seven variables were analyzed. The results of a one-way ANOVA test revealed a P-value below 0.05, indicating a significant statistical difference in the sense of safety and security component among the three types of street layouts. Further analysis using a post-hoc test showed that the mean score of sense of safety and security for the streets with green spaces located at the rear was the highest (M = 3.50, SD = 0.69). This was recorded higher than streets with green spaces at the front (M = 3.02, SD = 1.03) and those with green spaces at the end (M = 2.54, SD = 0.66). (See Fig -) These findings suggest that street layouts with green spaces at the rear provide a stronger sense of safety and security compared to the other two streets.

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Figure 7 Illustrates a line graph for comparison between street layout and Sense of Safety and Security

H4: There is a statistical difference in robustness across the three types of streets with different locations of green spaces.

Robustness was assessed using six variables, and the ANOVA test results showed a significant impact of robustness across the three street layouts ($p < .01$). Post-hoc comparisons revealed that the mean robustness score for the street layout with green space at the front ($M = 3.13$, $SD = 0.49$) was notably higher than that of the layout with green space at the end ($M = 1.68$, $SD = 0.32$) and slightly higher than the street layout with green space at the end ($M = 1.68$, $SD = 0.32$) illustrated by a line graph shown in fig below These findings indicate that the street layout with green space at the front demonstrates greater robustness compared to the other two street layouts.

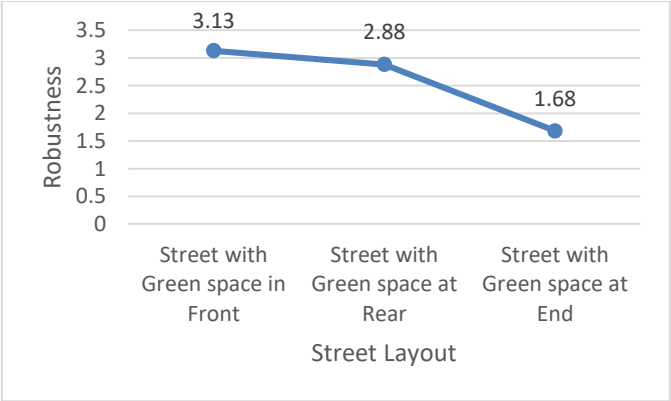

Figure 8 Illustrates a line graph for comparison between the street layout and Robustness

All the mean values of four livability indices derived from post-hoc tests across all three streets were added to find out which layout is best of all. The result showed a very marginal difference of 0.12 between street layout with green space at rear (M=2.93) and street layout with green space at front (M=2.81). However, the street layout with green space at the end (M=2.09) is significantly different from other street layouts, illustrated in fig 9 below.

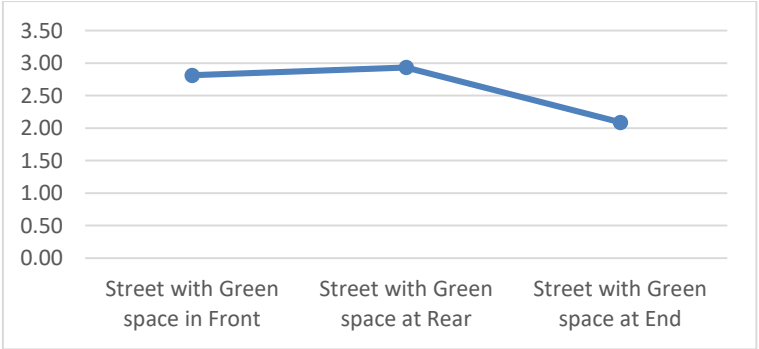

Figure 9 Illustrates line graph for comparison between street layout and Robustness. Source: Authors

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Conclusions and Implications

This study establishes a clear link between street livability and its layout. Objective evaluations based on observations and subjective assessments reflecting users' perceptions reveal that streets with green spaces at the front, such as NFC Street, exhibit a stronger sense of place and greater robustness compared to the other two layouts. Meanwhile, streets with green spaces at the rear, like Bahria Orchard Street, provide a better pedestrian realm than the other layouts. Overall, the findings indicate that the first two layouts; green spaces at the front and rear align more closely with livability criteria than the third layout, represented by UET Street, where green spaces are located at the end. The alignment between objective and subjective evaluations underscores the effectiveness of the livability indices used in this study.

This study reveals unique intangible qualities in streets where green spaces are positioned at the front, such as NFC street. These features give it a distinct character not found in the other two examples. The enclosed design, limited entry points, and the way the space encourages casual interactions and social gatherings all contribute to a stronger feeling of safety. People may also feel more secure here because the layout naturally supports passive observation by residents, what's often referred to as "eyes on the street." However, this sense of safety isn't absolute. The lack of adequate lighting, no visible security presence or surveillance systems, and poor visibility from surrounding areas can make the space feel less secure overall—especially when compared to the more comprehensively planned Bahria Orchard Street.

Similarly, while the NFC Street layout naturally supports walkability through its aesthetic appeal, physical and psychological comfort, and features like traffic calming and noise control, it scores lower in terms of pedestrian realm than Bahria Orchard Street. This is largely due to the absence of paved walkways and cycling lanes. Addressing these tangible shortcomings could transform NFC Street into the most livable of the three street layouts. Furthermore, the livability of the street with green space at the end (UET Street) can be improved by adding paved sidewalks, large, canopied trees, parking spaces, benches along streets, and cycling lanes. This will not only enhance its sense of safety and sense of place but also make it pedestrian-friendly and adaptable.

This study sheds light on the relatively overlooked idea of livability in the context of Pakistan's urban growth, with a focus on gated communities in Lahore. While international discourse increasingly emphasizes the importance of livable urban environments, local research continues to lag in examining how neighborhood design directly influences quality of life. The research calls attention to the need for more targeted studies that assess how uniform elements, particularly green spaces, impact people's experience of their streets. For instance, examining different street layouts within a single neighborhood, where residents share similar sociocultural backgrounds and the green infrastructure remains constant, could offer a clearer understanding of how spatial organization affects livability.

The study presents a practical approach to making urban neighborhoods more livable. It highlights how well-placed and well-maintained green spaces can boost safety, promote walking, support social connections, and offer flexible use. By linking these elements to broader sustainability goals, the study gives architects and planners not just ideas, but a workable model. It also stresses the importance of local governments in ensuring that green areas aren't just added, but thoughtfully equipped with lighting, street furniture, walkways, and safety measures. The results therefore have wider implications for community development and policymaking. This study acts as a bridge to educate interested parties about the concrete advantages of people-centered urban planning. The quality of life can be improved throughout the city when each neighborhood contributes to the public realm's enhancement.

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