Research Paper

Investigating the Factors Affecting the Success of Urban Spaces

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Abstract
This research assesses the determinants influencing the efficacy of a particular locale, specifically comparing a National Park endowed with historical significance, globally recognized, with another site, an Artificial Lake serving as a contemporary and burgeoning urban space, both situated in Gonbad-e Qabus, Golestan, Iran. The methodology employed involves a comparative study to gauge their respective levels of desirability. The primary objective of this investigation is to identify the factors contributing to the success of the Artificial Lake, despite its relatively limited historical attributes, in contrast to the National Garden, acknowledged as a world heritage site. Additionally, the identified challenges within these spaces are addressed, and solutions are proposed with active citizen participation. The research introduces novelty by concurrently investigating factors influencing the success of public spaces and comparing two categories - historical and contemporary. The sample size (n=383) was determined using Cochran's formula, comprising 184 male cases (48%) and 199 female cases (52%). Internal consistency of the questionnaire was confirmed through Cronbach's alpha coefficient. Employing a descriptive-analytic approach, data analysis utilized SPSS software (one-sample t-test) and LISREL software (second-order confirmatory factor analysis). The findings reveal a total success score of 82.63 for the Lakeside and 72.47 for the National Garden. Notably, the "safety and security" component in both spaces received the lowest satisfaction and quality scores. Conclusively, 81.2% of citizens express a preference for the Lakeside over the National Garden for their recreational activities.

Keywords: Urban space quality, Historical space, Contemporary space, Gonbad-e Qabus.

1. INTRODUCTION

In contemporary society, several societal shifts, including a decline in family size, increased divorce rates, and geographical dispersion due to educational and occupational pursuits, have contributed to a pervasive sense of loneliness among individuals. It is noteworthy that both personal attributes and neighborhood features play pivotal roles in shaping the experience of loneliness. The emergence of this societal landscape underscores the significance of well-conceived public spaces in fostering social connections, with parks, play areas, civic spaces, squares, and streets serving as potential conduits for meaningful interactions.

Within the urban context, the confluence of factors such as a fast-paced lifestyle and heightened urban stressors has amplified the need for access to nature and public open spaces. This need is anticipated to escalate as urbanization continues its upward trajectory, with approximately 70% of the global population expected to reside in urban areas within the next three decades. However, despite this growing demand, large cities today often fall short of providing an optimal living environment. Recent observations, particularly in densely urbanized regions, indicate a reduction in the quantity and degradation in the quality of public spaces (Bergefurt et al., 2019). Critically, the physical attributes of these spaces frequently fail to align with users' expectations, manifesting errors and

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deficiencies in design that hinder their efficacy in contributing to outdoor living (Turan et al., 2023).

Hence, communal and public spaces serve as essential components meeting fundamental human needs, and the size and purpose of these spaces exhibit a direct correlation with population growth. Throughout history, these communal spaces have not only been integral identifiers but also symbolic representations of the residents and the region. Their manifestations vary, ranging from open spaces in front of village houses to expansive urban squares such as Naghsh-e Jahan and San Marco squares, capable of accommodating a large population.

The success of these spaces is contingent on their ability to accommodate an increasing population in proportion to attendance, thereby fulfilling their role in enhancing residents' social lives. A dynamic and vibrant space, as underscored by White (1980: 17 & 18), is particularly conducive for single individuals and women. Notably, a high presence of women in a space signifies an urban environment with effective management catering to diverse needs.

William White emphasizes the unpredictable nature of people's behavior in urban spaces, asserting that the factor of "people's attendance in a space" surpasses all others in attracting individuals (Kashanijoo, 2010). Gel categorizes individuals' activities into three types: essential, selective, and social. Essential activities are deemed obligatory and occur independently of environmental qualities, while selective activities are voluntary and driven by individual preferences. The level of participation in a space is contingent upon the activity's nature and the social stimulation it offers (Gel, 2008).

Montgomery adds another layer to the discussion, identifying the key to urban space success as achieving a balance. Economic activities at various levels and layers are imperative for creating a thriving urban space. This exchange extends beyond commercial activities, encompassing social and cultural communication, emphasizing that true success lies in fostering a multifaceted engagement within these spaces (Cermona et al., 2008).

In historic Iranian cities, distinctive spaces like squares and tombs, deeply ingrained within the urban fabric, serve as symbolic representations of power and religious significance. Characterized by their substantial scale, these sites are pivotal in urban design, drawing people towards the city center. Their square configuration provides a high degree of flexibility, allowing for design interventions aligned with regional identity, respect for existing structures, and a contemporary understanding of space utilization. Such thoughtful design not only contributes to the city's identity but also transforms it

into a dynamic and luminous entity. Additionally, these spaces, when freed from vehicular traffic, enhance the urban environment and mitigate the risk of environmental degradation - a consideration integral to the planning of new cities.

In Gonbad-e Qabus, two prominent urban spaces exist, one situated downtown and the other at the city entrance. Despite the National Garden's rich historical identity, the Recreational Lake, located on the outskirts, has become the preferred destination for residents, resulting in a decline of urban activity in the downtown area. This study endeavors to elucidate the factors contributing to the relative failure of the historically significant downtown space in comparison to the flourishing newly constructed suburban space. The goal is to rejuvenate the downtown area by identifying key functional components and rectifying the deficiencies, ultimately transforming it into a thriving and successful urban space. Through a hierarchical analysis, this research aims to address the shortcomings of both spaces and propose improvements.

In general, the questions of this research are as follows:

1) What factors contribute significantly to the success of urban spaces?

2) Among the available urban spaces, which one is preferred by the citizens?

3) Is there a notable gender-based disparity in the perception of the "safety and security" factor, identified with the lowest satisfaction and quality scores?

4) Within each urban space, which demographic group exhibits a greater sense of safety and security?

2. LITERATURE REVIEW

This section provides a succinct overview of select studies examining the success of urban spaces. Sakip et al. (2015) conducted an in-depth analysis of the major factors influencing the success of parks in Indonesia, identifying dimensions such as accessibility and permeability, degree of comfort and mental image, usage and activity, and sociability. Their research, focused on six prominent Malaysian parks, pinpointed "accessibility and permeability" as the primary factor contributing to park success, with sociability, usage and activity following in descending order. The study suggests further exploration of sexual and age segregation in future research articles.

Marti et al. (2017) sought to identify successful squares using schematic and historical maps and local social networks. Their findings revealed a strong spatial correlation between the city's most successful squares and its historic central district. Additionally,

they observed commonalities among all successful squares in terms of their location within the urban network and proximity to the major axes of the city.

In a study by Ramlee et al. (2015), the formation of successful urban public spaces was explored through user perception surveys. The characteristics and impacts of successful spaces were elucidated, including stress alleviation, communication enhancement among users, improved city quality from a tourist's perspective, and the provision of essential services. The study underscored the necessity and vitality of public spaces in a city.

Jalalalddini and Oktay (2011) conducted a study on the streets of Cyprus, emphasizing the pivotal role of urban spaces, particularly streets, in preventing the exclusion of a significant population from society. They highlighted the importance of diverse activities and usages in urban spaces as vital contributors to their vitality.

Fleury Bahi et al. (2008) outlined factors influencing environmental satisfaction, including perception of the social environment, access to services, green space, and social relations. The study identified the highest correlation between the existence of public green spaces and environmental satisfaction.

Carr (1990) identified five factors influencing people's attendance in urban spaces: comfort, convenience, passive preoccupation, discovery, and aesthetics. Furthermore, the Public Spaces Project (PPS) identified four key elements - accessibility, comfort and mental image, usage and activity, and sociability - as integral components of a successful place (PPS, 2000).

1. **Accessibility:** This pertains to how the physical and visual aspects of a space are interconnected with their surroundings. A successful public space is both visible and easily accessible, with the physical elements influencing the overall accessibility and perceptibility of the space.

2. **Comfort and Mental Image:** The comfort and aesthetic appeal of a place are fundamental to its success. Creating a desirable image involves considerations such as security, cleanliness, the architectural texture of nearby buildings, and the distinct personality of the space.

3. **Usages and Activities:** Ongoing activities within a space constitute its foundational elements, attracting people and endowing the space with unique and exceptional features. The variety and vibrancy of activities contribute significantly to the success of the space.

4. **Sociability:** A space with a sociable quality not only distances itself from unpleasantness but also fosters a sense of community. People meeting friends, feeling at ease with strangers, and developing a deeper connection with the place contribute to its success (PPS, 2000).

In the context of this research, the paper specifically utilizes the components of access, safety and security, aesthetics, furniture and lighting, sociability, and usage and activity. By comparing two distinct spaces, the study aims to measure and identify factors influencing the success of one space over another, with the ultimate goal of implementing these insights to enhance and design public spaces more effectively.

3. THEORETICAL FRAMEWORK

3.1. Human, Urban Spaces and Behaviour

The connection between individuals and their urban environment is profound, influencing essential aspects of their lives. Upon closer examination of the city, the focal point of a neighborhood and its associated amenities reflects the aspirations of its residents to enhance their surroundings, acting as a catalyst for proactive engagement and community involvement (Razavizadeh et al., 2015: 54). The intrinsic link between people and public spaces is significant, as these spaces become a continuous backdrop to human activities and experiences. The pursuit of an improved quality of life has prompted a heightened focus on the design and structure of public spaces. However, the realization of this aspiration is not always straightforward, as evidenced by the contrasting influences of modernist and post-modernist architectural movements (Aghostin-Sangar, 2007:16).

The intricacies of human cognition and emotions are encapsulated in terms such as "feel" and "experience." To comprehend how the environment shapes individuals' feelings and experiences, it becomes imperative to delve into the physiological and psychological processes at play. A thorough understanding of these processes allows built environment professionals and public authorities to craft environments that are genuinely 'humanistic,' attuned to the nuanced ways in which the environment impacts human behavior (Aghostin-Sangar, 2007:17).

3.2. Human Presence in Urban Spaces

Urban spaces serve as the optimal setting for the observation and analysis of human behavioral interactions. These spaces, characterized by their accessibility to individuals both physically and visually, are public arenas that facilitate a myriad of

activities. Researchers have diligently explored pedestrian activities and human behavior within these spaces, recognizing their pivotal role in enhancing the overall quality of urban environments. The literature in design and planning has extensively emphasized the multifaceted importance of public spaces, encompassing socio-cultural and health-related dimensions (Razavizadeh et al., 2015:54).

Jan Gehl's perspective sheds light on the diverse reasons for human presence in urban spaces, categorizing them into three distinct types:

A) **Necessary Activities:** These are essential tasks such as commuting to school or work, shopping, or waiting for public transportation, where participants have little to no choice.

B) **Optional Activities:** These activities occur when time and location permit, and favorable weather and surroundings invite participation. Examples include taking a walk for fresh air, stopping for coffee on a street, or simply people-watching.

C) **Social Activities:** Dependent on the presence of others in public spaces, social activities encompass communal engagements and passive interactions, such as observing and hearing others (Gehl, 1987: 9-11).

3.3. Successful urban spaces

Understanding why certain places thrive socially while others may not is a pivotal inquiry that can unveil the intricate dynamics of local social interactions and shed light on the factors influencing the preferences for specific spaces. Traditionally, exploring these preferences relied on quantitative and qualitative field studies. However, in the age of abundant online information, the identification of preferred spaces has become more accessible, enabling a detailed analysis of their characteristics. This shift facilitates valuable insights for future decision-making processes concerning urban systems (Agryzkov, Martí, Tortosa, & Vicent, 2015; Calabrese, Ferrari, & Blondel, 2014; Ruíz Sánchez, 2012). Delving into the most successful public spaces within a city offers an avenue for investigating their physical configurations, providing essential clues about what aspects of public spaces resonate with the local community (Martí, et al., 2017:66).

Given the diverse nature of a city's open spaces in terms of size, features, and shape, this study adopts a comparative approach, examining two distinct public places with a focus on historical aspects, people presence, urban vitality, and overall success in those areas.

The success of urban spaces is intricately tied to their use and the presence of human beings. Architectural and urban planning should foster social interactions and unity among people, yet contemporary urban spaces often witness a decline in social participation and community relations (Behzadfar, 2013). In this paper, the term "successful" aligns with the definitions provided by scholars like Jacobs (1995), Gehl, Svarre, Press, and Steenhard (2013), Carmona et al. (2010), Sircus (2001), Lang (2005), among others. Success denotes livable, sociable, and highly frequented public spaces, indicating the quality of these spaces through attributes such as attractiveness, animatedness, accessibility, comfort, liveliness, and safety. A successful place actively engages individuals in an emotional experience, conveying purpose and narrative (Sircus, 2001).

The proximity of urban spaces to main roads significantly influences their evaluation, and the incorporation of green infrastructure in urban spaces emerges as a key feature impacting well-being (Adams, 2014). For adolescents, insecurities and negative experiences strongly influence their utilization of public spaces (Höglhammer et al., 2018). Accessibility, the quality of vegetation, and the overall living context play pivotal roles in determining residents' satisfaction levels with urban green spaces (Zhang et al., 2015).

4. MATERIALS AND METHODS

4.1. The case study

The research was conducted in Gonbad-e Qabus, the principal city of the Gonbad-e Qabus district, covering an expanse of 2059 hectares in the northeastern region of Golestan province, Iran. Bounded by Turkmenistan to the north, Kalaleh city to the east, and Aliabad, Gorgan, and Aq Qala cities to the south and west, Gonbad-e Qabus stands as a strategic hub in the region. According to the 2016 census, the estimated population of the city is 155,910. Notably, Gonbad-e Qabus is renowned for hosting the world's tallest brick tower, Qabus Tower, constructed in the 11th century AD (Lotfi & Mohammadi, 2012).

Designed in adherence to urban planning principles with a distinctive checkered pattern, the city is situated between two prominent rivers, Chehel Chay and Gorgan. Two key focal points of the city, the National Garden and the Recreational Lake, serve as dominant sites and form the primary focus of this research (Fig. 1).

The selection of the National Garden and the Recreational Lake for this study was based on the following reasons:

Different locations: (in the city center/ in the downtown, in the suburb of the city/at the entrance of the city)

Different construction period: (a historically valuable urban space, a contemporary urban space)

4.1.1. The National Garden

The National Garden in Gonbad-e Qabus stands as a significant historical and architectural marvel, contributing profoundly to the city's identity. Constructed in the year 397 AH (1007 AD), this monumental tower soars to a height of more than 52 meters, positioned atop a 10-meter artificial hill crafted during the reign of Qabus Ibn Voshmgir. Serving a dual role as both a tomb tower and a victory tower (though scholars differ on its primary function), Gonbad-e Qabus represents an enduring testament to

Iranian architecture, with over a thousand years of existence. The monument has undergone several rounds of restoration, with the most notable repair conducted in the 40th S.H. (1970 AD).

Gonbad-e Qabus holds esteemed recognition, having been designated a national monument of Iran on January 6, 1932 (No. 86). Further elevating its status, the site received UNESCO World Heritage recognition at the 36th UNESCO Conference in 2012. The National Garden, with its rich historical significance and global acclaim, serves as a point of pride for the city, embodying qualities that extend beyond the local context. As a historical, identifying, national, and tourist site, it plays a crucial role in shaping the cultural and touristic narrative of Gonbad-e Qabus on a global scale.
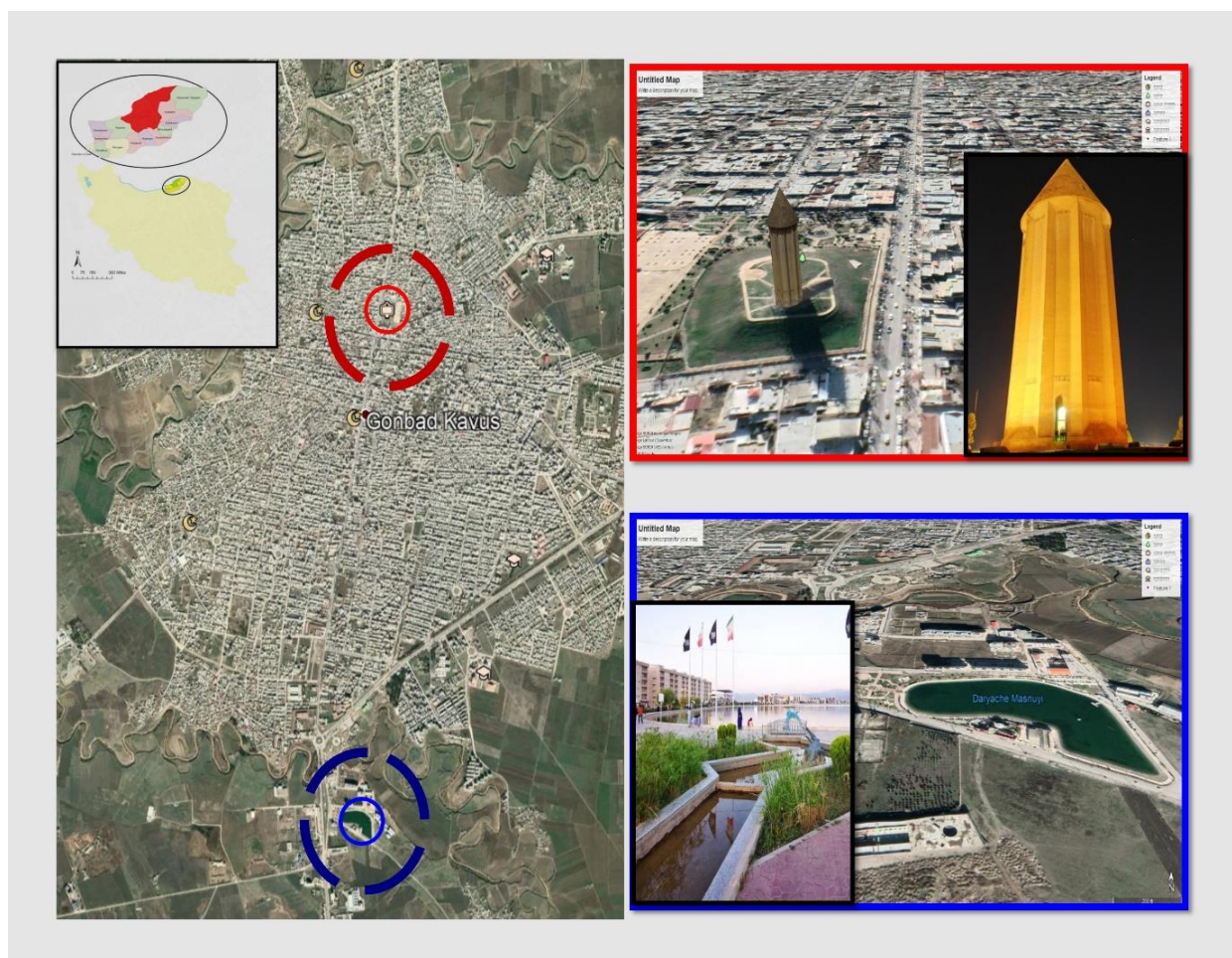

Fig 1. The Cognitive Map

4.2. Method

In terms of epistemology, our research employs a quantitative approach utilizing SPSS software for one-sample t-test and LISREL software for second-order confirmatory factor analysis. The overarching methodological strategy involves a quantitative comparison of two distinct spaces. This study adopts a descriptive-analytical and survey research design, with data collection encompassing both documentary and field methods.

Sampling was conducted in August-September 2020, incorporating both in-person and absentee methods to gather responses from residents of Gonbad-e Qabus. Employing Cochran's formula in consideration of the population of Gonbad-e Qabus, a sample size of 383 individuals was determined.

The data analysis phase involved the utilization of SPSS software for independent sample t-test, one-

sample t-test, and alpha reliability calculations. Additionally, LISREL software was employed for second-order confirmatory factor analysis, allowing for a comprehensive examination of the factors influencing the success of the two public spaces under consideration.

5. FINDINGS

Among the 383 participants in the study, 48% of the respondents identified as male, while 52% were female. In terms of marital status, 66.3% were single, and 33.7% were married. Notably, a significant majority, 83% of the participants, expressed a preference for the Recreational Lake over the National Garden. Additional detailed results are provided in Table 1.
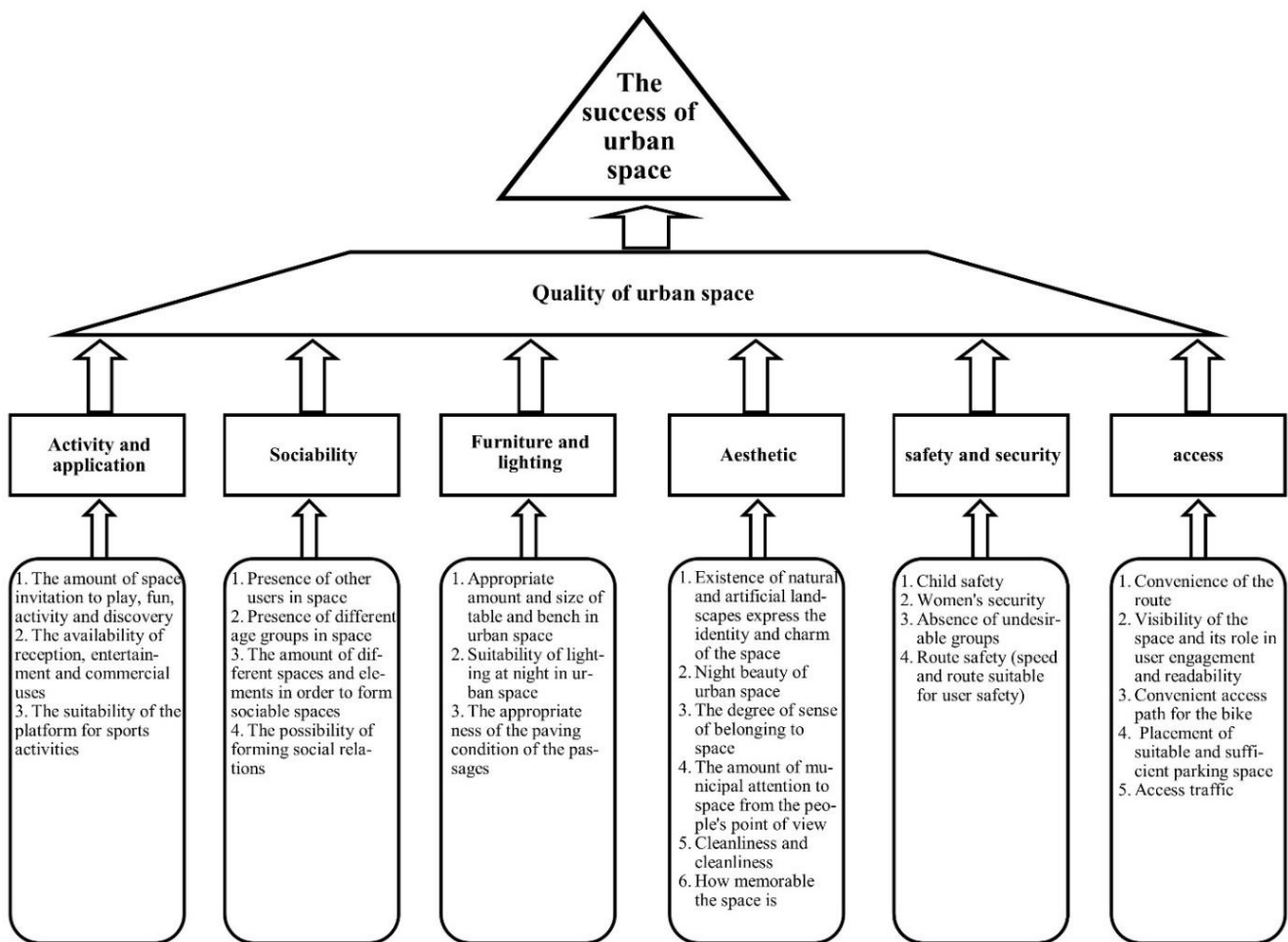

Fig 2. Conceptual model of research

6. ANALYSIS OF FINDINGS

6.1. Security Distinction between Men and Women in the National Garden

In Table 2, the significance (sig.) of Levene's test is determined to be 0.329, which exceeds the significance level (α=0.05). Consequently, the assumption of equal variances is accepted, indicating that the variances of independent groups of men and women are statistically equal. This condition validates the application of the t-test for the variables outlined in the first row.

The hypothesis posits that the perceived sense of security in the National Park differs between men and women. The obtained sig. value, being less than 0.05, allows for the rejection of the null hypothesis (H0) at a 99% confidence level, thereby accepting the alternative hypothesis (H1). This result signifies that there is a significant difference in the perceived security between men and women. Both the upper and lower limits are positive, indicating that the average security felt in the National Garden by men surpasses that of women (Table 2).

6.2. Security Distinction between Men and Women in the Recreational Lake

Referring to Table 3, the assumption of equal variances is upheld, signified by Levene's test yielding a significance (sig.) of 0.842, which exceeds the predetermined significance level (α=0.05). This acceptance indicates that the variances of independent groups of men and women are statistically equal, allowing for the consideration of variables in the first row, where equal variances are assumed.

The hypothesis under scrutiny posits that the perceived sense of security in the Lake differs between men and women. As per the table, the sig. value falls below 0.05, granting grounds to reject the null hypothesis (H0) at a 99% confidence level and, consequently, affirm the alternative hypothesis (H1). This outcome signifies a notable difference in the perceived security between men and women at the Lake. Both the upper and lower limits are positive, indicating that the average security felt by men in the Lake exceeds that of women (Table 3).

Table 1. Research data

age	Percentage	job	percentage
0-20	18.5	Employed	38.4
20-30	50.4	Unemployed	3.4
30-42	14.9	student	51.4
42 and up	16.2	housewife	2.6
		other	4.2

Table 2. Independent Samples Test

Security of National garden	Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Equal variances assumed	.955	.329	5.989	381	.000	.51131	.08538	.34344	.67918
Equal variances not assumed			5.962	367.481	.000	.51131	.08576	.34267	.67995

Table 3. independent sample test

Security of Artificial Lake	Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Equal variances assumed	.040	.842	3.699	381	.000	.30724	.08307	.14391	.47057
Equal variances not assumed			3.699	378.599	.000	.30724	.08307	.14390	.47058

6.3. The Score and Average of Each Indicator and the Quality of Urban Space

The evaluation of each sub-criterion (accessibility, "safety and security," aesthetics, "furniture and lighting," sociability, "usages and activity") is based on a ranking scale from one to six, with the total score representing the main component as presented in Table. The Recreational Lake outperformed the National Garden in terms of accessibility, including factors such as route ease, parking, and route legibility.

Concerning "safety and security" (encompassing the feeling of security for all age groups and genders, as well as the safety of roads and the designated space), both urban spaces exhibited nearly equal performance, with low scores compared to the total score. The mean aesthetic score for the lake, incorporating elements such as water features and attractive usages, surpassed the average and exceeded the score of the National Garden, a World Heritage site. Notably, the National Garden's mean score in the aesthetic dimension fell below the average, a point of consideration given its heritage status.

In the "furniture and lighting" category (evaluating the amount of light per unit area, quality and quantity of furniture such as benches, and the suitability of public space flooring), the National Garden's mean score was below average, while the Lake scored higher than the mean. Specifically, the average lighting index for the National Garden and the Recreational Lake was 2.8 and 3.2, respectively, indicating poor lighting in the National Garden and acceptable lighting in the Lake.

Regarding sociability and the power to attract people, both the National Garden and the Lake achieved average scores of 2.93 and 3.15, respectively. The most significant difference emerged in the "usage and activity" dimension, where the National Garden received a very low mean score of 2.5, while the Recreational Lake scored an average of 3.51, suggesting high flexibility in activities and usages, along with the presence of attractive elements in the Recreational Lake compared to the National Garden.

Finally, the average score for the final component, representing the quality of urban space, was 2.78 for the National Garden and 3.21 for the Recreational Lake. In the National Garden, the average score for all components, as well as the main component, was below average. In contrast, the average score for all components except the "safety and security" dimension, as well as the main component, in the Recreational Lake, was above average, providing a comprehensive overview as illustrated in Table 4.

6.4. The One-Sample T-Test for Each Space

The one-sample t-test is employed to substantiate the significance of the difference between the average score of each dimension and the main component of the urban spaces, specifically the National Garden and the Lake. Examining the tables, it is evident that the sig value for most components falls below 0.05, with the exception of the "furniture and lighting" and sociability dimensions for the National Garden, which are approximately equal to the average. This outcome aligns with the established hypothesis.

Table 4. Score and Average of Indicators in the Total Quality of Urban Space

Artificial Lake		National garden (Ghabos tower)		Area
	Total score		Total score	Access
	16.36(25)		13.1(25)	
	Average satisfaction		Average satisfaction	
	3.27(5)		2.62(5)	
	Total score		Total score	Security
	13.56(25)		13.67(25)	
	Average satisfaction		Average satisfaction	
	2.71(5)		2.73(5)	

Artificial Lake			National garden (Ghabos tower)			Area
	Total score	16.36(25)		Total score	13.1(25)	Access
	Average satisfaction	3.27(5)		Average satisfaction	2.62(5)	
	Total score	18.88(30)		Total score	17.36(30)	Aesthetic
	Average satisfaction	3.14(5)		Average satisfaction	2.89(5)	
	Total score	9.46(15)		Total score	8.8(15)	lighting
	Average	3.15(5)		Average	2.93(15)	
	Total score	14.04(20)		Total score	11.75(20)	Sociability
	Average	3.15(5)		Average	2.93(5)	
	Total score	10.33(15)		Total score	7.79(15)	Activity
	Average	3.51(5)		Average	2.5(5)	
3.2(5)	Average	82.63(130) Score	2.78(5)	Average	72.47(130) Score	Total

Table 5. The One-Sample T-Test for the National Garden

	Test Value = 3				95% Confidence Interval of the Difference	
	t	df	Sig. (2-tailed)	Mean Difference	Lower	Upper
Access	-9.070	382	.000	-.38590	-.4696	-.3022
Security	-6.035	382	.000	-.26893	-.3565	-.1813
Aesthetic	-2.350	382	.019	-.11140	-.2046	-.0182
lighting	-1.505	382	.133	-.07398	-.1706	.0226
Sociability	-1.419	382	.157	-.06723	-.1604	.0259
Activity	-8.013	382	.000	-.40557	-.5051	-.3061
Quality if National Garden	-5.814	382	.000	-.21884	-.2928	-.1448

6.5. The Second-order Confirmatory Factor Analysis

To assess the reliability of the model and validate the conceptual model using the research data, various general fitting indices, encompassing both absolute and incremental indices, were employed. In the second-order six-factor model, the chi-square value of the degree of freedom was notably favorable, standing at 2.7 for the National Garden items and 2.02 for the Recreational Lake items. The absolute index, calculated at 0.067 and 0.066 for the National Garden and Recreational Lake items, respectively, was found to be within the desirable range below 0.08. Additional fitting indicators are detailed in Table 7, providing a comprehensive overview of the model's reliability and alignment with the research data.

The final pattern encompasses six dimensions, namely accessibility, "safety and security," aesthetics, "furniture and lighting," sociability, and "usage and activity," collectively considered as factors determining the quality of urban space. Confirmatory factor analysis using LISREL software was employed to derive factor loads and investigate the confirmation of factors obtained from these dimensions.

All components and items were confirmed as factors determining the quality of urban space. The T-values for all items and components exceed 1.96, with the minimum T-value being 6.18 and 5.17 for the National Garden and the Recreational Lake, respectively, both falling within the accessibility dimension.

In the National Garden, the "furniture and lighting" (0.9) and "safety and security" (0.68) dimensions exhibit the highest and lowest factor loads, respectively. Notably, the amount of light at night (0.96) is identified as the most crucial item concerning lighting, while the item "women's security" (0.98) holds the highest regression weight among the National Garden items.

For the Recreational Lake, the "activity and usage" dimension (0.96) carries the highest regression weight, signifying its utmost importance. Conversely, the "safety and security" dimension (0.58) has the lowest factor load among the dimensions of the Recreational Lake. The most critical item in the "usage and activity" component is the "suitability of space for various activities such as exercise" (0.87). Additionally, the item "women's safety" (0.98) boasts the highest regression weight among all items of the Recreational Lake, residing within the "safety and security" dimension, as detailed in Table 8.

The comprehensive assessment of the strengths and weaknesses of the mentioned spaces involved interviewing and surveying the local populace. The aim was to gather insights from the people of the region and propose solutions for enhancing urban spaces or addressing their weaknesses. Citizen participation was a foundational aspect of this research, ensuring that the final solutions align with the needs and preferences of urban space users. A total of 294 individuals actively participated in the survey, contributing valuable insights and feedback.

The distribution of comments across different dimensions is as follows:

- Accessibility Dimension: 21 comments (7%)
- Aesthetics and Lighting Dimension: 84 suggestions, comments, or criticisms (28%), with a notable emphasis on lighting.
- Security Dimension: 112 comments (38%), with a specific emphasis on women's security.
- Sociability and Usage Dimension: 77 comments (26%).

Table 6. The One-Sample T-Test for the Recreational Lake

	Test Value = 3				95% Confidence Interval of the Difference	
	t	df	Sig. (2-tailed)	Mean Difference	Lower	Upper
Access	7.081	382	.000	.27728	.2003	.3543
Security	-6.722	382	.000	-.28355	-.3665	-.2006
Aesthetic	3.488	382	.001	.14708	.0642	.2300
lighting	3.261	382	.001	.15318	.0608	.2455
Sociability	12.628	382	.000	.50914	.4299	.5884
Activity	9.570	382	.000	.44648	.3547	.5382
Quality if Recreational Lake	6.067	382	.000	.20827	.1408	.2758

Table 7. Fitting Table

RMR	IFI	NFI	(X^2)/DF	DF	Chi-square	GFI	RMSEA	CFI	Fit indicators
0.089	0.97	0.94	2.07	293	607.96	0.91	0.067	0.96	National Garden
0.085	0.96	0.93	2.02	293	591.86	0.91	0.066	0.96	Artificial Lake
Close to zero	n>0.9	n>0.9	n<3			n>0.9	n<0.08	n>0.9	Required limit

Table 8. Factor Analysis People's Participation

Artificial Lake					National garden (Ghabos tower)					Item	Area
T_Value	T_Value	Estimate	Standard solution	Estimate	T_Value	T_Value	Estimate	Standard solution	Estimate		
5.79		0.84	0.48	0.50	6.77		0.76	0.51	0.61	1	Access
	5.19		0.56	0.66		6.18		0.57	0.69	2	
	5.17		0.56	0.78		6.91		0.71	0.88	3	
	5.49		0.65	0.74		6.90		0.71	0.80	4	
	4.85		0.49	0.51		6.64		0.62	0.72	5	
7.22		0.58	0.72	0.75	8.75		0.68	0.76	0.87	6	Security
	9.91		0.76	0.89		11.56		0.82	0.98	7	
	9.32		0.70	0.73		9.75		0.68	0.74	8	
	7.63		0.56	0.69		8.01		0.56	0.69	9	
	7.31		0.54	0.61		6.92		0.48	0.54	10	
10.44		0.88	0.69	0.78	11.26		0.88	0.74	0.88	11	Aesthetic
	10.67		0.77	0.87		11.25		0.75	0.96	12	
	10.40		0.75	0.83		11.07		0.74	0.89	13	
	9.01		0.64	0.73		10.86		0.73	0.89	14	
	8.37		0.59	0.67		10.34		0.69	0.74	15	
	8.93		0.64	0.75		8.70		0.59	0.80	16	
8.75		0.87	0.61	0.68	9.36		0.9	0.63	0.68	17	lighting
	8.60		0.74	0.88		9.28		0.78	0.96	18	
	8.87		0.78	0.87		8.88		0.73	0.86	19	
9.97		0.93	0.65	0.67	10.20		0.86	0.71	0.76	20	Sociability
	8.25		0.64	0.63		9.36		0.68	0.78	21	
	8.74		0.68	0.80		9.94		0.73	0.83	22	
	6.99		0.52	0.65		9.97		0.73	0.90	23	
10.49		0.96	0.67	0.79	11.25		0.89	0.76	0.85	24	Activity
	8.64		0.65	0.72		8.61		0.61	0.76	25	
	9.75		0.75	0.87		10.22		0.72	0.93	26	

Pictures

7. DISCUSSION

The research introduces novelty through its dual focus on investigating the factors influencing the success of public spaces while simultaneously comparing two distinct types of public spaces - historical and contemporary. The findings, as revealed by the independent sample t-test, indicate that men perceive a higher level of security compared to women in both the National Garden and the Artificial Lake. This aligns with Yavuz et al.'s findings, which highlighted that women often experience more fear of crime than men (Yavuz & Welch, 2010).

In this study, the quality and success of urban spaces are conceptualized as a second-order factor encompassing six components: accessibility, "safety and security," aesthetics, "furniture and lighting," sociability, and "activity and application." The fit indices, including the absolute index and incremental index of fit, suggest that these six components accurately represent the construction of quality and success in urban spaces for both the National Garden and the Artificial Lake. Consequently, the main hypothesis - that the success and quality of urban space form a second-order factor comprising these six components - is confirmed.

Further analysis reveals varying degrees of influence among the components in each space. In the National Garden, the components with the most significant relationships with the quality and success of urban space are furniture, "activity and application," aesthetics, sociability, accessibility, and "safety and security," respectively. In contrast, the Artificial Lake exhibits a different pattern, with "activity and application," sociability, aesthetics, furniture, accessibility, and "safety and security" having the greatest impact on the quality and success of urban space, respectively.

Notably, the predictive power of individual components also differs between the two spaces. In the National Garden, furniture emerges as the most influential predictor, while in the Artificial Lake, "activity and application" takes precedence. This study contributes by examining three components (accessibility, "application and activity," and sociability) previously explored in research by Sakip, Akhir, and Omar (2015) and Heng and Chan (2000). Additionally, it introduces the evaluation of "safety and security," "furniture and lighting," and aesthetics as integral components of the success and quality of urban space.

The results of the one-sample t-test highlight significant differences between the test value (3) and the averages of each component in the quality of urban spaces and the overall dimension of quality and success of urban spaces, with a few exceptions in the Artificial Lake. Notably, for most components in the National Garden, the averages fall below the test value, while in the Artificial Lake, averages (except for the "safety and security" component) exceed the test value (3).

In terms of accessibility, the Artificial Lake outperforms the National Garden, particularly in items such as "suitable cycling routes for accessing urban space" and "urban space parking," which received more favorable attention.

Regarding "safety and security," both locations show dissatisfaction among respondents concerning the presence of undesirable groups. However, the number of respondents expressing dissatisfaction with this issue is higher in the National Garden compared to the Artificial Lake.

In both places, satisfaction levels regarding aesthetics and "furniture and lighting" components are moderate. The "activity and application" dimension, influenced by factors like the availability of recreational uses and suitability for sports activities, favors the Artificial Lake. This suggests that the Artificial Lake is more successful in attracting diverse age groups and fostering sociability, contributing to a higher overall presence of people.

The strengths identified in the Artificial Lake have likely played a role in its success, showcasing a higher level of satisfaction across various components compared to the National Garden.

In the National Garden, the components of sociability, "furniture and lighting," aesthetics, "safety and security," "activity and application," and accessibility have the highest average ratings, respectively. However, issues related to insufficient attention to sports activities and infrastructure, as well as challenges in controlling undesirable individuals within the urban space, have led to a reduction in its quality, decreased satisfaction among people, and impacted its overall success. Addressing these shortcomings, particularly focusing on sports-related activities and infrastructure, could enhance the quality of the National Garden.

For the National Garden to attract more tourists and visitors, increased attention should be given to providing adequate parking spaces. The identified weaknesses suggest opportunities for improvement in both infrastructure and safety measures, ultimately contributing to a more successful urban space.

Conversely, in the Artificial Lake, the components of sociability, "activity and application," accessibility, aesthetics, furniture, and "safety and security" have the highest average ratings, respectively. The primary area for improvement involves controlling undesirable groups within the space, as addressing this issue could significantly enhance the overall quality of the location and increase satisfaction levels among visitors.

The Artificial Lake's success is attributed to its focus on reception uses, attention to sports activities and infrastructure, and the provision of sufficient parking spaces. These factors contribute to making the Artificial Lake more successful than the National Garden, as reflected in increased people's desire to be present in this space.

As Kostrzewska points out, the desirable features of active public spaces are as follows: their proximity to the place of residence (2) connecting them to a cohesive and integrated system (3) existence of bicycle stands and parking spaces (4) variety of architecture and facilities for attracting a wide range of users (Kostrzewska, 2017).

The comparative analysis reveals that weaknesses identified in the National Garden are recognized as strengths in the Artificial Lake, contributing to the superiority of the latter. While both spaces are man-made, the critical distinction lies in their historical context. The National Garden represents a historical setting, resonating with the purity of ancestral heritage. Although physically intact, it has struggled to evolve functionally, remaining tethered to the past

and failing to adapt to the rapid changes of the present era. As emphasized by Ramlee et al., urban public spaces should symbolize the contemporary city, aligning with the dynamic needs of the modern populace (Ramlee, Omar, Yunus, & Samadi, 2015).

In contrast, the Artificial Lake embodies a present-day character. Despite lacking the historical significance and value of the National Garden, it successfully addresses the spiritual and psychological needs of contemporary individuals. This dichotomy highlights the importance of creating third places, like the Artificial Lake, which is a key objective for urban planners. Such spaces aim to facilitate social interactions and provide individuals with alternatives to formal, official environments.

To enhance the success of the National Garden, a shift is required in its environmental characteristics to align more closely with the attributes of third places in the present age. This involves incorporating elements that foster contemporary social interactions and resonate with the preferences and lifestyle of today's urban residents. The challenge lies in preserving the historical essence while adapting to the evolving needs of the community.

The results underscore the importance of adapting culturally and historically significant places to the current needs of society. While old places hold cultural and historical significance, ensuring their relevance and functionality in the present age is crucial. The study suggests that these places can not only coexist with contemporary artificial spaces but may even outperform them if appropriately adapted. Bolici's observation that older places may be underutilized due to a lack of alignment with modern needs resonates with this finding (Bolici, Gambaro, & Giordano, 2017).

The satisfaction of citizens with artificial spaces is attributed to their alignment with the current generation's needs. Enhancing the National Garden's quality and increasing citizen satisfaction requires measures to rejuvenate its historical charm. Regeneration programs, as emphasized by Zagroba et al., play a vital role in preserving or revitalizing attractive sites by striking a balance between economic, social factors, and cultural heritage (Zagroba, Szczepańska, & Senetra, 2020). Introducing new activities, especially those related to sports, emerges as a key strategy. The success of the Artificial Lake, notably due to the presence of sports uses and infrastructure like cycling routes, aligns with findings by Barghchi et al., highlighting the role of sports facilities in urban regeneration (Barghchi, Omar, & Aman, 2009).

The study emphasizes that while historical places hold inherent value, proactive measures by city management are essential for their revitalization and continuous improvement in quality. The authors suggest that such efforts not only enhance the local and national appeal of these places but can also elevate their status globally.

To attract more visitors and users, city managers, especially those overseeing the National Garden, are encouraged to invest in various dimensions of the place, improve infrastructure, and implement auxiliary measures. The study advocates for increased investment as a means to enhance the overall experience of urban places. Additionally, the authors propose that providing information through means such as leaflets, information desks, tour guides, and websites can significantly contribute to the success of urban places. Well-informed visitors are likely to have a more enriching experience and may contribute positively to the place's success.

Furthermore, fostering collaboration between place users and the private sector is highlighted as a strategy to protect the environment of urban places and improve their overall quality. This participatory approach can lead to shared responsibility for maintaining and enhancing the attractiveness of these spaces. The study posits that creating conditions conducive to collaboration will not only improve the physical aspects of urban places but also foster a sense of attachment among users. Ultimately, the authors argue that such comprehensive measures can result in a positive cycle where visitors are drawn to urban places repeatedly, contributing to sustained success and vibrancy.

The data analysis and test results reveal significant insights into people's preferences and satisfaction levels with the Recreational Lake and the National Garden. The majority of respondents, 81.2%, chose the Recreational Lake as their preferred location, indicating a strong preference for this urban space. The components of the Lake that garnered the highest and lowest levels of satisfaction were "Activity and usage" and "Safety and security," respectively. The high regression weight associated with "Activity and usage" suggests its considerable impact on overall satisfaction, making it a critical factor in the success of the Recreational Lake.

In contrast, all components of the National Garden exhibited lower satisfaction levels compared to the Recreational Lake, except for the "Safety and security" dimension. Despite the National Garden having distinct advantages, such as housing a world heritage site in the downtown area and reflecting city identity, its overall satisfaction remains below average.

The analysis indicates that "Usage and activity" plays a pivotal role in the superiority of the

Recreational Lake over the National Garden. Additionally, other components, ranked from high to low impact on the Lake's superiority, include accessibility, aesthetics, sociability, and lighting. Both sites share similar challenges in terms of "Safety and security" and lighting, which are identified as critical weaknesses influencing the quality of both spaces.

The user-generated solutions presented in the research offer valuable insights into enhancing the safety, security, and overall appeal of public spaces, particularly the National Garden and the Recreational Lake. The study underscores the significance of aligning space characteristics with people's desires and priorities, emphasizing that successful public spaces should be shaped by the interests and preferences of individuals rather than solely adhering to designer dictations.

One major focal point of user recommendations is the improvement of "Safety and security," which emerged as a critical concern in the test results and data analysis. Users propose practical measures such as increasing police presence, enhancing lighting (with diverse heights and colors to improve attractiveness), incorporating attractive designs, placing 24-hour uses in proximity, and organizing public activities to foster a sense of security. Addressing safety concerns is seen as vital to mitigating the influence of inappropriate groups in these spaces.

Another key area of emphasis is the improvement of lighting conditions, as poor lighting is identified as a factor attracting undesirable groups. Users suggest implementing creative lighting solutions to not only enhance safety but also add to the overall attractiveness of the spaces.

Furthermore, users express the importance of recognizing and leveraging the unique advantages of the National Garden, such as its central location and proximity to Qabus Tower. Specific recommendations include revitalizing the downtown area, promoting the National Garden as a distinctive space, and offering special advantages to attract more users.

The dimension of "Activity and usage" is identified as a top priority by users. Recommendations in this regard include providing public activities, such as green route for running and exercising, a path for cycling, installing mass sports equipment, attracting musicians to the place, building sidewalks in part of the surrounding streets, creating more diverse and active uses at night, increasing entertainment uses, designing the space in accordance with the identifying element (Qabus Tower), increasing the inviting aspect of the space, installing a parking lot near and within acceptable walking distance to the National Garden.

8. CONCLUSION

The current investigation offers a systematic prioritization of factors influencing the efficacy of urban spaces. Employing second-order confirmatory factor analysis, the study aimed to validate the proposed model across both sites. Its distinctive contribution lies in the simultaneous exploration of elements influencing public space success while comparing historical and contemporary spaces. Urban administrators, planners, and designers can leverage these findings to enhance the effectiveness of public spaces.

Prospective studies may replicate similar inquiries in diverse urban locales or introduce additional dimensions, such as the cultural aspect. Furthermore, future research endeavors might adopt structural equation modeling to quantify the influence of quality on place attachment. It is acknowledged that this study is constrained by the limited representation of foreign tourists. Envisioning an expanded influx of both domestic and international tourists in response to the strategies outlined in this study holds promise, facilitating subsequent investigations to incorporate valuable insights from diverse tourist perspectives.

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