The Safer City: A New Planning Perspective for the Traditional City Development

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ABSTRACT

The research deals with the concept of a safe city and the impact of security on cities, in an attempt to identify the most important physical characteristics and indicators necessary to achieve safety in cities. The research identified seven characteristics (access and movement, structure, control, ownership, protection, activity, management and maintenance). From these seven characteristics, eighteen indicators were derived that directly affected the achievement of safety in urban environments. These indicators were applied to the study area, An-Najaf traditional city in Iraq. By adopting the analysis of indicators using field survey, observation and analysis using geographic information systems and mathematical models. The indicators that contributed to achieving a number of characteristics of safe cities in An-Najaf traditional city were identified: the structure of the city, the homogeneity of society, as well as the activity characteristic, as it was characterized by religious and tourism activity.

1. INTRODUCTION

The concept of a safe city is one of the important concepts in achieving a sustainable city because it aims to provide a healthy and safe environment for the living and movement of all segments of society, especially children and women. This gives the character of vitality and activity to the communities to increase the demand for services and activities in all sectors of land use, and this would enhance the ease of access and physical proximity. The processes of urbanization and the increase in the population within cities contribute significantly to reducing the levels of security within them, through the increase in traffic accidents and the inability to control crime. The government, society, and urban characteristics contribute to providing security and reducing crime, as urban policies and planning methods can help achieve a safer life [1]. The safe city is part of the concept of livable cities and focuses on the problem of crime in urban areas [2]. It is a city that relies on the integration of technology and the natural environment and recommends increasing the effectiveness of healthy places, to reduce crime and achieve readiness and rapid response to emerging threats or emergencies [3]. The safe city strategy also seeks to formulate effective centers with advanced infrastructure that includes sensors, technology, and networks to stimulate sustainable economic growth and high quality of life [4].

Safety is a critical aspect of the quality of life in the city. So the Safer City Program was launched, in 1996 by UN-Habitat at the request of African Heads of State. This program then evolved through three phases. The first phase targeted the urban crime prevention approach, mainly in three areas: institutional crime reduction and violence prevention, social crime prevention, and crime prevention in the physical environment. In the second phase, the program expanded to city safety in two new matters. The first is a security of tenure

and forced eviction since property ownership is the cause of conflicts and violence in some countries. The second matter is represented in dealing with natural disasters and efforts to prevent chaos. While the third phase emphasized the use of management and governance, with an emphasis on these phases are linked to each other to formulate a comprehensive approach to safety in the city [3].

The emergence of the concept of defensive space preceded the emergence of the concept of the safe city, as it is a stage of the development of that concept, which depends on the environmental and behavioral psychology of people within places and spaces, which focuses on seven principles represented in regional characteristics, natural control, access control places, mobility destinations, support for legitimate activities, management and visibility of space, and the impact of geographic proximity [2]. Then the safe city concept was developed by adding the social aspect represented by the relationships and community interactions within the places, being one of the basic factors that cannot be ignored. Then it evolved to include the environmental aspect of urban planning and design that suits the human scale by promoting pedestrian-oriented land uses and activities, encouraging places for community interactions, residents' participation in places, community culture, community communication, and identity. Some studies emphasized the community's participation in the neighborhood's self-regulation, recognizing the importance of "eyes on the street" or the community's eyes for residents who use these spaces [5].

Hong [6] focused on the relationship of communities with the government working to adapt urban environments to be safer places, by reviewing some urban planning projects and infrastructure development in Pakistan. He suggested three ways that could be an entry point in achieving a safe city represented by collecting and producing huge amounts of data about places using technology and communications,

establishing advanced and efficient projects that would develop security systems in the city, and imposing control over financial, administrative, legal and control systems in cities [6].

Klanjčić et al. [7] dealt with accidents resulting from urban mobility and contributed to identifying the urban characteristics that would determine the safety of road users. They analyzed urban road accident data for people who died or were seriously injured by collecting data from 24 cities in five European countries. This indicator was adopted as a measure of safety performance in cities, and they concluded that the characteristics of road infrastructure and the intensity of traffic flows have a significant impact on achieving traffic safety for people. They found that cities that rely on high rates of walking and using bicycles and limiting the speed of cars on the streets have less risk of traffic accidents.

Tiboni et al. [1] investigated the role urban planning plays in achieving safer, more climate-friendly mobility. They demonstrated the need for integrated approaches that can combine spatial planning and mobility management, by reviewing several urban policies and urban planning strategies. They presented an urban renewal project in which they showed how pedestrian accessibility increased at the neighborhood level, as this increase came from the effect of two factors: the distribution of services and flexible mobility network patterns, which can contribute to creating a more walkable space.

Al-Jaberi et al. [8] dealt with the possibility of transforming traditional cities into sustainable cities. They chose the city of Karbala in Iraq as a case study, as it includes many characteristics represented by a suitable mixture of land uses, allocating paths for pedestrians only, preventing car entry, homogeneous division of blocks (fine grain), as well as the availability of moderate densities for buildings and residents. These characteristics may enable it to shift towards sustainable cities, and these characteristics enhance security throughout the city.

In their study published in 2020, Lim et al. [9] presented empirical evidence regarding the safe city program launched in Malaysia. They aimed to identify factors contributing to crime prevention by surveying a sample of 400 pedestrians in the business district of Kuala Lumpur. They found that there is a major role for the authorities in enhancing security. However, the measures taken by the community to impose security in the place are less feasible. They recommended that there be an analysis of the behavior of criminals in the selection of appropriate crime sites for them.

Risdiana and Susanto [5] focused on the role of the smart city in achieving a safe city by helping companies and communities control and reduce crime. They presented multiple methods for measuring and evaluating the city's safety, by reviewing a set of indicators, including crime rates in public places and streets, the annual number of victims in the city, health rates, and the availability of health services, as well as other indicators, in an attempt to formulate a measurable conceptual model through which cities security assessment in Indonesia.

From the foregoing, it can be noted that previous studies dealt with the issue of safe cities from different aspects. In this research, we try to link the concept of safe cities with urban planning and urban design, in an attempt to identify effective characteristics and indicators that achieve safe cities in an integrated manner. The research aims to accurately identify the effective characteristics and indicators by supporting them with quantitative and qualitative measurements and setting specific criteria for safe cities. The research assumes that the

characteristics of the physical structure have a decisive role in supporting communities in making safe cities.

2. THEORETICAL APPROACHES

In this part, the research presents the characteristics of the traditional city as well as the characteristics of the safe city in order to find the common characteristics between them.

2.1 Characteristics of the traditional city

The characteristics of traditional cities can be summarized in four basic characteristics:

(1)   Hierarchy: The hierarchical characteristic appears clearly in its texture through the gradation of spaces from the wide public space represented by the central space and the mosque to the private space between the alleys, which are surrounded by some residential units [10, 11]: The hierarchy also appears through its roads, as the large main axes surround the mosque and the central space, and smaller secondary axes branch out from it, extending towards the outer wall of the city. Narrow local alleys with closed ends branch out from the secondary axes, and this is the clear hierarchical form in its urban fabric [12].

(2)   Diversity and vitality: Various uses are spread along the main and secondary streets, as these uses are a mixture of commercial, religious, and service uses, as well as residential use. This land uses diversity made the traditional city characterized by vitality and activity throughout the long hours of the day, as the central religious function constitutes points of attraction at various times, especially during the times of performing rituals and celebrations [13].

(3)   Control and surveillance: The streets and spaces of the traditional city are characterized by high surveillance because the main and secondary streets include some uses that are busy throughout the day and even at night times. As for the narrow alleys, they are usually closed-ended alleys that outsiders cannot enter because the window openings overlook and control the people who enter the alleys, and entry is limited to people belonging to the group of units surrounding the alley. The central space usually includes security personnel and employees who organize the entry of visitors and perform ceremonies inside the mosque [11].

(4)   Harmony and social cohesion: It is one of the clear characteristics of traditional cities, it was reflected in its compact structure, which made it a high-density city with high building coverage rates. Also, traditional cities include people belonging to the same race and religion, this point greatly reduced the entry of strangers into the city, enhanced the sense of place attachment, and imposed a responsibility on residents and visitors to protect the place because the city represents a spiritual dimension for the population [14].

2.2 Characteristics and indicators of safe cities

Safe cities are characterized by some characteristics and indicators that characterize their urban structure, and have a fundamental role in preventing crime:

(1) Access and movement: The success or failure of any place as part of a sustainable community is affected by the nature and quality of its communications, as lack of communication can reduce and undermine vitality, and thus can increase the chance of committing a crime. Therefore, it is

necessary to create well-connected and safe places through careful and creative design based on local evaluation [15]. Car traffic must be calmed and slowed down to create suitable urban environments for other modes of transportation, such as cycling and walking, to provide effective transportation alternatives to the car through an integrated strategy that enhances security and sustainability [1]. This calls for the establishment of multiple centers with mixed land uses and suitable densities, linked to high-quality public transportation [16].

From the foregoing, indicators of access and movement characteristic can be:
- Connectivity
- Measures to slow down the movement of vehicles
- Diversity in transportation modes.

(2) Structure: The structure should be planned to prevent crime from the outset, with the ability to adapt to unexpected situations or new opportunities. Safe and sustainable spaces must either be robust enough to handle the changing demands of life, or flexible enough to evolve [15]. Appropriate planning and effective use of the built environment can reduce the incidence and fear of crime, and improve the quality of life. If the site is well-planned and designed, it will be less likely that this site will be chosen to commit a crime [17]. The planning of residential areas must contain more cul-de-sacs (which must be short and straight to allow visibility), alleys and pedestrian paths, open spaces, and green spaces should be planned in a way that guarantees their defense, as they can only be accessed through the surrounding buildings [15].

From the foregoing, indicators of Structure characteristic can be:
-The presence of a percentage of cul-de-sacs in the residential neighborhood, they are short and straight.
-Choosing the right locations for the open spaces and that they are surrounded by buildings.

(3) Surveillance: Natural Surveillance is a design concept geared primarily toward keeping intruders in check. It uses design characteristics to increase the visibility of a property or building. Facilitating effective surveillance should be an essential part of crime prevention planning, because proper placement, window design, lighting, and landscaping maximize the ability of those concerned to monitor intruders as well as ordinary users. This provides an opportunity to challenge inappropriate behavior or report it to the police or landlord. When natural surveillance is used to its greatest advantage, it maximizes the potential for crime deterrence by making the behavior of the offender more visible to the passing individual, police patrol, or private security personnel [18]. Monitoring is done by providing good visual communication between residential units, commercial buildings, and public environments such as streets, public areas, gardens, sidewalks, parking lots, and alleys. Activity rooms such as kitchens and living rooms are also positioned to allow a good view of parking lots, streets, and common areas. Managers, doormen, attendants, and security personnel must have comprehensive views of these areas [17].

From the foregoing, indicators of Surveillance characteristic can be:
-Provide a visual connection between the buildings on the one hand and the squares and streets on the other.
-Designing residential units to ensure that kitchens and living rooms overlook car parks, streets, and public areas.
-The ability of managers and guards to monitor public places.

(4) Ownership: The fact that owning something makes one feel more valuable than similar things that are not owned by him, which is known as the " mere ownership effect" [19]. Therefore, people's sense of ownership and responsibility towards their surroundings can make an important contribution to achieving security and preventing crime. Therefore, it seems that there are two main elements necessary for a sense of ownership and its security implications, namely: the component of land and property acquisition, and the capacity-building component to support community empowerment processes, as well as the revitalization of institutional processes. Local government agencies and other organizations expressly designed to provide services that are more responsive to community needs and demands through multispectral interventions [20].

Underpinning the ownership is a clear distinction between public, semi-private/shared, and private space [17]. From the foregoing, indicators of Ownership characteristic can be:
-Ownership of housing units or lands and property in general.
-Empowering members of the community, and providing services to meet the needs of the community.
-The existence of a clear distinction between the boundaries of ownership (public, semi-private or joint, private)

(5) Physical protection: To make the urban environment safe and right, physical protection must be provided. It may be useful here to use physical barriers such as doors, fences, and walls to create safe and attractive places as well. The use of barriers and high fences that impede movement and access are useful in areas that are more prone to crime, such as the backyard of the house, and these barriers must be able to be visually penetrated so as not to impede surveillance or provide hiding places for criminals [21].

From the foregoing, indicators of this characteristic can be:
-The presence of doors, fences, and walls in their appropriate places.
-The ability of the barriers to be visually penetrated is subject to observation.

(6) Activity: Crime prevention depends on the availability of "eyes in the street" through the presence of people who carry out their daily activities. It has been shown through some studies that the large and inappropriate increase in activities may cause chaos or loss of identity [22]. However, the right mix of uses and activities in an area always leads to more oversight than many times, so care must be taken to ensure that mixed uses are compatible in an area [23].

Also, providing a range of housing types in terms of size, type, ownership, and the family's ability to bear its costs can lead to attracting a people mixture of different ages, lifestyles, and economic statuses thus providing a kind of good activity [24].

From the foregoing, the indicators of Activity characteristic can be:
-The mixed land uses
-The mix of housing types
-The pedestrians' density provides the vitality of the place.

(7) Management and Maintenance: A planning system can influence a range of management systems that help make places look good and work well [25].

The system must have a high level of cleaning and maintenance, whether it is implemented by public, private, or voluntary organizations, through which a strong message can be sent about zero tolerance for vandalism [15].

Table 1. Characteristics and indicators of safe cities

Characteristics	Indicators	Methods	Standards
Access and movement	Connectivity	R/A	≥ 1
	Measures to slow down the movement of vehicles	Field survey	The presence of physical partitions to ease the movement of vehicles
	Diversity in transportation modes	(A+B) > (C+D)	50 < (A + B)
Structure	percentage of cul-de-sac	Field survey	The presence of a percentage of the cul-de-sac in the residential neighborhood, and they are short and straight.
	Space design	Field survey	Designing the correct places for open spaces, and to be surrounded by buildings and provided with a supporting intention.
	visual connection	Field survey	Provide a visual connection between the buildings on the one hand and the squares and streets on the other Provide a visual connection between the buildings on the one hand and the squares and streets on the other.
Surveillance	Designing residential units	plans	The units have windows overlooking the street for the living and kitchen spaces.
	Security personnel monitoring	Field survey	The number of security personnel responsible for monitoring and regulating places and people using them
Ownership	Ownership of housing units and lands	questionnaire form	The number of people who own lands, units, and buildings
	Ownership boundaries	Field survey	Physical boundaries separating the properties (public, semi-private or joint, private)
	empowerment and service provision	500m access distance	Users access services within a distance of 500 meters
protection	doors and fences	descriptive criterion	Provide doors and fences to protect and prevent penetration
	A visual penetration of barriers	descriptive criterion	Allow vision and visual control through fences and fences
activity	mix land use	entropy index	0-1
	Diversity of housing types	Simpson Index	0-1
	pedestrians' density	P/A	P/H 500 The number of people passing by and owners of shops and uses
Administration and maintenance	Entities responsible for the management	descriptive criterion	Governmental or private agencies working to manage places
	Coordination and cleaning	descriptive criterion	Waste collection, coordination, and trimming of trees and plants

From the foregoing, the indicators of Management and Maintenance characteristic can be:

-The presence of governmental or private agencies concerned with cleaning and maintenance.

-Coordination and periodic cleaning to cut grass, clean trees, preserve public places, and continuous removal of rubbish and dirt.

Table 1 shows the characteristics and indicators of safe cities and the methods of measurement in comparison with the standard.

The research dealt with the concept of a safe city by reviewing a number of recent literature that focused on important aspects of the subject. After that, the research looked at the characteristics of traditional cities, as well as the characteristics of safe cities, to find similarities between their characteristics, to determine the critical indicators of safe cities, which are influential in the development of traditional cities.

3. METHODOLOGY

After studying and analyzing many previous recent studies that dealt with safer cities, the knowledge gap was identified, the problem was presented and the goal was set, and the research reached through its approved hypothesis that many features and indicators were relied upon in the analysis of the study area. The descriptive analytical approach was adopted by collecting data from the relevant departments and institutions in the province of An-Najaf such as (the Directorate of Urban Planning, Directorate of Municipality, and Administration of the Shrine of Imam Ali bin Abi Talib), as it has relied on many descriptive indicators that could be applied in the study area, and it was Analyze it based on observation and field monitoring of the situation. In addition to many quantitative indicators that can be analyzed using mathematical models and the database of statistical tables and maps of geographic information systems, to accurately represent the reality of the situation, the extracted results were compared with the standards adopted in safe cities. Figure 1 shows the proposed methodology

4. CASE STUDY

An-Najaf traditional city is one of the traditional Arab and Islamic cities, it is one of the cities in central Iraq. This city is characterized by several planning characteristics that made it a justification for choosing it as a study area, as it includes some characteristics that enable it to be a safe city. The city is characterized by a compact structure, the fence that surrounds

it, street planning, and a mixture of uses, as well as the social characteristics emanating from the spirit of the place and its religious nature, as it includes the shrine of the fourth caliph for the Muslims, Ali Ibn Abi Talib. The importance of this city made there a great government interest in terms of management, organization, and imposing security in the place [26].

Figure 1. Methodology of research

Figure 2. Location of An-Najaf traditional city concerning the master plan

The emergence of the city is due to spiritual factors through its inclusion of the shrine of Imam Ali bin Abi Talib, which is distinguished by the fact that it arose at the highest plateau and no river passes through it, and it is bordered by the western side by the An-Najaf Sea as a natural threshold, in addition to

the Wadi Al-Salam cemetery [27], which is considered one of the largest cemeteries in the world as a human threshold It is hoped that it will be added to the World Heritage List, which greatly contributed to making the city take specific directions in its urban growth outside the traditional city, which includes the historical center [10]. See Figure 2 shows the location of An-Najaf traditional city concerning the master plan of the city.
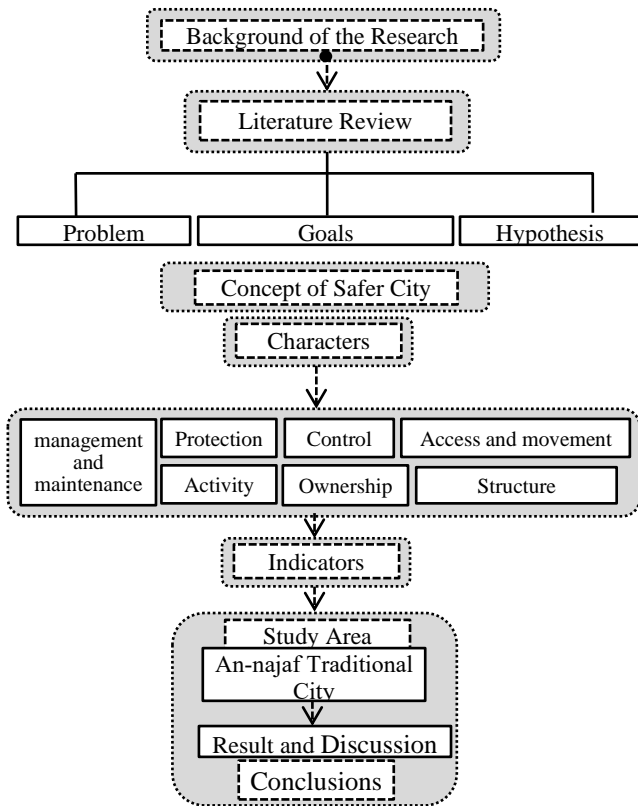
5. RESULT OF ANALYSIS FOR THE CHARACTERISTICS OF THE SAFER CITY AND DISCUSSION

5.1 Access and movement character

(1) Connectivity: The connectivity indicator is one of the indicators that have been achieved largely in An-Najaf traditional city, as its value reached (2.2) [28], this is due to its compact structure consisting of a large number of small urban blocks close together, which was reflected in the formation of its alleys and streets. It consists of some main streets that are connected to a large number of alleys and side paths, which made it highly connected. See Figure 3.
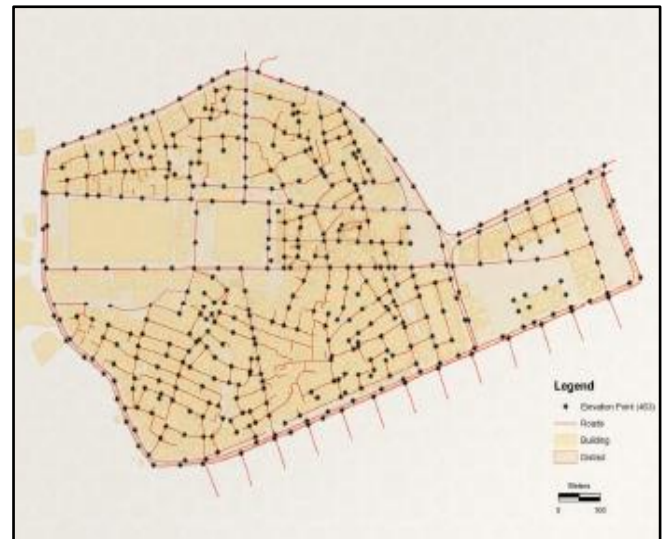

Figure 3. The nodes and linkages of the in An-Najaf traditional city

Figure 4. The movement of buses and private cars in An-Najaf traditional city border

(2) Modes of transportation variety: An-Najaf traditional city is a city dedicated to the movement the pedestrian-only within it, meaning that the alleys and secondary streets are planned for the movement of pedestrians, bicycles, and the movement of vehicles. As for the main streets surrounding the city, they allow the movement of private cars. Bus stations are spread along the outer perimeter of the city, from which the pedestrians move into the city, so the rate of movement on foot and by bicycle is 100%, while the movement of private and public vehicles is non-existent within the city. See Figure 4.

(3) Slow-down measures: This city is pedestrian only so there are no measures to slow down movement within it. These measures are only present in the main streets that surround the city, and at its main entrances, as well as in areas near public transport stations to allow pedestrians to cross without car accidents. See Figure 5.
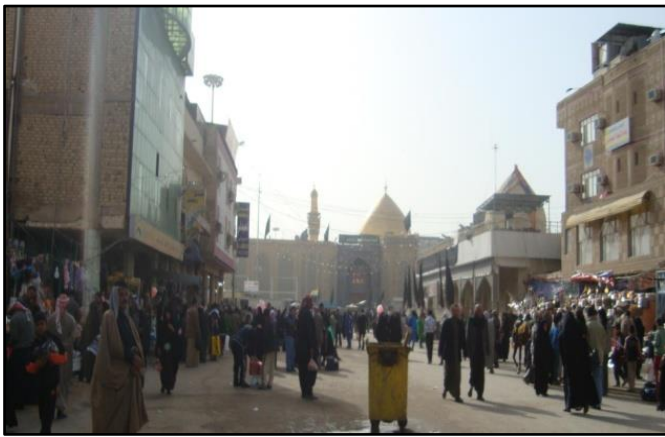
Figure 5. The movement of the pedestrian cars in An-Najaf traditional city

5.2 Structure character

(1) Cul-de-sac ratio: An-Najaf traditional city includes a large number of alleys with cul-de-sacs, which are intended for pedestrian traffic only, as they are narrow and tortuous. Some wooden windows overlook these alleys, which makes them monitored by the residents, and the number of units within them is limited, which prevents the entry of outsiders, and is only limited to the movement of the alley's residents. See Figure 6.

Figure 6. The cul de sac alleies and main streets in An-Najaf tradional city

(2) Space design: Spaces in An-Najaf traditional city are few and relatively small, due to the city's compact structure. The spaces were distributed in the different neighborhoods of the city, each space is surrounded by some mostly residential buildings. As for the central space, which is relatively large and occupies a middle position, and constitutes a public space in which all residents of the city meet, as well as visitors from outside, it is surrounded by buildings from all directions, which are mostly commercial buildings. See Figure 7.

Figure 7. Al-Huwaish neighborhood center (Fadua)

5.3 Surveillance character

(1) Visual connection: Most of the main streets in the city are surrounded by commercial buildings and shops that open directly to the street on the ground floor because of the high commercial activity and the high demand of visitors to the city and the purchase of gifts and needs. This gives the streets surveillance at most hours of the day and even late at night, in addition to the fact that most public and private squares are surrounded by some buildings, this enhances the surveillance characteristic of these places. See Figure 8.

(2) Design of residential units: The residential units were designed to have wooden windows overlooking the street on the upper floors, to adapt to the climatic characteristics to take advantage of the air movement in the alleys as well as to control and monitor the alleys. The windows were designed from wood that is paved vertically and horizontally so that there are openings through which people inside the housing units can see the people who are outside, and at the same time people passing through the alley cannot see the people inside the units. See Figure 9.

Figure 8. Surveillance and visual connection of commercial buildings on Zainalbdeen street

Figure 9. Building design cars in An-Najaf traditional city

(3) <u>Personal Security monitoring:</u> The city is characterized by the central space that includes the shrine as well as it represents the mosque. Because of the importance of this space, it imposed the necessity of a large presence of security personnel and administrators in the place, to organize the movement of visitors and follow up on their celebrations and movements, to ensure that accidents do not occur as a result of crowds, security breaches, or quarrels at times. A system of cameras spread throughout the place is also used. It should be noted, however, that monitoring here is not limited to security men and administrators, but society has a great role in protecting the place and preventing crime, as it represents a spiritual dimension and a religious belief for them. See Figure 10.


Figure 10. The central place of the holy shrine and its centrality cars in An-Najaf traditional city

5.4 Ownership character

(1) <u>Ownership of housing units and lands:</u> The ownership index is achieved significantly in most parts of the city, as the largest percentage is the private property of the city's population, which achieved the largest percentage, reaching 76%, while the ownership of religious endowments amounted to 12%, then municipal ownership by 10% and the lowest percentage is government ownership by 2% [29], As shown in See Figure 11.
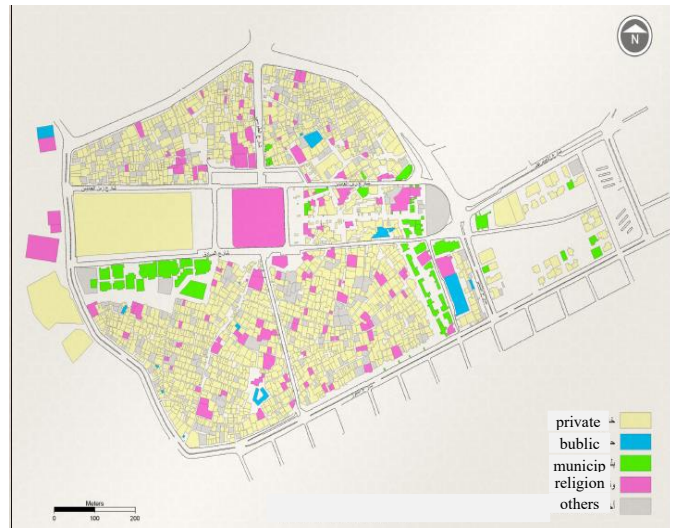
Figure 11. Ownership type in An-Najaf traditional city

(2) <u>Ownership Distinctive Limits:</u> The boundaries of ownership are indicated and proven, as this is represented by the boundaries of buildings belonging to each type of property. Ownership of endowments and the municipality is concentrated in the central area, as it constitutes places of public use. The boundaries of the residential units represent private ownership, while the alleys are considered semi-private spaces, and the streets are considered the boundaries of public ownership. The remaining types of property are spread throughout the city.

(3) <u>Empowerment and service provision:</u> The an-Najaf traditional city provides all the services that residents and visitors need, including all kinds of residential, commercial, religious, recreational, educational, and health uses, as well as the use of light industries and heritage industries. These uses are spread all over the city, and this enables users and visitors to reach them within a distance of no more than 500 meters. See Figure 12.

Figure 12. Commercial services in An-Najaf traditional city

5.5 Protection character

(1) <u>doors and fences:</u> An-Najaf traditional city provides all the services that residents and visitors need, including all

kinds of residential, commercial, religious, recreational, educational, and health uses, as well as the use of light industries and heritage industries. These uses are spread all over the city, and this enables users and visitors to reach them within a distance of no more than 500 meters.

The city is considered one of the walled cities, as the wall was built for defensive purposes many years ago, but this wall has destroyed several parts of it at present. In general, all residential units and buildings are surrounded by walls that give them privacy and distinguish them from other properties, which makes it easier to control and monitor them and limits the entry of strangers to them.

(2)   A visual penetration of barriers: This indicator achieves low values due to the social and religious character of the city's population, which does not allow visual penetration. The opening of the residential units towards the interior is around the central space only, and the central mosque is surrounded by a wall permeated by multiple gates to control and control the entry and exit of visitors. The city lacks public green spaces, which are usually surrounded by fences that allow visual penetration.

5.6 Activity character

(1)   Mix land use: An-Najaf traditional city provides all the services that residents and visitors need, including all kinds of residential, commercial, religious, recreational, educational, and health uses, as well as the use of light industries and heritage industries. These uses are spread all over the city, and this enables users and visitors to reach them within a distance of no more than 500 meters.

(2)   includes a large number of land uses that are spread over a relatively small area. This made the mixture of uses high in the city, as its value reached (0.68) [29]. In general, residential use occupies the largest proportion and is spread throughout the city, and commercial use is spread along the main and secondary streets. Recreational and religious uses occupy the central area, and educational and health uses are distributed within the city's neighborhoods. See Figure 13.
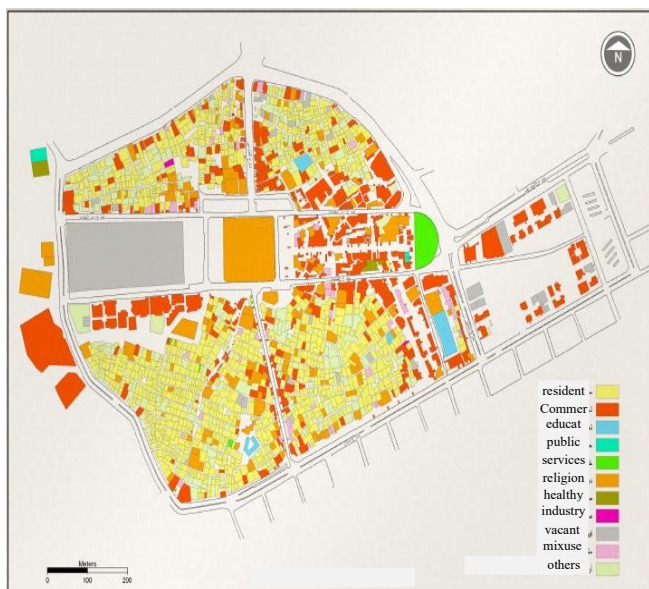
Figure 13. Land use and distribution of services in An-Najaf traditional city

(3)   Diversity of housing types: Most of the housing units in An-Najaf traditional city are of the horizontal type, so this indicator achieves a low value of (0.1). Vertical housing is limited to some private hotels for the residents of visitors in the city, and most of the housing ownership is the private property of its owners. See Figure 14.

Figure 14. Diversity of housing types in An-Najaf traditional city

(4)   Pedestrians' density: An-Najaf traditional city provides all the services that residents and visitors need, including all kinds of residential, commercial, religious, recreational, educational, and health uses, as well as the use of light industries and heritage industries. These uses are spread all over the city, and this enables users and visitors to reach them within a distance of no more than 500 meters.

It is one of the religious tourist cities, therefore visitors flock to it from all over the world, especially Islamic countries, and for this reason, its streets are most of the time occupied by the population, as their density reached 950 people per hectare. This contributes to imposing greater restrictions on criminals due to the lack of vacant places where criminals usually resort to committing their crimes. See Figure 15.

5.7 Administration and maintenance character

(1)   Entities responsible for the management: An-Najaf traditional city receives the attention of the government as it represents a religious center and a place that includes many cultural and religious symbols, so government agencies take the management upon themselves. In second place comes religious institutions and schools that contribute to government agencies in completing management and organization work.

(2)   Coordination and cleaning: The city is under great pressure from visitors, which results in the accumulation of waste in large quantities, especially in the seasons of religious celebrations, which constitutes an additional burden on the municipality. The municipality continues throughout the day to collect waste, clean the streets, cut trees, and coordinate them periodically, while the work of the cadres of religious institutions is limited to cleaning the central place (the shrine and the space surrounding it) as well as cleaning religious schools and mosques. See Figure 16.

Table 2 shows the result of the analysis of proposed indicators for the characteristics in An-Najaf traditional city.

Table 2. Result of the analysis of the indicator for the traditional city of Najaf

Characteristics	Indicators	Result	Discussion
Access and movement	Connectivity	2.2	The blocks are short in size which makes the connectivity and accessibility very high in the city.
	Measures to slow down the movement of vehicles	(A+B) = 100%	The rate of movement of pedestrians and biking is 100%, while the movement of private and public vehicles is non-existent within the city.
	Diversity in transportation modes	not achieved	The city is for pedestrian traffic only, so there are no measures to slow down the movement within it, and it is only on the main streets.
Structure	percentage of cul-de-sac	achieved to a large extent	The neighborhoods include a large number of alleys with closed ends because they are intended for the movement of pedestrians only, as they are narrow and tortuous.
	Space design	achieved to a small extent	Spaces in the city are few and relatively small, due to the city's compact structure.
Surveillance	visual connection	achieved to a large extent	The streets are monitored most hours of the day and even late at night, in addition to most public and private squares due to the city's tourism activity and the presence of shops that are usually open.
	Designing residential units	achieved to a large extent	The residential units were designed to have wooden windows overlooking the street on the upper floors to control and monitor the alleys and spaces, as well as climatic characteristics to take advantage of the air movement in the alleys.
	Security personnel monitoring	achieved to a large extent	In the main central space, there are a large number of security and administrative personnel to regulate the movement of visitors.
Ownership	Ownership of housing units and lands	achieved to a large extent	The largest percentage is privately owned by the city's residents, which achieved the largest percentage, reaching 76%, so monitoring, control, and interest are greater.
	Ownership boundaries	achieved to a large extent	Ownership of endowments and the municipality is concentrated in the central area, as it constitutes places of public use. The boundaries of the housing units are private property.
	empowerment and service provision	A distance of 500 meters, achieved for all uses	The access for residents and visitors to all kinds of residential, commercial, religious, recreational, educational, and health uses, as well as the use of light industries and heritage industries.
protection	doors and fences	achieved to a large extent	All residential units and buildings are surrounded by walls that give them privacy and distinguish them from other properties, which makes it easier to control and monitor them.
	A visual penetration of barriers	not achieved	This indicator achieves low values because the social and religious character of the city's population does not allow visual penetration
activity	mix land use	It has a value of 0.68 which is a good value	Residential use occupies the largest proportion and is spread throughout the city. Commercial use is spread along the main and secondary streets. Recreational and religious uses occupy the central area.
	Diversity of housing types	Its value was 0.1, which is a very low	Most of the housing units in the traditional city of Najaf are of the horizontal type, so this indicator achieves a low value.
	pedestrians' density	950 people/ hectare	The tourist nature of the city made the rate of pedestrian density high, as its streets are most of the time occupied by the population, which makes it difficult to provide a suitable environment for criminals due to the high surveillance.
Administration and maintenance	Entities responsible for the management	achieved to a large extent	The interest of the local and central government is available since the city represents a religious center, religious institutions and schools, and a place that includes many cultural and religious symbols. Therefore, government agencies take management upon themselves.
	Coordination and cleaning	achieved to a moderate extent	The accumulation of waste in large quantities, especially in the seasons of religious celebrations, constitutes an additional burden on the municipality. Despite this, the municipality continues to collect waste, clean the streets and cut trees throughout the day.

Figure 15. The visitor density in the religious events types in An-Najaf traditional city

Figure 16. Works of cleaning after the celebrities

6. CONCLUSION

The concept of safe cities is one of the important concepts that contribute to achieving sustainability, as this concept is achieved through cities that are characterized by good physical structures, that would support the mix of uses, provision of services, safe housing, and provide easy access and physical proximity to communities.

Homogenous societies can be more secure by imposing surveillance on public and open spaces and limiting the entry and penetration of strangers, which would increase the chances of crime. Homogenous communities also increase the possibility of interaction and the formation of social relationships, which would make a safer city.

Cities that support the multiplicity and diversity of activities, such as containing commercial, recreational, religious, and tourism activities that attract residents and achieve a suitable vitality for places, thus achieving safety in places by monitoring and occupying them most of the time of the day, which reduces the chances of providing empty places that encourage crime.

Great interest in planning public and open spaces, streets, and squares because of their great importance in determining the level of safety in cities, as they reflect the extent of interaction and social relations and express the extent of activity and vitality of urban communities and the achievement of safety.

The article recommends studying the relationship between safe places and increasing the productive efficiency of societies. It is also possible to study the relationship between safe cities and physical health, as well as the possibility of studying the relationship between safe cities and multi-use cities.

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