



Urban Planning Impact on Human Behaviour Within Urban Communities

Nourhan Yosry, Esam Mousa & Esraa Ebrahiem Salem

¹High Institute for Engineering and Technology at Obour (OI), Egypt,
Nourhany@oi.edu.eg essamm@oi.edu.eg esraa.ebrahiem@oi.edu.eg

Abstract

The study's focus is on how human behavior interacts with outdoor spaces in residential areas because of the fundamental connection between these public areas and the people who use them and the variety of requirements they serve. Individuals engage in a variety of activities as part of this reciprocal interaction, which may be either bad or good depending on how well the spaces serve users' fundamental needs. Given that the majority of the exterior open areas in housing buildings, particularly public housing, are almost completely ignored, This disregard and carelessness results in the development of an environment. It is inappropriate and has a negative effect on society, whether from a social, cultural, urban, or economic perspective, as well as on psychological and health aspects, which in turn affects how people act and react to these spaces and their various components in a way that appears hostile to the built environment, either through intervention, additions, change, or encroachment to meet their basic needs inside the spaces that were not designed with that purpose. The development of people's behavior in these spaces will be significantly impacted if the basic requirements of humans can be met inside of the outdoor areas. Environmental design is one of the most crucial fundamental factors that unquestionably influences human behavior, productivity, and his contribution to society. And smart preparation. The study looks into how the environment and behavior interact with one another in the Military Factory 27 housing area, where these interactions are most obvious.

Keywords: *Urban Designing, Human Behavior, environmental behavior, Social Design, Built environment, environmental influence.*

1. Introduction

The built environment has a significant influence on how people behave in daily life, which affects human progress and development. As a result, one of the key axes of development and prosperity is the developing linkages between the built environment and society.

The relationship between man and the built environment, the degree to which they influence one another, the ways in which the built environment can affect human and social behavior, the effects of the built, natural, social, and cultural environments on both individual and group behavior, as well as the relationship between the environment's material and moral components and between material and human behavior, have all been the subject of numerous philosophical theories. It is generally acknowledged that the objectives of urban design and planning procedures are to provide environments that are congruent with the demands, wants, and behaviors of their inhabitants. According to studies, people who live in urban areas that don't meet their social and recreational needs suffer negative environmental, behavioral, economic, social, and cultural effects. As a result, they may decide to leave the area, try to change it to suit their needs and behaviors, or even pick up new habits. In order to adapt to these spaces, new ones must be created, but doing so distorts the built environment and prevents it from serving the purpose for which it was intended. Additionally, doing so wastes time and money spent on studies and implementation; examples include closing terraces in some residential buildings and altering their style and color because these changes are incompatible. Due to a shortage of seating areas and comfortable furnishings that support engaging in sedentary activities, users of the facility as well as other people often resort to sitting in areas that are not intended for this purpose.

Most urban planning and design processes rely on treating and developing the built environment to solve urban space problems, ignoring the human moral aspect, which is represented by the behavior of employed or expatriate

individuals. Whether this is done to design new urban spaces or improve a deteriorating urban area, which had an impact on the emergence of Negative effects, whether the environment has an impact on human behavior. The issue of the distribution of urban areas in housing complexes is addressed by a variety of trends and philosophies.

This was evident in the way residential areas were developed urbanely, and a number of theories that explain how places are shaped, measured, and valued began to emerge. a group of residential units connected to one another by common or interstitial areas, creating a particular physical and social environment.

However, the open areas did not have the expected impact, either environmentally or socially, as can be seen from the general observation of residential urban complexes in the new locations. The study also makes the assumption that the greatest contribution to the failure to achieve the effectiveness expected of them may come from the blind application of some ideas without taking into account the social, environmental, and behavioral aspects unique to each sector.

2. Problem Statement.

According to scientific studies, the details of housing design and residential environment planning have a significant and vital impact on the social and psychological characteristics of people living in residential units, including strengthening or weakening social ties between residents and their sense of security against structural, natural, and unnatural threats, their sense of belonging, their level of education, and their level of psychological health.

In order to establish appropriate social, cultural, economic, and urban determinants and standards for the creation of external spaces in terms of dimensions, proportions, shape, and all other physical properties as well as their ability to perform their various functions to reach the best use of them, it was important for research to examine the reciprocal relationship between human behavior of individuals and external spaces and the impact of each on the other. likewise perfect user satisfaction.

3. Research Goals.

The study's main goal is to promote the preservation of the residential environment and to look for ways to recognize the value of exterior living spaces in a way that ensures the retention of their urban character and the advancement of their environmental and urban level in terms of the aspects of life that are experienced through their residents' social and behavioral traits.

In-depth attempts are made in this study to accomplish the following goals:

- Outlining the link between changes in human behavior and urban and architectural design, as the two cannot be kept apart during the design phase.
- Research both the impact of human behavior on these spaces and the impact of external spaces with their diverse qualities on the human behavior of individual users.
- The significance of studying human behavior in order to generate social, cultural, urban, or economic indicators that can be used as standards when creating or improving outdoor areas.
- Outlining the reciprocal relationship between the environment and human behavior, assessing the state of the study area's urban spaces, and calling attention to this kind of research in creating and enhancing their design.
- Being aware of the various social and economic characteristics of local populations.
- Recognize the actual state of the housing's physical conditions, describe the changes that have occurred, and be aware of the degree of deterioration it has reached.

4. Methods and Tools

The theoretical approach and the practical approach, which are the following, are the two main research methodologies:

Theoretical strategy:

The theoretical investigation is split into two sections.

First, research on how people interact with one another and how that interaction is reflected in private outdoor areas. After measuring indicators of the built environment's quality and the impact of the concept of sustainability on spaces, the study of the characteristics of the environment most conducive to human life follows. The second step

is to examine the mutual influence between external spaces and human behavior in terms of the impact of external spaces on human behavior.

The practical approach was based on choosing a residential area in accordance with the predetermined criteria, along with the necessary justifications and reasons for the selection. Next, the theoretical study was applied to the real world, and the necessary data and information were accessed, then they were analyzed to arrive at the field study's findings. This is accomplished by utilizing a few crucial instruments, namely:

1. preliminary investigation of the subject.
2. The use of questionnaires and the selection of a population sample for field research.
3. Researcher notes from home locations.
4. Researcher-led interviews with a representative sample of the populace.

5. Theoretical Review

Human behavior as a concept and how it develops in urban societies:

Human contact with the environment produces human behavior. Behavior is the activity that arises from the human throughout the interaction process with the environment. The environment generates activity that influences the human and vice versa (A. Dweidar, 1995).

The interaction between a human person and his immediate surroundings occurs on many different levels, starting with his understanding of his surroundings in light of his psychological and physical make-up, as well as his cultural and social background and values, and continuing until he becomes conscious of his immediate surroundings. This awareness differs from person to person, and this kind of perception is the real reason behind the variations in behaviors that people adopt to meet their various requirements. Despite the fact that these demands are similar to one another, they vary from person to person (A. Afifi, 1991).

1- General factors affecting how people behave include

Numerous factors have an impact on human behavior and contribute to its emergence, formation, and modification. It is the product of numerous forces interacting with one another, and these forces might vary from one society to another depending on the dominant culture of the individual.

There are two main categories of these elements that affect human behavior and the issue:

- Human needs and reasons
- The way humans are formed.

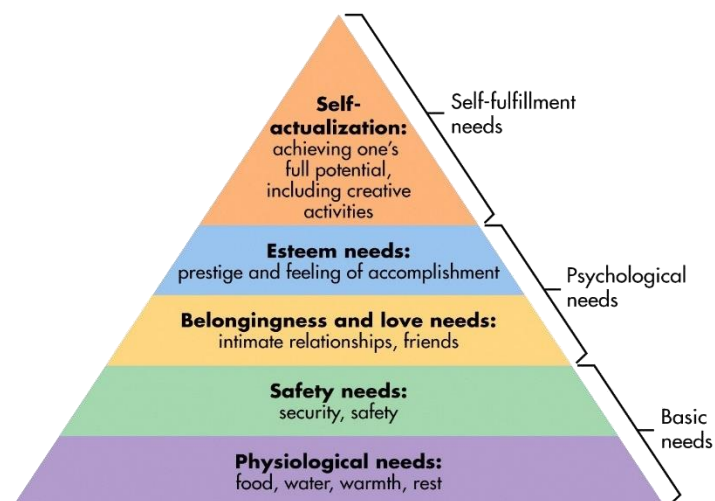


Fig 1: show Maslow's Hierarchy of Needs Pyramid (Maslow's hierarchy of needs, 2023).

Maslow's theory differs from more purely physiological representations of human motivation because motivation is seen as being not just concerned with tension reduction and survival but also with human growth and development (Nisreen Abdel Salam, 2001).

Human needs and motives: The different aspects of activity and conduct that a person does not sense from his or her contact with themselves but rather occur as a result of circumstances that move and influence them, including the basic wants and motives of the person (Eman Attia, 1988).

Needs: It is an essential epic for those who live in a world where life is either a story or it is not possible. which leaves him in a state of migraine and mental migraines, which he suffers from severely up until the point at which he responds to Iran. Life has ended, and although this enlightened may not comprehend it, once he recognizes it, he works extremely hard to achieve it till he is free of the situation that causes him suffering.

Need, inspiration, driven action, and need gratification

The motivations are split into two categories:

Primary physiological drivers include:

They are instinctive, unlearned urges that include the need to eat, drink, and have other bodily requirements met. Despite the fact that it is possible to learn how to control them, these needs cannot be mastered. Depending on how much these requirements are met, they have less of an impact on a person's life and do not fully explain his conduct.

Secondary reasons that are acquired through time: are those that come from society as a result of a person's upbringing, interactions with others, and exposure to environmental conditions. These motives also take into account the person's knowledge, experience, and cultural and social background, and they have a significant and obvious influence on how people behave.

There are various theories that have developed that examine human wants, and many scientists have developed models for these needs, including Lytton's model, Maslow's model, and others (Alaeddin Serha, 2003).

2- Humans and urban environments interacting in various urban communities:

A fundamental requirement for creating a suitable environment that meets the requirements and needs of the human being inside it, and is therefore suitable for the human being to perform his activities and behaviors within it, is organizing human interaction with the surrounding environment, which is represented here in the exterior spaces in residential areas. To investigate this connection, it is necessary to look into a number of unique aspects, including (Ali El-Husseini, 2000):

1. The reaction's constituent parts.
2. The manner in which this reaction occurred.
3. The effects of this encounter.

As a result, the designer must select an expressive style that is appropriate for the setting and the various tasks carried out there, consistent with the people using the space, their needs, and their cultural and social backgrounds, as well as the opportunities and constraints set by the moment the Interaction takes place (Ahmed Auf, 2002).

3- Fundamental ideas concerning outdoor areas in residential regions:

Residential urban space is that restricted or defined space between three-dimensional features, whether they be structural, natural, or the progression of these elements that make the void simple to see and recognize. Residential areas' exterior spaces are primarily created by assembling a number of residential units in a particular fashion.

a- Components of urban external spaces:

A variety of delimiters serve as symbols for the space's many elements. A delimiter or horizontal plane that is the level of the space's floor, an upper horizontal delimiter that is the level of the space's ceiling, a vertical plane that is the level of the space's limits, and then elements make up the exterior space (Heba Farouk Al-Dabani, 2007).

Interior furnishings and any other non-human elements, such as inanimate items or plants that are present in the space, as well as the element of physical activity, which can be social or recreational, are included in the components of the space.

b- Urban outdoor spaces in residential neighborhoods have the following characteristics:

The space's distinguishing qualities are generated through an integrated and interwoven interaction between these characteristics and the shifting proportions, shapes, measures, and details that are present in the space. According

on how they perceive the area, these qualities also have a significant impact on how individuals behave and engage in activities outside. It was important to clarify the space's qualities as a result. outside of a home. These qualities can be categorized into various categories:

1. The size of the space (which refers to its dimensions and measures).
2. Keeping the vacuum inside.
3. the vista (Abdullah Fouda, 1995).

c- The purpose of outdoor places in cities:

One of the most crucial elements of the design process is how the exterior areas work. The degree to which the external space satisfies the functional criteria serves as a barometer for how well it is as a design product. Two fundamental components used to produce the functional characteristics of a space: first, obtaining quantitative criteria for spatial content, which experts articulate in terms of planning and design rates; and second, achieving the best interactions between the various components of the space (Firas Mrouh, 2009).

4- How architecture affects people's behavior:

A large portion of human interaction and social experience takes place within designed physical environments, and just as they are our circulating symbols and the meanings of our lives, our designed physical environments are closely linked to humans and their expressions.

The movement of building inhabitants can help with all-senses architectural design, which increases the experiences they are exposed to inside the structure. The qualities of a place combine to create a symphony for the inhabitants, much like a musical song. In order for users to have deeper, more meaningful moments, interactions, and experiences in the environment, form and function can be made more obvious by including all of the senses (Wallaa Mohamed Metwally, 2004).

Urban space and human behavior are the subject of research and study areas.

In the city of Qalyubia Governorate is where you may find the Military Factory Housing Project. One of the projects for the Armed Forces that was held by several people, it was established in the early 1960s by the Armed Forces Engineering Authority.



Fig 2: It depicts the research area's boundaries and the general location of the city of Benha.

Project elements: The project consists of a number of apartment buildings split into three residential neighborhoods. Each neighborhood has a number of residential buildings with a ground floor plus five residential floors in height. The buildings don't rise higher than 19 meters. The region is distinguished by the residents' intermediate social status. This project consists of middle-class dwellings, and the surrounding area 33 residential blocks make up the project's 33 residential blocks, which has a total land area of 34,865 square meters.

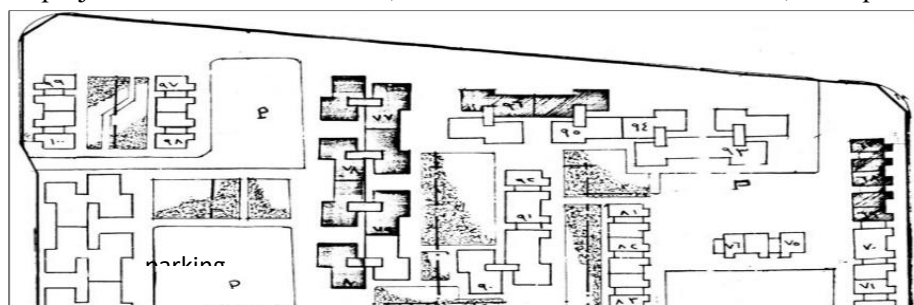


Fig 3: show Project elements

Services in the study area: In the project's center, there is a special service area that is connected to one of the region's main roadways and contains a number of services, such as:

- 1- In addition to the presence of a hotel secondary education school at one end of the project, both a basic education school and a secondary school that serve the entire neighborhood and its surrounds also have playgrounds attached to organize sporting events. A form of specialized school that serves the entire region or neighborhood, it is a freshly launched project.
- 2- A nursery for kids in the heart of the city.
- 3- There are numerous mosques. One of the mosques is a centrally located mosque that offers commercial services including photography and computers as well as services to the project's residents. The neighborhood lacks a sophisticated market.

Types of outside spaces: There are various different types of exterior spaces in the study area.

a. public housing with sizable areas:

They are either substantial residential areas that were left between the blocks after they were put together or side spaces brought about by combining the orientation of many blocks. Due to their huge width, which makes paving or maintenance operations expensive and taxing for the people, there is a risk that these large places would be exploited.

b. Semi-private living quarters:

They serve as the exterior borders of a collection of residential units but are overlooked by them. The field study has shown that this kind of outdoor spaces works well because they serve as a barrier between residential areas and the main vehicular thoroughfares, so lowering the risk and annoyance. It is regarded as a secure area for kids to play and has a view that their residential units don't have. It provides privacy, and its existence encourages locals to congregate there or let their kids play there. It is the most functional type of residential space since residents maintain and care for it.

c. Private residential spaces:

These are areas that are unique to each building since some inhabitants work to fence off and maintain a portion of the area in front of the building. Because it is particular and simple for the proprietors of one residential block to protect and manage, residents' interest in this sort of voids grows.

Block size and orientation:

The plan made a fair effort to build residential areas that establish a spatial formation between the blocks, however it used a free planning approach for the residential blocks and did not follow a definite direction. The availability of a variety of advantages in the area, such as:

- Changing the direction of the residential blocks, led to the diversification in the orientation of the residential blocks within a single residential site. Residential spaces with distinct ends and entrances and a high level of containment are attainable.
- The residential spaces that are overlooked by the residential units from all four sides are difficult to intrude upon, especially if the distances between them are acceptable. The residential buildings have five levels with a ground floor and a height of 19 meters, and the surrounding skyline is uniform.

The next section examines a survey of the residents' opinions and a monitoring of their actions within models of open spaces present in the residential area under research once the study area has been assessed in terms of its

location, area, and composition. The purpose of this study is to determine how these spaces affect people's behavior, how people behave, and how people behave in relation to exterior spaces. How they handle it and how well these areas accommodate the various demands of the people who use them. Residents who use the areas and whose homes look out on them are polled about their opinions using online survey forms. This area's people, a total of 100 respondents, were the subject of the study.

The population's cultural makeup makes up the first axis.

The region has a sizable middle-class population, with the percentage of educated persons being as follows:

- 30% have a high cultural level.
- 60% have an average level.
- 10% have a below average level.

The second axis: The characteristics of space and how they affect people

1. In terms of measurements and ratios:

The measurements range from 42 meters to 82 meters in length. This location is divided into two sections: a landscaped area on one side, which the school and mosque both views, and a parking lot connected to the main roadway on the other.

The planted portion can be anywhere from 42 m and 42 m in size, while the parking area is roughly 42 m by 40 m. A 20 cm high tiled pathway divides the planted area from the parking lot.

2- Results of the questionnaire:

- In terms of people's perceptions of the emptiness, we find that 75% of the residents whose opinions of the emptiness were asked about had a positive perception of the emptiness scale. This indicates that the residents who live in the emptiness or whose homes overlook it are aware of it well.
- In terms of the space's width, we discover that 30% of respondents stated the space was wide and that feeling of confinement was lost by 70% of respondents who said the room was very wide.

Regarding the ideal population size for the survey, in order to feel secure and protected inside and to avoid noise, more than 60% of the people desired the area to be medium in size. To protect the privacy of the apartments and the large distances between them, the remaining percentage—roughly 20% of them—finds that a broad space is preferable, and 20% think that a very wide area is better.

The third axis: With regard to the space's dimensions and kind:

1- Space shape is a rectangular area with a 42 m by 82 m size that is enclosed on four sides by residential buildings, making it difficult for anybody to infringe on it. Given its relative size and versatility, the area may accommodate a variety of uses. When it comes to defining the space, the majority of locals concur that it is Its broad area makes it particularly specific.

The entrances of the residential complexes look out onto the area, which is why it is referred to as the major front space. In terms of ownership, the area is regarded as a semi-private space for the residential units that overlook it because residents of such residences use it to access their units and wait for their cars in the spaces provided for them.

When the respondents were questioned about their preferred leisure activity to offer psychological comfort ,for 25% of them, it serves as a practicing area for various hobbies, a safe place for kids to play, and a view that is both lovely and civilized. For the remaining 25%, it serves as a view that faces a busy road.

The fourth axis: In relation to the space's components and contents,

we discover that 25% of the inhabitants who were polled inside the space believe there are too many trees and green areas, while 75% believe there are enough of them. While everyone who responded agreed that the garden in the area was empty because there were no water fountains or other water features, there were also no chairs or places for mattresses to sit. Mothers, social gatherings, or watching youngsters while they play are the best users of it.

As a result, we discover that the space's furnishings had an impact on how well the inhabitants that frequent it were able to satisfy their functional needs. The entire population of respondents stated their absence and desire for the presence of children's swings, as well.

The people all agreed that there were few additional vacuum furnishing items, such as trash and garbage cans, and 10% of the population verified this. This indicates that they are not widely dispersed throughout the region, making them accessible to all people. As a result, some locals engage in undesirable actions like dumping trash in the vacuum.

Regarding the removal of exterior rubbish from residences, certain private firms have agreements with the inhabitants to provide this service, which involves going through the units and collecting garbage from them. The residents make the agreements directly with the company.



All the respondents agreed that there are not many lighting poles, and if any do exist, no one is interested in keeping them maintained, rendering them entirely useless, especially in the back, side, and marginal zones, which are quite gloomy at night.



Social features of the population and functional needs make up the fifth axis.

The following is discovered by looking at how many of the questioned residents felt that the area satisfies their functional needs:

- About 60% of people say that their leisure time is a suitable and moderate way to meet their functional needs.
- 25% of people say the vacuum adequately satisfies their demands.
- 15% of people say that their functional needs are completely unmet by recreation.

Table 1: show the activities people do in the places are reflective of their functional needs:

Recreational activities	According to a poll of local residents in the Officers' Row neighborhood, up to 95% of the respondents believe that there are no seats inside the space and that the shaded areas are insufficient despite their undeniable value. The activity of hiking does exist, either by going on a stroll for entertainment or by walking from one area to another to fulfill certain activities, like going to work or shopping.	 <p>Picture (2) shows the use of fences and flower beds for sitting and waiting</p>
Play activity for children and youth	We found that 80% of the population believes the space meets an important functional need, which is children's play, while 20% believes the space is unsuitable for both children's play and for cars to enter it. This information came from a survey of a group of residents about the suitability of the space for children's play activities.	 <p>Picture (3) shows children's playing activity in the outdoor spaces</p>
Social relations	65% of the population believes that social links are strong, while 35% believe that social relations are moderate, according to a study of respondents from the area.	
feel safe	We discover that 75% of the population feels well about their sense of security in public places, whereas 25% feels only moderately safe. When people are questioned about how safe they feel at night because of inadequate lighting, this percentage rises.	
sense of self and distinction	It is somewhat available inside the vacancy in 75% of the responders. Additionally, it should be mentioned that 90% of the population has a desire for progress. The proof for this comes from their perspective that	

	preserving the emptiness and growing flowers and trees in it both require individual effort. among the populace.	
the feeling of belonging to emptiness	It is widely available among the residents of the emptiness who were polled, and one of the reasons for this perception is the emptiness's accurate definition and the residents' ongoing maintenance and nurturing of it. However, some other emptiness may lose the sense of emptiness as a result of its large extension and experience a decline in the sense of belonging.	 <p>Picture (8) shows the interest of some individuals in maintaining the external spaces of their residential groups</p>
sense of privacy	The place has a sense of privacy, as 90% of the inhabitant's experience privacy well and 10% of them feel privacy poorly. This is because the space is broad and the distances between the blocks are just right for ensuring residents' private.	 <p>Picture (4) shows that the distances between the blocks are appropriate to achieve privacy</p>

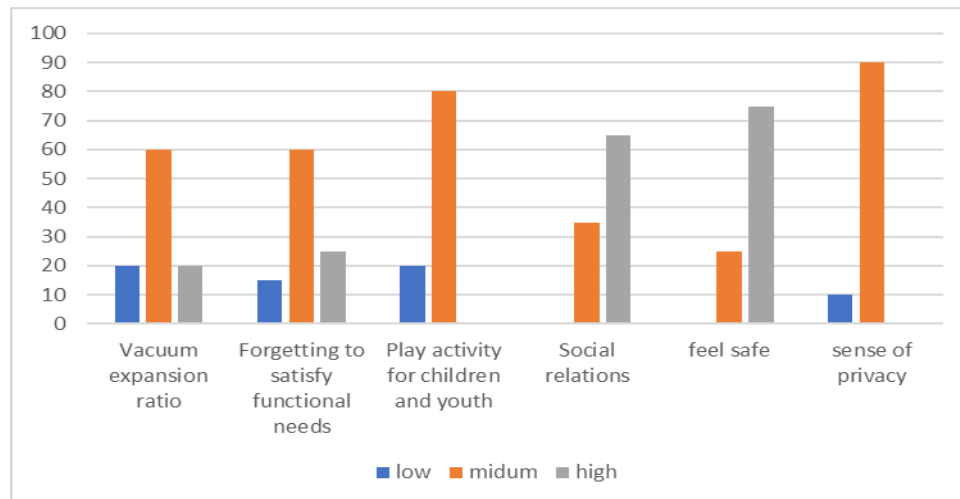


Fig 4: shows the population and functional needs.

6. Results

- Human behavior can be influenced by the architect by influencing the urban and architectural environment around him, but this influence is limited because human behavior is influenced by a variety of social, economic, and cultural factors as well as an individual's psychological state.
- The value of outdoor space for residents varies depending on the socioeconomic standing of the community. Streets, passageways between apartment buildings, block entrances, and playgrounds are examples of exterior space for inhabitants of popular neighborhoods.

3. In terms of encroachment on the external space and involvement and contribution to sustaining the external space, people's interactions with and behavior toward it vary depending on the economic and social status of the population.
4. For people with poor social and economic status, recreational behavior—such as children's play and social interactions—represents the most significant sorts of positive activity. However, one of the most significant negative actions in residential areas is beautification due to high social and economic levels' interest in aesthetic values.
5. In terms of the types of users, their ages, and the activities they engage in in the space, human manifestations existing inside the space have an impact on how people behave and the activities they engage in inside the exterior areas. The level of crowdedness prevalent in the exterior places has an impact on people's behavior as well.
6. The failure to meet the demands of residents in external spaces, which motivates inhabitants to strive to meet these needs, whether they are functional, social, biological, or aesthetic needs, is the main cause of encroachment on external spaces by residents at their various economic and social levels.
7. Urban vacancies in residential areas have a significant role in fostering social links and homogeneity among residents, which satisfies their requirements for individuality and a sense of belonging to the neighborhood they share with others.
8. A person is more drawn to the busiest and noisiest regions due to his psychological behavior. This explains why kids favor playing activities that involve mobility and variety. As a result, one of the most crucial justifications for avoiding residential places is the complete isolation or separation from internal motorized circulation channels.
Since attention is focused on applying theories, standards, proportions, and shapes of urban spaces without taking into account the study of the behaviors and needs of users of the spaces, which differ from one community to another and possibly even from one area to another in the same city, the urban design of these spaces plays a significant role in creating this gap.
9. To achieve effectiveness in building urban spaces and thereby successfully address the demands of people and society, residential areas' urban design must take into account the opinions and needs of users and monitor their actions.

7. Future Research Recommendations

Behavioral study that examines the interaction between the environment and human behavior provides a frame of reference that may be applied when making design choices. Accordingly, it is obvious that there is a growing demand for research and studies that connect information and behavioral data on how the built environment and human behavior interact, specifically:

1. Examine how users engage with parts of the physical environment, including how they perceive those elements, how they comprehend them, how they influence them, and how they are affected by them, in light of their cultural, social, and economic disparities.
2. Research how different activities' spatial linkages and effects on obtaining desired outcomes in urban areas.

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