

Place-Making as an Approach to Develop Informal Housing Area's Urban Spaces

Wesam Mehanna ¹ | Walaa Mehanna ²

Received: 2022-09-15 | Final version: 2023-03-27

Abstract

Informal housing areas exist in most cities of the world, in both advanced and developing countries. Despite the efforts of countries to eliminate them, this pattern still exists. The urban spaces in these areas are social spaces with a mix of cultures and values and have many possibilities for improvement. Place-making is a quiet movement that reinterprets public spaces as the heart of society. Using space-making in urban spaces in informal housing areas can realize many benefits in many social, economic, or environmental aspects that contribute to improving and developing those areas. The research aims to study the relationship between place-making criteria and the inhabitants' characteristics of informal housing areas to confirm the importance of using the place-making approach in developing urban spaces in those areas and making them more efficient. A questionnaire was conducted on inhabitants of one of the informal areas in Tanta city, Egypt -on the outskirts of the city- and analysed statistically by SPSS. The analytical study shows a certain relation between place-making criteria and the inhabitants' characteristics of informal housing areas. So, the research suggests using the place-making approach in informal housing areas as an entry point for development and creating good places that improve the urban environment in such areas.

Keywords: informal housing areas; place-making; urban spaces; successful places

Citation

Mehanna, W. & Mehanna, W. (2023). Place-Making as an Approach to Develop Informal Housing Area's Urban Spaces. *ACE: Architecture, City and Environment*, 18(52), 11833. <https://dx.doi.org/10.5821/ace.18.52.11833>

Place-making como enfoque para desarrollar los espacios urbanos de las zonas de vivienda informal

Resumen

Las zonas de viviendas informales existen en la mayoría de las ciudades del mundo, tanto en los países avanzados como en los que están en vías de desarrollo. A pesar de los esfuerzos de los países por eliminarlas, este modelo sigue existiendo. Los espacios urbanos de estas zonas son espacios sociales con una mezcla de culturas y valores y tienen muchas posibilidades de mejora. El place-making es un movimiento silencioso que reinterpreta los espacios públicos como el corazón de la sociedad. Utilizar el space-making en los espacios urbanos de las zonas de viviendas informales puede reportar muchos beneficios en muchos aspectos sociales, económicos o medioambientales que contribuyen a mejorar y desarrollar esas zonas. La investigación pretende estudiar la relación entre los criterios de creación de espacios y las características de los habitantes de las zonas de viviendas informales para confirmar la importancia de utilizar el enfoque de creación de espacios en el desarrollo de los espacios urbanos de esas zonas y hacerlos más eficientes. Se realizó un cuestionario a los habitantes de una de las zonas informales de la ciudad de Tanta, Egipto -en las afueras de la ciudad-, y se analizó estadísticamente mediante SPSS. El estudio analítico muestra cierta relación entre los criterios de creación de lugares y las características de los habitantes de las zonas de viviendas informales. Así pues, la investigación sugiere utilizar el enfoque place-making en las zonas de viviendas informales como punto de entrada para el desarrollo y la creación de buenos lugares que mejoren el entorno urbano en dichas zonas.

Palabras clave: zonas de vivienda informal; place-making; espacios urbanos; lugares de éxito

¹ PhD, Lecturer at Department of Architecture, Faculty of Engineering, Tanta University, Tanta, Egypt (ORCID: [0000-0003-0358-8201](https://orcid.org/0000-0003-0358-8201); Scopus Author ID: [57211413039](https://scopus.org/57211413039)), ² PhD, Lecturer at Department of Architecture, Faculty of Engineering, Tanta University, Tanta, Egypt (ORCID: [0000-0001-5122-9305](https://orcid.org/0000-0001-5122-9305); Scopus Author ID: [57211413040](https://scopus.org/57211413040)). Contact e-mail: wesam.mehana@f-eng.tanta.edu.eg

1. Introduction

Handling the emergence of informal settlements is one of the fundamental challenges of urban urbanization. Although the efforts exerted by various countries, whether developed or developing, to analyse, develop and solve the problems of these areas, most of the proposals and actions have not led to effective solutions, and these areas remain as a problem for cities. According to UN-HABITAT (2016), 1 out of 8 people live in informal housing areas, and this number is increasing rapidly; if no action is taken, the population of informal housing areas will reach 3 billion by 2030 (UN-HABITAT, n.d.).

The problem of informal settlements is one of the main issues in Egypt, as it is an economic, social, and urban problem that negatively affects the urbanization of the region itself and the surrounding areas. Informal housing areas in Egypt take several forms: expansion on privately owned agricultural land, often at the urban periphery (representing 80% of informal urbanization in Egypt), where informal urban growth has consumed about one-sixth of the country's traditional agricultural land, informal settlements on state-owned lands (representing about 20% of informal urbanization in Egypt), cemeteries and cities of the dead exist in Cairo and not common to other urban centres (Hegazy, 2016). Urban spaces in informal settlements are often chaotic, poorly planned and maintained, and sometimes completely missing, which increases stress and pressure for people living in crowded and inadequate conditions (PPS (Project for Public Spaces), 2012).

Upgrading of informal settlements mainly focuses on providing infrastructure, improving housing and providing various services, while the development of urban spaces does not take priority in these projects. Despite the importance of urban spaces in these areas, they are often poorly integrated and neglected during the development of processes, although investment in these places can create thriving spaces. Healthy public spaces are the starting point for revitalizing communities and stimulating economic development as they help build a sense of community, civic identity and culture (PPS, 2012).

place-making is an approach appropriate in any type of city but resonates especially with residents of informal settlements to solve their problems and reshape their environment. UN-HABITAT has recognized the potential of using place-making as a tool to meet social needs, economic development, and etc to promote and create a safe and good life in informal housing areas where it is an important element of renewal and redevelopment. However, it was only recently that the concept of place-making was introduced into the development of informal settlements in developing cities (PPS, 2012). Where UN- HABITAT and the Project for Public Spaces signed an agreement in 2011 that works to transform cities through place-making and public spaces. The United Nations Human Settlements Program, UN-HABITAT, was mandated to promote socially and environmentally sustainable towns and cities with the aim of providing adequate shelter for all (PPS, 2012). There are some studies and researches that have been concerned with studying the use of the place-making approach in areas of informal housing (Ex: Akbar, 2020; Akbar & Edelenbos, 2020; Bawole, 2009; Lombard, 2010; Lombard, 2014; Mpe & Ogra, 2014). In fact, Place-making in informal settlements has been little explored in literature. So, this study could contribute to the understanding of the concept.

Informal settlements are broad social processes, as they are initiatives made by people with their limited resources. They are consistent with the standards and principles of the place-making process. However, public spaces do not achieve the level required to make good spaces. Hence, the study aims to identify how to apply the place-making approach in informal housing areas and make good places in those areas to help with urban renewal and development. That's to explore the extent to which the standards of making places in informal housing areas (urban extension areas) are achieved through the presence of a set of elements in the urban spaces that are working to achieve them.

To investigate the impact of different characteristics of the population in informal housing areas - especially in urban sprawl areas - on the acceptance and satisfaction of the population with their area. The areas of urban sprawl, which represent the expansion of agricultural land, were chosen for the study because they represent the largest proportion of forms in Egypt, and it is estimated that between 1980 and 2025 nearly half of the agricultural lands in Egypt will be lost to informal settlements (Khalifa, 2015).

The research methodology followed an analytical approach, analysing and dropping the theoretical study of the criteria for place-making in urban spaces in terms of the acceptance and coexistence of the community in informal housing areas with the urban spaces in their areas. Through the choice of an informal housing area in the city of Tanta (East of Al-Qased Canal in the Al-Ghufran Mosque area), statistical descriptive analysis of data collected from data sources was performed using descriptive statistical tools. Conclusions and recommendations were drawn through the results of this analysis.

2. Informal settlements areas

2.1 *The concept of informal settlement*

Informal housing areas emerge because of the gaps between supply, demand, and legal and official supply in the housing market. It is a type of housing outside of the official supervision of planning and administrative organizations, emerging as an urgent need and becoming a reality (Mehanna, 2015).

Many definitions of informal housing have been developed based on many studies of competent official authorities. UN-HABITAT (2007) defines informal housing areas as densely populated slums characterized by substandard housing, lack of tenure, and access to basic services (such as water and sanitation, etc); often, their structure does not comply with the minimum standard planning and building regulations but is a response to the affordability of housing that meets legal requirements (Mpe & Ogra, 2014). The United Nations classifies informal settlements in two ways: first, they do not meet housing standards and requirements, and they are unplanned and urbanely low; and second, they are residential areas built illegally by landlords on land that are not owned by them (Mehanna, 2015; Mngutyó & Jonathan, 2015).

Urbanization is a transformative process; informal settlements in urban areas in developing countries develop because of rapid urbanization (García-Villalba, 2014; Mngutyó & Jonathan, 2015), in situations where governments cannot deal with the housing needs of the population or providing various infrastructure and facilities (Mngutyó & Jonathan, 2015), while also witnessing increasing land prices. In addition to increased pressure on public services and changes in spatial composition, governments cannot keep up with increasing demand considering resource scarcity.

These areas are characterized by the poor infrastructure state of drinking water, sanitation, electricity, roads, and housing (Kamalipour, 2016; Mngutyó & Jonathan, 2015) and are therefore described as areas of deprivation, environmental degradation, and poverty, as well as being illegal, irregular, marginal, and uncensored independent areas (Cantada, 2015) that are created by the private sector on their own lands or lands usurped from the state, often outside the city's cordon without planning or authorization (Mehanna, 2015).

Informal settlements are usually seen as a problem primarily because of their association with poverty, irregularities, and marginalization (Lombard, 2010), as well as in isolation from other areas, but they are an integral part of the city physically and functionally (Lombard, 2010).

Some theorists have emphasized that such settlements are considered complex and changing social processes that play a role in creating complex spatial arrangements (Lombard, 2010), as informal settlements are developed through the initiatives, imagination, and limited resources of the people living within them (Beza & Hernández-García, 2014).

Abu Zayd Rajah identified them as the areas where a segment of society took the initiative and solved its housing problems by itself, outside the influence and intervention of official authority, with limited financial means (Mehanna, 2015). As Roy (2011) points out, as areas of vibrant urban living, housing, and expansion, these spaces are not only a product but also a process that requires an advanced understanding of how they function in terms of the morphologies of urban informality (Kamalipour, 2016).

By applying Henri Lefebvre's theory, urbanization in informal areas is understood as a process through which a tightly interconnected community combines a complex lifestyle of individuals to coexist and live together (Mahmoud & Elrahman, 2016). Huchzermeyer also believes that these areas are not just a group of individual families that have found a solution to their individual housing needs but a collective effort to secure access to land and shelter (Huchzermeyer, 2004).

Viewing these settlements as social processes provides a broader view of these places and the sociopolitical and dynamic relationships that occur within them, as well as their established spatial, technical, and legal aspects (Lombard, 2010).

2.2 *Urban spaces in informal housing settlements*

The urban spaces in informal settlements spontaneously form during the development of unplanned houses, which do not have specific patterns and forms but are used by the population effectively (Bawole, 2009).

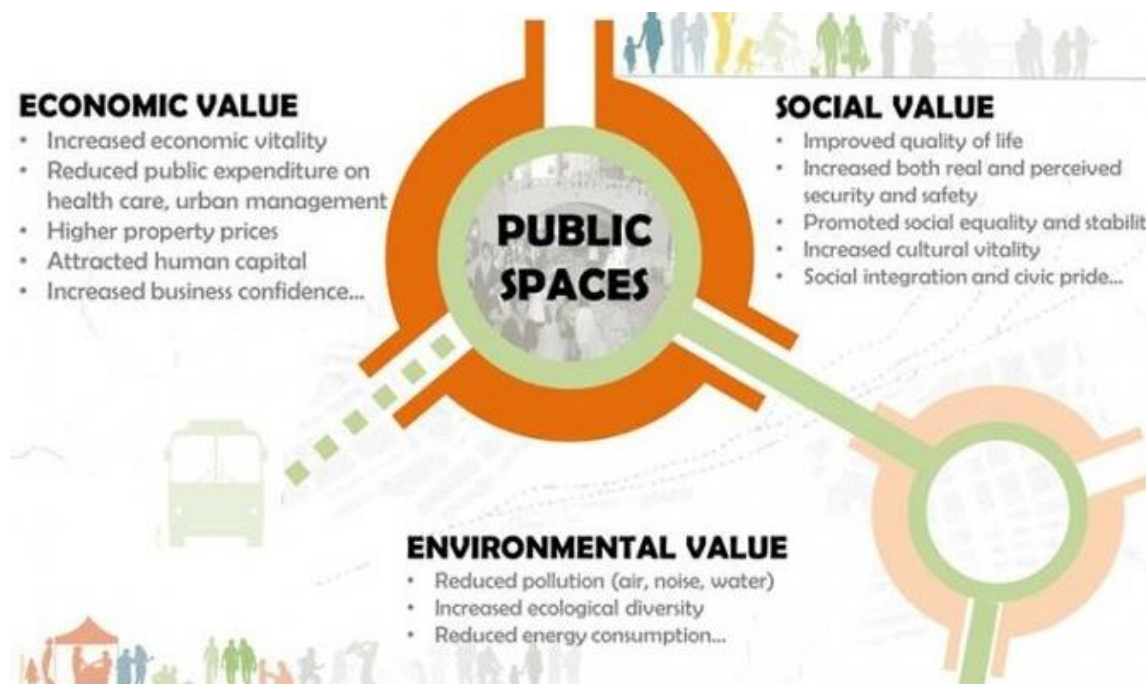
These spaces are characterized by high flexibility and diversity of uses and their differences may change on a daily, weekly, or monthly basis, with the ability of users to keep a level of adequacy of the quality of the space to practice different activities within it. These activities that take place within it benefit from an extension of the space overlooking it and have a close relationship with the group of users, increasing its effectiveness.

Urban spaces in informal settlements are an extension and continuity of closed and proprietary utilitarian living spaces (Al-Hagla, 2003) that are dominated by living spaces where social relations highly interrelate. This type of space is considered (an ecosystem), or a closed system, where everyone helps and depends on others (Mahmoud & Elrahman, 2016). These spaces are the scene of most behavioural interactions in these areas, and they are at the heart of social circumvention on several levels, allowing them to play their role in regulating all kinds of interactions (social, economic, environmental..) (Al-Hagla, 2003).

These spaces lead people belong to and share the neighbourhood as a common unit between them, which can encourage a return in participating in voluntary collective work at the level of the assembly (Mahmoud & Elrahman, 2016).

Cities recognize the numerous benefits that public spaces provide, including centres of social interaction and cultural expression, engines of economic development, improved health, accessibility and safety, environmental sustainability, increased citizen participation, and a sense of ownership (Cantada, 2015) (Figure 1).

Figure 1. Benefits of public spaces informal housing settlements



Source: Cantada, (2015).

One of the most important problems for urban spaces in informal settlements that hinders them from fulfilling their role is that any development processes are based on making the most of building surfaces at the expense of urban spaces. Therefore, there is no room to consider the spatial construction of the area. The random structure of the building blocks makes them confine among themselves spaces characterized by randomness, which is an inappropriate field for developing a sense of place (Al-Hagla, 2003).

3. Place-making

3.1 *The place-making concept*

Place-making is a concept that uses social and political processes to create value and meaning in a particular environment (Beza & Hernández-García, 2014; Mngutyo & Jonathan, 2015). It is a daily social process for building and reconstructing an urban space (Lombard, 2010), in which a specific sociopolitical-geographical community engagement process takes place where the value and meaning of preparation are used as a platform for achieving positive results related to the public space (Beza & Hernández-García, 2018).

It is inherently political, as it involves (relative) sets of conceptual places with individual experience that are grouped, re-established and selectively expressed through space frameworks to achieve social and political goals that lead to the participation of the place strategy (Zhang, 2018).

The place-making process extends from the construction and improvement of public spaces to concerns such as those of community health and safety, social justice, equality, sustainable economic redevelopment, capacity-building initiatives, tourism, art, and culture to create a sense of ownership and belonging to the place (Behera, 2017).

The place-making process is a human-centred urban transformation process (Behera, 2017), within which human activity is fundamental and constitutes the activities of citizens who, directly or indirectly, take part because of their right to direct and influence the creation of public spaces (Beza & Hernández-García, 2014; Mpe & Ogra, 2014). Their knowledge, wisdom, and experience bases are used to improve and maintain public spaces. Place-making is a collaborative process that involves the community, stakeholders, and government (Beza & Hernández-García, 2018). It forms and improves public spaces in cities to increase the common value (PPS, 2018; Archer, 2014) and helps to strengthen the connection between the people and places they share in an empowering way (Behera, 2017; Beza & Hernández-García, 2018; PPS, 2018; Lombard, 2014).

Place-making not only provides direct friction but also social capital, defined by Robert Putnam as the links between individuals—social networks, the rules of reciprocity, and trustworthiness that arise with them (Silberberg et al., 2013). Therefore, place-making brings communities closer together and achieves a common vision (Behera, 2017).

Place-making is not a new approach; Jane Jacobs and William H Whyte introduced it in the 1960s as an incremental process for improving the safety, comfort, attractiveness, and liveliness of public spaces to create more people-oriented places (PPS, 2000), as bottom-up processes represent a type of participation in which people act directly to improve their environment (Seve, B. et al., 2023). The planners used it in the 1970s to explain their work of developing attractive public spaces where people want to spend time (Faga, 2006). This term re-emerged in the 1990s due to the new urbanization movement, and it aimed to revitalize the community to eliminate isolation and degradation in urban neighbourhoods (Schaefer-Borrego, 2017).

Place-making can be considered both a process and a tool, as a process that involves interventions by specialists to provide order and the physical form of space that influences user groups to create a common goal and vision. As a tool, it helps designers understand how users value and relate to a place to promote affiliation with the urban environment (Vardhan, 2019).

3.2 *Place-making principles: (Archer, 2014; Council, M. P., 2008; PPS, 2018; Mpe & Ogra, 2014)*

There are several key principles by which public spaces can be transformed into vibrant community spaces. It can be summarized as follows:

1. The community is the expert: Community members can provide a historical perspective, insights into how the area works, and an understanding of the problems and what is useful for people, as they deal with these issues regularly.
2. Create a place, not a design: The most important factors of design success are providing access, creating uses, economic opportunities, and the presence of physical elements that make people feel welcome and comfortable with effective relationships with the surrounding activities, as although the design is an important component in creating a place, it is not the only factor.
3. Look for partners: Partners such as local institutions, governments, and individuals can ensure the success of the venue by providing ongoing support, both financial and political, and planning activities.
4. You can learn a lot just by observing: Look at how people use public spaces, determine what they like, and assess what makes them work or not. You need to follow up on observation after improvement to see how the place has developed to manage it over time.
5. Have a vision: The vision of a public space carries its character, activities, uses, and meaning in the community. This vision must be determined by the people living or working in or near the space so that individuals feel proud and desire to be in the space.

6. Experiment: Lighter, Quicker, Cheaper: These characteristics provide flexibility to expand the space by experimenting, evaluating, and integrating results into the next steps. Long-term planning and short-term improvements can be tested and refined.
7. Triangulate: Testing and arranging different items in public spaces with each other can bring people together, for example, the seat, trash can, and coffee booths placed near the bus stop form synergistic rings, and passengers will be more willing to wait for busses than if they are isolated from each other.
8. They always say, "It can't be done.": every community has naysayers, and when ideas stretch out of reach of any organization or its jurisdiction officials, say it cannot be done. Therefore, by starting at a small scale, minor improvements can help to overcome larger obstacles.
9. Form support functions: Input from the community and partner advice on how places work and the way they need to be done should be actively considered when designing or rehabilitating a space.
10. Money is not the issue: Costs should be widely viewed and compared to benefits.
11. You are never finished: Responding to the community's needs, opinions, and changes mean that the challenge is developing the ability to respond effectively.

3.3 *The importance (benefits) of place-making*

Place-making not only creates better spaces for people but also develops a community narrative, wherein public spaces become part of everyday life and create emotional connections to places that strengthen community (Council, M. P., 2008).

The benefits of place-making are summarized below:

Community goals:

- Enriching the quality of life of society through development, whether social, economic, civilized, etc.
- Realizing community sustainability through continuous maintenance and reinvestment.
- Increasing social capital and enhance belonging to the place.
- Involving the community in decision-making.

Design objectives (urban):

- Promoting clarity and harmony and supporting authenticity and diversity.
- Emphasizing flexibility where it is easy to change and develop.
- Bringing vitality to the pulse of the place.
- Promoting continuity and containment and achieving interconnection between neighbourhoods.

Functional goals:

- Reviving the local area by respecting the past and connecting with the present.
- Providing easy access and easy movement within the place.
- Developing and upgrading places.
- Creating multiple jobs and functionally adapted places.

Security objectives:

- Enhancing safety and security.
- Developing social spaces that motivate people to communicate.

Aesthetic goals:

- Reviving the material and moral values and symbols associated with the place.
- Maintaining the identity of the place and highlighting it.
- Enriching the place architecturally to make it more beautiful.

3.4 Place-making process challenges

Place-making is an urban planning tool. It cannot be generalized as a single model to be applied to all places and for all areas, as each neighbourhood and street in a city is different and requires its own specific approach. Among the most important challenges facing creating space are people, place, and time (Behera, 2017). Some of these challenges are presented below: (Behera, 2017; Silberberg et al. 2013; Strydom et al. 2018):

- Place-making is often a difficult process because there are many marketing activities. Presenting an idea to people and gaining their support requires different skills. In addition, there is a lack of understanding of the benefits of place-making by public officials, local representatives, and even some professionals.
- A gap in knowledge and experience can cause a place-making project to fail, as the public community must be known inside and out, and obtaining a real community expert is a difficult process.
- Community participation is essential to the success of the project. It requires intensive work, and participants and stakeholders must be carefully selected. Another potential challenge is the lack of coordination among stakeholders and the lack of strong management.
- Regulations and policies are a serious challenge, as the project can be rejected because it is not policy aligned which often does not change or adapt well.
- The place-making process is expensive, and therefore reliable sources of financing are necessary at all stages of the project, whether to cover costs or maintenance and operation.
- Like all other planning and design processes, the place-making process takes a long time, to carry out processes such as bringing together stakeholders, examining the context, communicating opinions, etc.

3.5 Place-making approach criteria (Abd El Gawad et al. 2019; Council, M. P., 2008; PPS, 2018)

According to the evaluation of many cases of vital public spaces around the world, there are four criteria for place-making to make successful places (Figure 2).

Figure 2. Benefits of public spaces informal housing settlements



Source: PPS. (2018).

1. Access and links: The space is visually or physically connected with its surroundings, is easy to access and navigate within, is well connected to surrounding buildings through sidewalks and streets and can be seen closely inside.
2. Comfort and image: Individuals' sense of space in terms of security, safety, and cleanliness includes seating. This determines whether the place will be used.
3. Uses and activities: The primary reason people use the place, and places can be distinguished from each other. A variety of carefully selected activities can attract different groups of people during the day.
4. Sociability: A sense of willingness to interact with strangers as well as with friends and neighbours, generating a sense of space strength and connection with the community. This determines how people use space in groups or individually.

4. Place-making in informal settlements

The exploration of informal settlements through place-making aims to understand the sociospatial processes of place construction in this context as a reaction to gaps in the typical urban theory for specific types of places through dominance processes of knowledge production.

Emphasis on creativity and interaction are both critical to building spaces that make sense for communities (Lombard, 2014; Mpe & Ogra, 2014). Place-making is a comprehensive idea and a practical tool for improving areas where it has the potential to be one of the most transformative ideas (Mngutyo & Jonathan, 2015). It involves the collective formation of the public domain to increase shared value through the planning, design, management, and programming of public spaces (Mngutyo & Jonathan, 2015).

It is only recently that place-making has been introduced in developing countries for the development of informal settlements. In 2011 UN-HABITAT has recognized place-making's use as a tool that serves human social needs and economic development, enhances quality of life, and creates safe and prosperous neighbourhoods in informal settlements (PPS, 2012).

By using place-making in informal settlements, governments can reduce poverty and improve the living conditions of their populations. It is a way to address weaknesses, create local economic activity, and pay attention to a place and its meaning and association with communities. The meaning of places in informal settlements is understood by the population involved in its creation, thus contributing to the production of knowledge about places and effective development (Mpe & Ogra, 2014; Lombard, 2014).

5. Materials and Methods

5.1 *Materials (Case study)*

The total area of informal housing in the Arab Republic of Egypt is 160.8 thousand acres spread across 226 of the 234 cities, representing 38.6% of the urban mass of the cities of the Republic. The total area of unplanned informal housing areas in the Republic is 156.3 thousand acres (97.2% of the total informal housing areas), while the total insecure areas cover 4.5 thousand acres (2.8% of the total area of the areas) (Central Agency for Public Mobilization and Statistics, 2016).

According to Central Agency for Public Mobilization and Statistics (2016), Informal housing areas in the Arab Republic of Egypt share many characteristics and features that make them different from other urban areas in cities, although their features vary in intensity from one area to another. These characteristics are summarized as follows:

- Basic characteristics of the dwelling, which reflect the economic and social realities of the population: in such areas, several families are present in the housing unit with participation in public goods, and the average number of rooms in the house is approximately 2.7 rooms; there is also a spread of garbage in the streets that is not disposed of properly.
- Household characteristics, which are affected by the quality of individuals within the family and their economic and social characteristics, note the large size of the family members in those areas with a low level of education and high unemployment rates. Likewise, there is low income and high migration to these areas.
- In terms of the availability of services, these areas suffer from a low level of services and low levels of quality and efficiency.

The Delta region comes to the forefront in terms of the number of informal housing areas. The total area of informal housing in Al Gharbia governorate is estimated to be 6771.5 acres, which is equivalent to 61% of the urban mass of the governorate (Central Agency for Public Mobilization and Statistics, 2016), and, according to the central agency for public mobilization and statistics and the Ministry of Urban Development, is distributed in 47 areas inhabited by 868.317 thousand people, representing 74% of the total urban population (Mehanna, 2015).

The informal housing areas in Al Gharbia governorate are divided into 8 cities, with the total unplanned area being 6670.7 acres, representing 98.5% of the total area of unplanned areas in the governorate (4.3% of the total area of unplanned areas in the Republic), while unsafe areas (12 areas) occupy approximately 100.8 acres, accounting for 1.5% of the total area of informal housing areas in the governorate (2.2% of the total of the republic's unsafe areas) (Central Agency for Public Mobilization and Statistics, 2016). (Table 1)

Table 1. Distribution of unsafe informal areas according to the degree of risk in Gharbia Governorate in 2016

Informal areas risk degree in Gharbia Governorate	Number of areas	Number of units	Area (acres)
First degree	0	0	0
Second degree	8	2570	46.6
Third degree	1	306	16.4
Fourth degree	3	540	37.8
Total	12	4416	100.8

Source: Central Agency for Public Mobilization and Statistics. (2016).

Tanta is the capital of Gharbia Governorate, located in the heart of the Delta, 92 km north of Cairo. It is one of the most densely populated cities. Its area is approximately 4,575.2 acres, and the population in 2022 is about 515,000. For Tanta city, both the growth prospects of the city and the limited expansion trends have contributed to the emergence of informal housing areas in the city, as there is little chance of obtaining housing either from the public or official sectors.

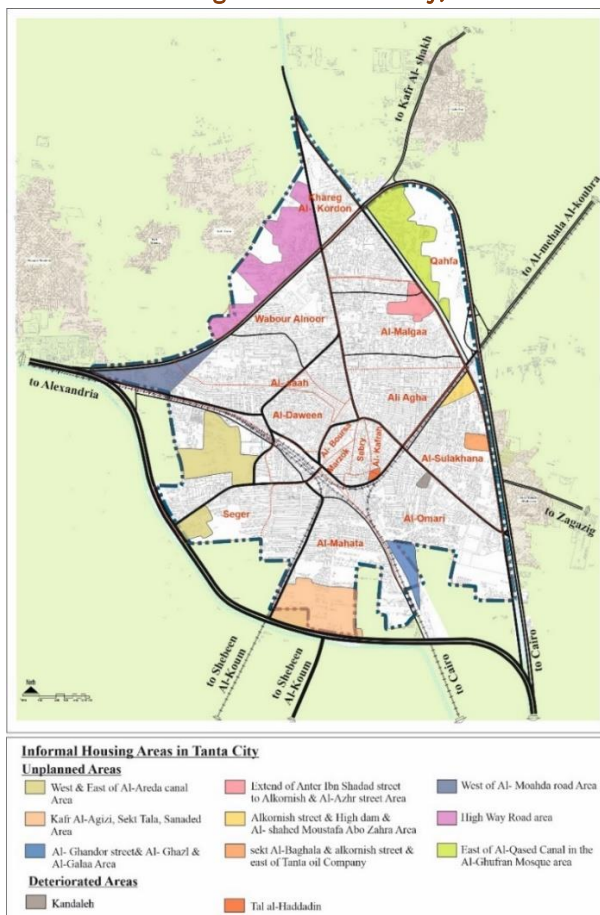
The lack of a comprehensive urban growth scheme for the city structure has also made urban growth easier, in addition to the lack of laws regulating urban sprawl and expansion with no control over urban growth processes and the rise and fall of land prices within the city on the periphery (Mehanna, 2015).

According to the general strategic plan of the city of Tanta, the number of informal housing areas in the city is 11 (9 unplanned areas, 2 degraded areas), and their total area is estimated to be 416.7 acres, representing 11.6% of the total urban mass (Mehanna, 2015). The distribution of informal housing areas in the city varies among its neighbourhoods, and their distribution is scattered and unequal. There is an inverse relationship between small administrative districts and the area of informal housing areas, and there is a direct relationship between large administrative districts and the population size among informal housing areas (Mehanna, 2015). The city's informal housing areas are distributed as follows:

- Tanta city's first district is concentrated in 4 areas spread over three neighbourhoods: Al-Dawaween, Seger, and Al-Mahata, with an area of 242 acres, accounting for 39.3% of the total area of the neighbourhood.
- Tanta's second district has 5 areas concentrated in 4 neighbourhoods: Al-Omari, Al-Malgaa, Qahfa, and Al-Sulakhana, with an area of 282 acres, and accounting for 50.6% of the total area of the neighbourhood.
- The two deteriorating areas are located in Tal al-Haddadin and Kandaleh.

These areas are distributed along roads, railways, and canals, such as Al-Moahda Road and Al-Qased Canal. They also occupy areas of religious origin, as well as areas next to industrial activities. This contributes to the easy accessibility and ease of connection of these areas with the rest of the city (Mehanna, 2015) (Figure 3).

Figure 3. Informal housing areas in Tanta city, Gharbia Governorate

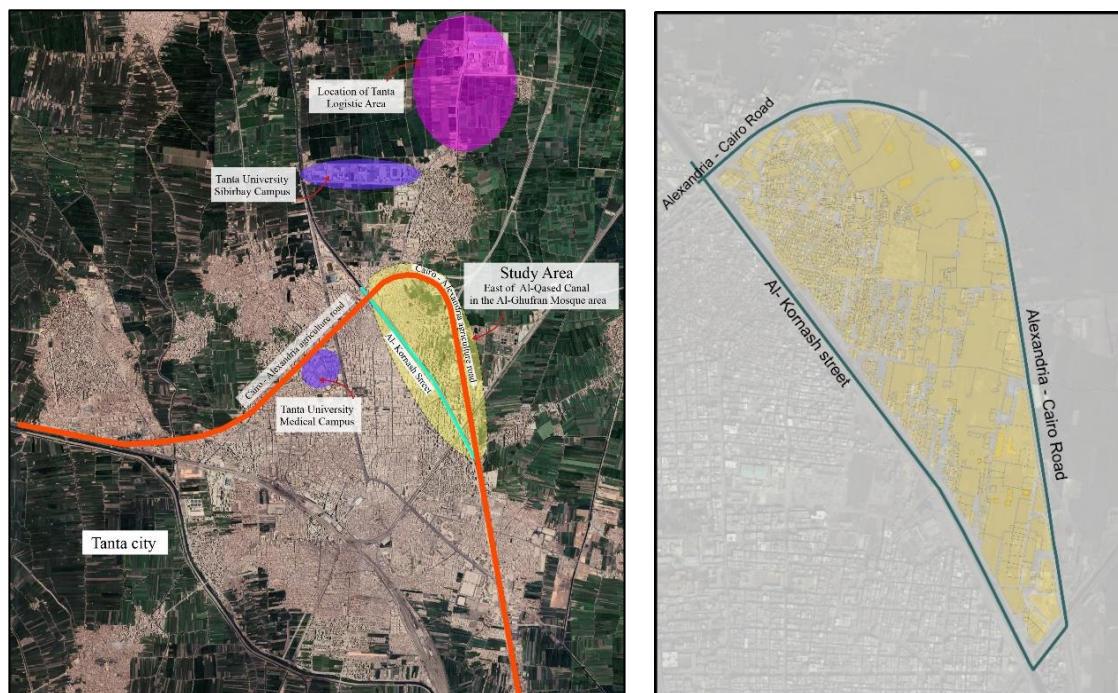


Source: Authors.

The area East of AL-Qased Canal in the AL-Ghufran Mosque area was chosen as one of the informal housing settlements in the urban sprawl areas in Tanta as it is on a main road, which is Cairo-Alexandria Agricultural Road, and one of its determinants is Kornash Street, which is an important axis that is currently being developed in the city. There is also a large urbanization movement in the region. It is also the closest informal housing area of the city to the logistics district.

East of AL-Qased Canal area in the AL-Ghufran Mosque area (Quhafa - Second district) is approximately 30 acres, equivalent to 0.6% of the city's total area, that is occupied by approximately 4650 people (1860 family). It is one of the unplanned areas that is located on agricultural land without a licence and is in violation of planning standards (Mehanna, 2015) (Figure 4), (Table 2).

Figure 4. Map of the East of the AL-Qased Canal area in the AL-Ghufran Mosque area



Source: Authors.

Table 2. General information about the East of the AL-Qased Canal area in the AL-Ghufran Mosque area

East of the AL-Qased Canal area	
district	second
Informal housing area location	East of AL-Qased Canal in the AL-Ghufran Mosque
Distance from city core (Km)	2.9
population	4650
Number of housing units	1860
Area (acre)	31
% From city total area	0.6

Source: Mehanna (2015).

The area is characterized by mixed land uses, average building conditions, and poor exterior finishes, and the average building height is 4–5 floors. It also suffers from a lack of services, and its residents are not satisfied with the health, recreational and educational services.

The area is dominated by compact appearances and a lack of organization. For instance, the percentage of narrow streets in the area is 30%, and the roads are subjected to narrowness and torsion because they are affected by the ownership system of the agricultural lands on which they were built. The absence of planning has led to zigzagging streets and the emergence of blocked lanes (Mehanna, 2015). Urban spaces and public spaces in the study area represent public–private transition zones. These spaces are often virtually for anyone. There are no barriers to entry, and they attract people who live around or near them as well as people who have interests in them.

5.2 Methods

The study is based on quantitative data and results to achieve the research objective. A questionnaire was designed to collect the required data. It included a number of questions derived from theoretical studies and literature on place-making, and it was divided into three groups. The first group aimed at collecting general information about the sample members, including gender, age, marital status, educational status, and income level. The second set of questions examined the extent to which individuals perceive and understand their urban spaces. In addition to measuring their willingness to participate in projects to develop their places (their urban spaces) and create good places within their built environment. The third and final section aims to investigate the four criteria for place-making (access and connectivity, comfort and image, uses and activities, sociability) to consider how and to what extent these criteria are achieved in the informal housing area under study. Thus, contributing to understanding what the region needs when developing its spaces using place-making approach. Each section was scored according to the Likert scale, which is a five-level assessment tool for recording the answers of the study sample.

The questionnaire was tested on a random sample of 10 residents of the study area, and according to the experimental test, the questionnaire was prepared in its final form.

The study relied on selecting a random sample of the inhabitants of the study area to participate in the questionnaire. Referring to the literature on scientific research methodologies, it was discovered that most studies should use a sample size between 30: 500 (Elkhateeb, 2009), and (Alian, 2001) also indicated that studies that attempt to determine the correlation coefficient between two phenomena should use a sample size between 50: 100. The sample size of the study area (the East of the Al-Qased Canal area in the Al-Ghufran Mosque area) was estimated with 95% confidence and a margin of error of 9%, accordingly, it was found that the sample size should not be less than 112 (<https://www.calculator.net/sample-size-calculator.html>).

The questionnaire was conducted on a sample of 130 inhabitants representing the local community in the East of Al-Qased Canal area in the Al-Ghufran Mosque area district of Tanta, where the participants were limited to the residents of the area. The sample included a wide range of different categories available among members of the community. The questionnaire was distributed face-to-face by the authors. The results of the questionnaire were analyzed statistically by SPSS software. The following tests were conducted.

- Using Pearson correlation coefficient to measure the statistical impact of each section of place-making criteria on achieving place-making objectives.
- Independent sample T-test and one-way ANOVA test were used to study the relationship between inhabitants' characteristics in the study area and place-making criteria.
- An Independent sample T-test was used to determine the relationship between gender and place-making criteria. As, it compares the mean of two groups (male, and female) to determine whether the gender of inhabitants actually has an effect.

- One-way ANOVA test examines if there were any statistical differences between the two or more categorical groups. So, it was used to look at the relationship between (age, social status, level of education, and level of income) and place-making criteria as it compares the effect of an independent variable on multiple dependent variables. All of that will help to understand which of the independent variable (inhabitants' characteristics) have a connection to the dependent variable (place-making criteria).

The main limitations of the current study were, first, working with quantitative data. Second, although the sample size was appropriate, the sample was drawn from one district. Thus, the results may reflect the study area's community. Third, the lack of previous research studies on the topic.

6. Results and Discussion

The questionnaire was distributed to local residents in the east of the Al-Qased Canal area in Tanta city, and among the 130 people who participated in the survey, 59.23% were male and 40.77% were female. The ages of the participants ranged from less than 19 years to over 50 years old, with the following specifics (less than 19 years old 16.15%, 20 to 29 years old 36.92%, 30 to 39 years old 26.92%, 40 to 49 years old 13.85%, over 50 years old 6.15%).

The study sample included 57.69% married, 34.62% single, and 7.69% other social statuses (widower, divorced). The educational status of the study sample was 40% higher education, 43.08% technical education, and 16.92% other. Finally, regarding the level of income, the study sample was divided into 50.77 participants with low income, 40% with medium income, and 9.23% with high income. (Table 3)

Table 3. study sample characteristics

		N	%
Gender	Male	77	59.23
	Female	53	40.77
Age	Less than 19 years	21	16.15
	20 – 29 years	48	36.92
	30 – 39 years	35	26.92
	40 – 49 years	18	13.85
	More than 50 years	8	6.15
Social status	Married	75	57.69
	Single	45	34.62
	Otherwise	10	7.69
Level of education	Higher education	52	40.00
	Technical education	56	43.08
	Otherwise	22	16.92
Income level	Low	66	50.77
	Average	52	40.00
	High	12	9.23

Source: Authors.

The answers to the questions in the second group showed that 94.61% of the participants believed in the role of developing urban spaces in the study area for creating a good environment. Additionally, 94.62% confirmed that such a development helps to increase the sense of safety within the area. A total of 84.62% of the study sample expressed their desire and readiness to take part in projects that may be carried out to develop urban spaces in their region. The mean of the response for this set of questions was approximately 13.364, with a standard deviation of ±1.456.

These results confirm the concept of informal housing areas are complex social processes, whereby effective communities often share similar values and belief systems.

Thus, these individuals can be motivated to achieve mutual goals. When these individuals feel encouraged to provide input on an issue - as was done in the case study - they develop a sense of the importance of their opinions and thus become more likely to feel a sense of their community. Place-making process helps to raise this feeling among individuals, and therefore these results also confirm the importance of using this approach in the development and upgrading of these areas.

The results of the survey showed that the mean value of the four criteria was 17.3 with a standard deviation ± 1.936 for the access and communication standard, 17,388 with a standard deviation $\pm 1,719$ for the comfort and image standard, 17,008 for the standard of uses and activities with a standard deviation $\pm 2,140$, and 16,792 with a standard deviation $\pm 2,233$ for the sociability standard (Table 4).

Table 4. The numbers & the ratios of the answers of the questionnaire

	Very much agree		Agree		Rather		Don't agree		Don't agree very much	
	N	%	N	%	N	%	N	%	N	%
The development of urban spaces (streets, piazza and squares) helps to create a good environment	90	69.23	33	25.38	6	4.62	1	0.77	0	0.00
The development of urban spaces (streets, piazza and squares) helps promote a sense of security	54	41.54	69	53.08	6	4.62	1	0.77	0	0.00
In case of development of urban spaces (streets, piazza and squares) in your area would you like to participate	70	53.85	40	30.77	18	13.85	1	0.77	1	0.77
Access and links										
Users of nearby buildings use urban spaces (Streets, piazza and squares) in the area	76	58.46	43	33.08	10	7.69	1	0.77	0	0.00
There is a good connection between the urban spaces (Streets, piazza and squares) inside and outside the area	55	42.31	61	46.92	12	9.23	2	1.54	0	0.00
There are various transportation options to reach the urban spaces (streets, piazza and squares) within the region	53	40.77	51	39.23	24	18.46	2	1.54	0	0.00
What is inside the urban spaces (piazza and squares) in the area can be seen from the outside (the surrounding streets)	71	54.62	40	30.77	11	8.46	5	3.85	3	2.31
Comfort and image										
The place is good shading	80	61.54	46	35.38	4	3.08	0	0.00	0	0.00
There is an arrangement or schedule for cleanliness and maintenance carried out in the urban spaces (streets, piazza and squares) in the area from time to time	48	36.92	70	53.85	12	9.23	0	0.00	0	0.00
Urban spaces (streets, piazza and squares) in the area are safe for people and passers-by during transit	53	40.77	47	36.15	10	7.69	19	14.62	1	0.77
The urban spaces (streets, piazza and squares) in the area give a good initial impression	74	56.92	46	35.38	6	4.62	4	3.08	0	0.00
Uses and activities										
There are multiple services and activities within the urban spaces (streets, piazza and squares) in the area	85	65.38	37	28.46	7	5.38	1	0.77	0	0.00
There is a someone responsible for managing the urban spaces (streets, piazza and squares) in the area	58	44.62	59	45.38	12	9.23	1	0.77	0	0.00
Urban spaces (streets, piazza and squares) in the area are used by all ages	50	38.46	37	28.46	32	24.62	10	7.69	1	0.77
The location of urban spaces (streets, piazza and squares) affects the activities within them	58	44.62	35	26.92	32	24.62	5	3.85	0	0.00

Sociability										
People use the place (urban spaces) in the area frequently	56	43.08	36	27.69	37	28.46	1	0.77	0	0.00
Do you relate to the place and make friends in it	71	54.62	38	29.23	21	16.15	0	0.00	0	0.00
Urban spaces (streets, piazza and squares) in the region help create social interaction and create new friends	71	54.62	35	26.92	18	13.85	6	4.62	0	0.00
People keep the urban spaces (streets, piazza and squares) clean in the area and take care of them	51	39.23	37	28.46	33	25.38	4	3.08	5	3.85

Source: Authors by SPSS program.

Regarding the criterion of access and communication, 80% of the respondents expressed their agreement that there is ease and connectivity in the area and that there are different means of transportation to reach it. However, there is a shortage of public transport stops or places within the area. Additionally, 85.39% of the participants stated that the various urban spaces inside the area could be easily seen from outside.

In regard to the comfort and image criterion, 96.9% noted the availability of shadows within the different urban spaces in the study area. Although the percentage of their approval of their sense of safety within urban spaces during traffic is high at 76.92%, it is the lowest satisfaction rate in this criterion due to several reasons such as lighting, finishing the floors, etc. It is possible to provide greater security by installing light poles, taking care of sidewalks for pedestrians, providing enough seats to sit in the squares, working on creating green spaces, and other elements that enhance the sense of security.

Regarding the uses and activities, 93.8% of the study sample indicated their agreement that there is a mix in the various activities and uses within the region. In addition, 71.5% agreed on the impact of the available urban space on the activities in these spaces, as smaller street widths or urban spaces lead to fewer activities in the area.

Finally, regarding the sociability criterion, 81.5% of the participants expressed their agreement that the urban spaces in the area helped them create social interaction with each other.

Participants' replies and responses to the questionnaire show their affiliation and satisfaction with their places because the area was built through them. Therefore, the deficiencies of some aspects of the region did not significantly affect their satisfaction with life in the district.

The Pearson correlation coefficient was used to measure the relationship between the four place-making sections and good place-making objectives to determine the statistical impact of each section on achieving good places. It was found that the correlation coefficient of all sections is significant with a positive value. All criteria had a P value above 0.01 (Table 5).

Table 5. The correlation between each part of Place-making criteria and good place-making objectives

Place-making's criteria	Total score		
	Pearson Correlation r	P-value	Order
Access and links	0.752	<0.001*	4
Comfort and image	0.778	<0.001*	3
Uses and activities	0.854	<0.001*	1
Sociability	0.799	<0.001*	2

Source: Authors by SPSS program.

From the previous table, the most effective criterion in the place-making approach in the study area is the criterion of activities and uses, with a high Pearson correlation coefficient value of 0.854. Therefore, it has a strong and parallel relationship with making good places with urban spaces in the study area. The second most effective criterion is sociability with a value of 0.799, then followed by comfort and image at 0.778, and access and connectivity with a value of 0.752. The adoption of a place-making approach in developing this informal area depends mainly on the arrangement of the four criteria as follows: activities and uses, sociability, comfort and image, access, and connection.

To investigate the statistical indications between the demographic characteristics of the residents of the study area as one of the informal housing areas in Tanta city and the different criteria for making places, T test and ANOVA were conducted, and the results were as follows:

Table 6 shows the results of the independent samples t-test. There was a significant difference in the score agreement of males with the comfort and image criterion (M=17.610, SD= ±1.664) and for females (M=16.943, SD= ±1.737); t =2.207, p = 0.029. The results indicate a p value less than 0.05 (with a significance (alpha) level of 0.05).

Table 6. The result of independent samples t-test to detect differences according to the gender variable

Place-making's criteria	Gender						T-Test	
	Male			Female			t	P-value
	Mean	±	SD	Mean	±	SD		
Access and links	17.195	±	2.090	17.453	±	1.693	-0.746	0.457
Comfort and image	17.610	±	1.664	16.943	±	1.737	2.207	0.029*
Uses and activities	17.221	±	2.198	16.698	±	2.034	1.373	0.172
Sociability	16.870	±	2.510	16.679	±	1.773	0.477	0.634

Source: Authors by SPSS program.

A one-way ANOVA was performed to compare the effect of age variables on their response to different place-making criteria. (Table 7) revealed that there was no statistically significant difference due to the age variable. The calculated significance values for each of the four criteria were greater than the significance level of 0.05.

Table 7. The result of one-way ANOVA to compare the effect of age variables on place-making criteria

Place-making's criteria	Age												ANOVA				
	Less than 19 Years			20-29 Years			30-39 Years			40-49 Years			Over 50 Years			F	P-value
	Mean	±	SD	Mean	±	SD	Mean	±	SD	Mean	±	SD	Mean	±	SD		
Access and links	16.857	±	2.516	17.042	±	1.935	17.457	±	1.521	17.611	±	2.004	18.625	±	1.188	1.631	0.171
Comfort and image	17.333	±	1.826	17.208	±	1.786	17.257	±	1.462	17.944	±	1.731	17.125	±	2.167	0.672	0.613
Uses and activities	17.095	±	2.278	16.854	±	2.144	16.629	±	2.170	17.778	±	2.016	17.625	±	1.768	1.097	0.361
Sociability	16.667	±	2.309	16.729	±	2.285	16.429	±	2.004	17.389	±	2.615	17.750	±	1.669	0.946	0.440

Source: Authors by SPSS program.

For the social status of the study sample (Table 8), a one-way ANOVA test shows that there are no statistically significant differences between the means of the responses according to social status except for the sociability criterion. There was a significant effect of social status on their response to sociability as one of making place's criteria at the p<0.05 level for the three conditions [F (2, 127) = 4.977, p = 0.008]. The mean score for married couples was 16.88, followed by single people at 16.28, while the highest response for other couples (widows and divorced) was 18.60, with a standard deviation of ± 2.079, ± 2.258, and ± 1.932, respectively.

Table 8. The result of one-way ANOVA to compare the effect of social status variables on place-making criteria

Place-making's criteria	Social status									ANOVA	
	Married			Single			Otherwise			F	P-value
	Mean	±	SD	Mean	±	SD	Mean	±	SD		
Access and links	17.427	±	1.764	16.978	±	2.231	17.800	±	1.687	1.120	0.330
Comfort and image	17.413	±	1.771	17.067	±	1.750	18.000	±	0.816	1.383	0.255
Uses and activities	17.120	±	2.079	16.644	±	2.258	17.800	±	1.932	1.446	0.239
Sociability	16.880	±	2.199	16.244	±	2.268	18.600	±	1.174	4.977	0.008*

Source: Authors by SPSS program.

In regard to level of education, a one-way ANOVA was conducted. It is clear from Table 9 that there was no statistically significant difference due to the level of education variable. The calculated significance values for each of the four criteria are greater than the significance level of 0.05.

Table 9. The result of one-way ANOVA to compare the effect of level of education variables on place-making criteria

Place-making's criteria	Level of education									ANOVA	
	Higher education			Technical education			Otherwise			F	P-value
	Mean	±	SD	Mean	±	SD	Mean	±	SD		
Access and links	17.462	±	1.776	16.964	±	2.000	17.773	±	2.069	1.698	0.187
Comfort and image	17.442	±	1.955	17.143	±	1.381	17.591	±	1.919	0.691	0.503
Uses and activities	17.308	±	2.236	16.768	±	1.907	16.909	±	2.467	0.884	0.416
Sociability	16.769	±	2.332	16.554	±	2.157	17.455	±	2.154	1.296	0.277

Source: Authors by SPSS program.

Regarding income level, Table 10 shows that there were statistically significant differences in the means of the responses based on the level of income in both the comfort and image and the uses and activities criteria. Where there was a significant effect of income variables on their response to comfort and image at the $p < .05$ level for the three conditions [$F(2, 127) = 4.186, p = 0.017$], the highest mean score for the low-income condition ($M = 17.742, SD = \pm 1.620$). Additionally, for uses and activities at the $p < .05$ level for the three conditions [$F(2, 127) = 3.744, p = 0.026$], the highest mean for the low-income condition ($M = 17.500, SD = \pm 2.107$).

Thus, it can be noted that the aspirations of high-income people are higher than those of low-income people, so their response and approval were lower.

Table 10. The result of one-way ANOVA to compare the effect of level of income variables on place-making criteria

Place-making's criteria	Income level									ANOVA	
	Low			Average			High			F	P-value
	Mean	±	SD	Mean	±	SD	Mean	±	SD		
Access and links	17.500	±	1.916	17.019	±	2.005	17.417	±	1.730	0.920	0.401
Comfort and image	17.742	±	1.620	17.000	±	1.547	16.583	±	2.429	4.186	0.017*
Uses and activities	17.500	±	2.107	16.538	±	2.034	16.333	±	2.309	3.744	0.026*
Sociability	17.061	±	2.359	16.423	±	2.163	16.917	±	1.676	1.209	0.302

Source: Authors by SPSS program.

The previous statistical analysis revealed that the gender and the level of income of the residents had an impact on comfort and image as one of place-making criteria. There was also an effect of the level of income on uses and activities. Further, the social status of residents influenced sociability. However, the characteristics of the residents had no impact on access and linkage.

7. Conclusions

Informal housing areas have emerged in the law's absence, characterized by illegality and irregularity, but at the same time, they can be seen as places where the urban environment is slowly developing to suit the needs of the population and shows the importance of basic human effectiveness in their construction and formation, as they appeared to provide self-shelter for individuals unable to afford it within the official areas of cities. Thus, through these areas, it is possible to understand the population dynamics of the urban poor and their inhabitants, as these areas are no longer limited to the poor only, especially the existing areas of urban sprawl.

Urban spaces reflect the needs and culture of society. Urban spaces in informal housing areas can provide a flexible core strategy for urban renewal in which investment in urban spaces creates prosperous, liveable cities. It also helps to maintain the network of the social organization of communities.

Governments can participate in enhancing living conditions and controlling development in informal housing areas by utilizing public spaces. In those communities, these places host a variety of activities as well as providing a setting for social, cultural, and economic connections. Thus, it can be utilized by a place-making apply to revitalize informal settlements.

Through the place-making process, the strengths of socio-spatial relationships can be clarified, whereby people and places can create relationships between people and places and with each other in an empowering way. The research proposes a place-making approach to understand informal housing areas and then defining the priorities and needs of these areas in accordance with their population. The development and upgrading programs of the informal areas must encourage the values inherent in the population and take advantage of their potential.

The study provided that uses and activities are the main drives of developing and upgrading informal areas. Taking into account that activities must be compatible with residents' needs. The second one is sociability which can be achieved through space design elements that encourage the interaction between residents. Then, comfort and image as when the space is convenient, safe, and clean, it leaves a good image in people's minds. Finally, access and linkage which focuses on how space is connected to its surroundings.

The study concurred with (Abd El Gawad et al, 2019) that the most influential criteria of the place-making approach are uses and activities but differed in the order of the remaining criteria. The reason for the change is probably the difference in the characteristics of the residents since statistical analysis confirmed the existence of that there is a relationship between residents' characteristics and the criteria for place-making.

Whereas, the material conditions in which people grow and live affect their personal and social identities and thus affect the way they think and feel about their social environment and the fundamental aspects of their social behaviour. So, this study investigated how the characteristics of the residents of the informal housing settlements - as different areas from the rest of the cities - affect the criteria of place-making.

By analysing the relationship between the criteria for making places and the characteristics of the population in the informal housing areas, especially in the urban sprawl areas, it has been found that there is a relationship between gender and the response to the comfort and image criterion. There is also a relationship between social status and the criterion of sociability. While, the level of income affects both the standard of comfort and image and the standard of uses and activities.

This must be considered when dealing with these areas through place-making, to raise the efficiency of applying this process when implementing development, upgrading, and urban renewal programs within the informal housing areas in the urban sprawl areas. However, there are some limitations. It

is not possible to generalize these results to all areas of informal housing, as the survey is for a relatively small sample, and information was collected from residents of the area under study only (urban sprawl areas). Therefore, the research is directed to the necessity of the need for future studies with a larger sample that focus on all types of informal housing areas and not only those in urban sprawl areas.

Based on the previous analysis, it is clear that informal housing areas can exploit the importance of some criteria for making good places in urban spaces in informal housing areas in starting development processes in those areas through the use of the approach of making places. The analytical study has shown that these spaces have many elements that are in line with the standards of making good places and thus contribute to the processes of urban development and renewal within informal housing areas. It is necessary to consider that certain inhabitant characteristics in these areas impact the process of place-making, which has been demonstrated through the analysis (gender, social status, and income level).

The research recommended using place-making approach in developing urban spaces in informal settlements. It is an essential approach as it depends on the assets and skills of the community. Thereby, contributing to a better understanding of those areas and thus development projects can perform their objectives properly.

The research also recommended the inclusion of more studies on the relationship between residents' characteristics of informal settlements and place-making criteria widely for all types of informal settlements to generalize the results and work through it when using place-making approach in developing informal areas.

Authorship

Wesam Mehanna: Conceptualization and design of the research, Methodology, Formal analysis, Graphic analysis, Investigation, Writing – original draft, Writing – review & editing; Walaa Mehanna: Conceptualization and design of the research, Methodology, Formal analysis, Graphic analysis, Investigation, Writing – original draft, Writing – review & editing.

Conflict of interests: The authors declare that there is no conflict of interest.

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