

COMMUNITY DEVELOPMENT WITHIN SLUMS' ILLUMINATION: A POST OCCUPANCY EVALUATION STUDY OF AL-ASMARAT PROJECT INHABITANTS

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ABSTRACT

Informal settlements' development and providing a decent life and safe housing for every citizen in Egypt is a national plan adopted by the Ministry of Housing, Utilities and New Urban Communities. Dangerous and unsafe settlements in Egypt represents 1% of the urban areas, thus 351 areas with about 240 thousand housing units had been set to be eliminated. *Al-Asmarat* is one of the projects which was previously planned to recompense the eliminated units for the families living in the unsafe areas like *Mansheyet Nasser*.

This research is shedding lights on the post housing process of the new inhabitants in *Al-Asmarat*, by illustrating a community assessment, focusing on the upgrading of their economic conditions. This occurs through an analytical qualitative methodology approach in the research, and consequently discovering the advantages and drawbacks of the upgrading project comprehensively. Finally, the research presents a comprehensive evaluation to this type of development of informal settlements in Cairo region.

Key words: Community development, post-occupancy evaluation, informal settlements, Al-Asmarat projects

تنمية المجتمع في ظل القضاء على العشوائيات: دراسة تقييم ما بعد الإشغال لسكان منطقة الأسمرات

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ملخص البحث:

تطوير العشوائيات وتوفير حياة كريمة وسكن آمن لكل مواطن في مصر هي خطة وطنية اعتمدها وزارة الإسكان والمرافق والمجتمعات العمرانية الجديدة. تمثل المناطق الخطره وغير الأمنة في مصر ١٪ من المساحة الحضرية ، ومن ثم فقد تم القضاء على 351 منطقة تضم حوالي ٢٤٠ ألف وحدة سكنية لتحقيق الهدف. الأسمرات هو أحد المشاريع التي تم التخطيط لها سابقاً لتعويض الوحدات التي تم هدمها للأسر التي تعيش في المناطق غير الأمنة مثل منشية ناصر.

يسلط هذا البحث الضوء على عملية ما بعد الإسكان للسكان الجدد في الأسمرات ، من خلال توضيح تقييم مجتمعي ، مع التركيز على الارتقاء بأوضاعهم الاقتصادية. ويتم ذلك من خلال منهج اسنقراطي و تحليلي في البحث ، وبالتالي اكتشاف مزايا وعيوب مشروع التطوير بشكل شامل. أخيراً ، يقدم البحث تقييماً شاملاً لهذا النوع من تنمية العشوائيات في مدينة القاهرة.

الكلمات الداله: تنمية المجتمع، تقييم ما بعد الإشغال ، العشوائيات ، مشروع الأسمرات.

INTRODUCTION

In recent years, Egypt has confronted a massive problem, concerning the growth of slums and informal settlements in different districts all over Cairo. Furthermore, the dilemma of informal settlements is not only considered an inhabitants' problem or squalid parts suffering from lack of services, however it's considered a complex phenomenon.

The governmental policies were illustrated in the informal settlements development fund "ISDF", which are based on achieving the principle of social justice and ensuring the citizen's right to obtain a safe housing with the improvement of living and economic conditions. One of the major policies is; Settling slum dwellers in the same locations or in the nearest neighboring areas. *Al-Asmarat* project reveals the application of this policy, where most of the inhabitants were from slum areas in Mansheyet Naser, Al-Dewika and old Cairo, which departs about 7.5-10 km away from *Al-Asmarat*. That's why the government has initiated a number of projects to fulfill a safe housing for the lower income inhabitants.

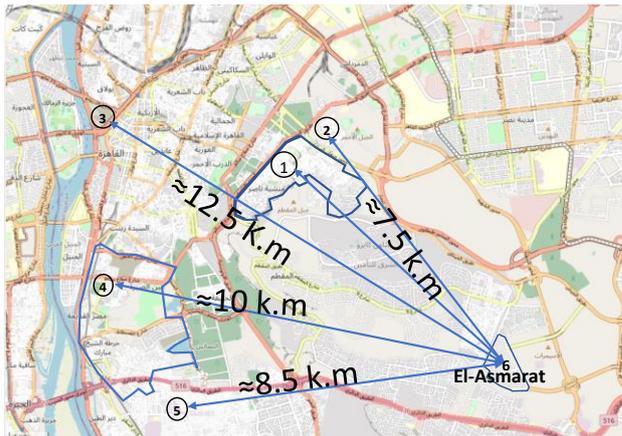


Figure 1: Shows the distances between the previous areas of the inhabitants and Al Asmarat area.
(Source: Author, 2022)

RESEARCH OBJECTIVES

This research has a number of objectives like;

- **Understanding** the current community of Al-Asmarat project, and whether the new residents are satisfied with the contemporary living conditions.
- **Analysis** of the post-occupancy procedures and a critical evaluation to *Al-Asmarat* project community.

- **Evaluation and discussion** of this type of community development (relocation strategy) and its impact on the target community, and the influence of the residence change on livelihood.

SLUMS DEFINITIONS' DILEMMA IN EGYPT

UN-Habitat established an inhabitant definition to identify slum dwellers among the urban population (2003). A slum inhabitant is a dweller that lacks one of five elements; access to improved water, access to improved sanitation, security of tenure, durability of housing, sufficient living area [1]. In 2008 part of the Mokattam hill fell on the inhabitants of “*El Dewika*” residents’ slum area which resulted in the death of hundreds. That’s why by the end of the year, the Informal Settlement Development Facility (ISDF) was established by a presidential Decree # 305/2008, in order to be the main organization responsible for the management of the Slums in Egypt (ISDF, 2008)

The ISDF was established to detect the unsafe areas, the informal markets and the unplanned areas in Egypt. It has changed the classification of the term as it is known as “Ashwaiyat” and turned it to “Informal settlements’

PRIORITIES OF INTERVENTION THROUGHOUT THE INFORMAL SETTLEMENTS

Based on the ISDF the initial estimations of unplanned areas pose to 60% of the total urban area, while the unsafe areas pose to 5%. Priorities of development were set due to the ISDF as follows:

- **First priority:** Buildings in locations that threaten human life, including areas in danger of rockslide, flooding or train accidents.
- **Second priority:** Buildings that are constructed with recycled or reused material in one or more of their elements (walls, roofs, etc.), buildings of low resistance to natural disasters and deteriorated buildings.
- **Third priority:** Threats to the health of inhabitants, as in the case of lacking clean water, improved sewerage, location within the influence zone of high voltage cables or construction on unsuitable soil.
- **Fourth priority:** Threats to stability or the lack of freedom in dealing with the inhabitants’ properties.

4.1 Typologies of interventions in informal settlements

Development of urban and living conditions for the informal areas through Participatory Planning [2], classified informal areas upon the way of intervention under three categories; Upgrading, Redevelopment and Containment:

- **Upgrading:** It mainly depends on improving housing conditions in the informal settlements that house a high proportion of low-income urban dwellers. This includes improving and/or installing basic infrastructure such as water, sanitation, waste collection, access roads, footpaths, storm drainage, lighting, and public telephones among other things. Upgrading also includes regularizing security of land tenure and housing improvements [3].
- **Redevelopment or Rehabilitation:** It is an institutional change that involves shifting of an entire informal built environment to a formal housing structure [4]

- **Containment:** it is the construction of certain projects within the peripheries of cities to stop the informal urban expansion on the agricultural land [2].

AL-ASMARAT PROJECT INITIATIVE

“*Al Asmarat*” is one of the Egyptian neighborhoods located in the Cairo governorate, specifically in the “Mokattam neighborhood.” The goal of establishing that neighborhood is to eliminate the problem of slums’ expansion. In turn, the government worked to transfer the residents of slums to that new project, which has sufficient facilities and services, and the most prominent residents’ beneficiaries are the inhabitants of “Manshiet Nasser” and “*El Dewika*” areas [5].

5.1 The previous housing of AlAsmarat inhabitants

According to the interview with the current residents, it was illustrated that about 80% of the current residents were living in “*Mansheyet Nasser*”. It was noticed also that, the inhabitants who were living in *El Asmarat* from 7 years ago stated that they were living in places which was recorded as a dangerous setting from ISDF. The remoteness of “*Mansheyet Naser*” and *Al-Dewika* areas and their isolation from different areas of livelihood presented a certain problem to the residents which was very difficult to deal with. Besides, the area lacked facilities, effective services and employment opportunities. Another major problem that had a certain impact on the living conditions of the inhabitants is the irregular water supply as almost daily they were subject to water cuts for several hours and sometimes for several days [6].

5.2 “Al-Asmarat” neighborhood stages

It was built on an area of 188 Feddans, the number of units in it has reached 18,420 housing units, this project was established in 3 phases, Figure2, and these stages are:

- **Phase One: Asmarat 1:** It was built on an area of 65 Feddans, and contains 6285 housing units.
- **Phase Two: Al Asmarat 2:** This phase was built on an area of 61 Feddans. It reached 4722 housing units, other than private construction of facilities and services
- **Phase Three: Al Asmarat 3:** It is located on an area of 62 Feddans, and contains 7,440 housing units (ground floor + 9 repeated floors), Figure 3, Figure 4

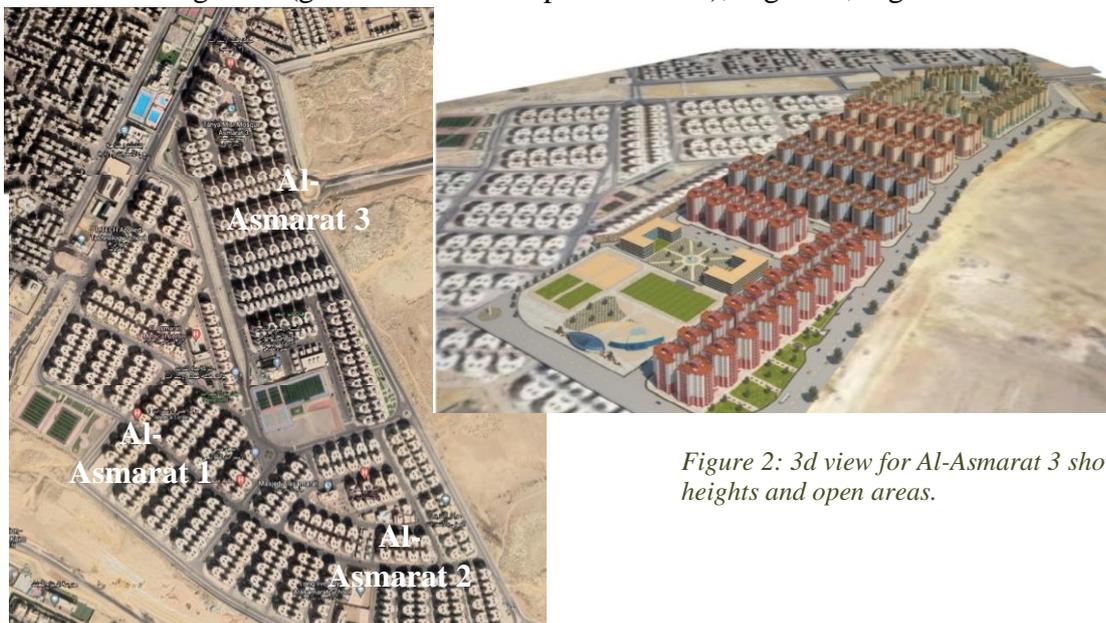


Figure 2: 3d view for Al-Asmarat 3 showing heights and open areas.

Figure 3: Layout of all Asmarat Phases Source: (Google Earth, 2022)

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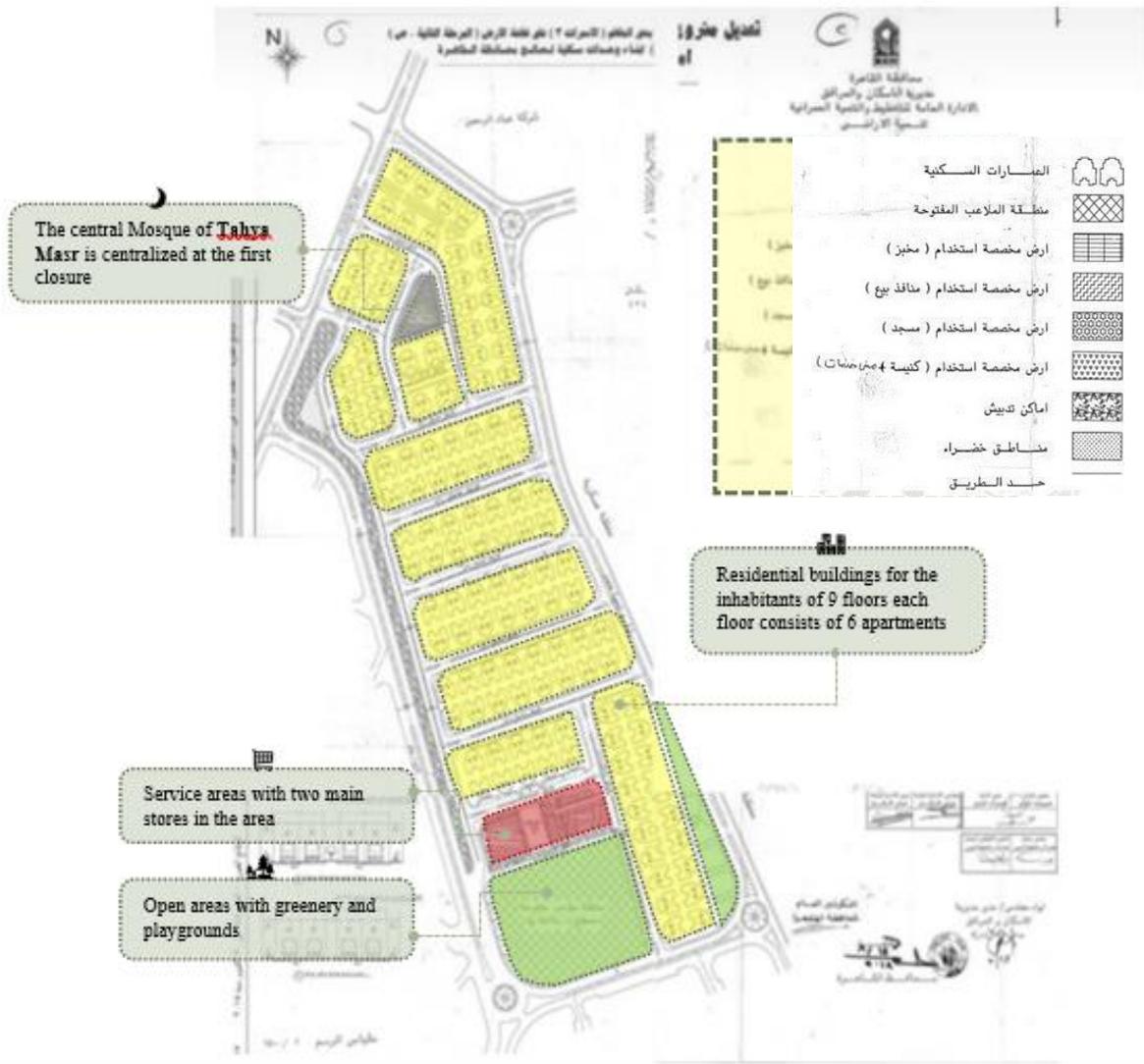


Figure 4: Layout of Al-Asmarat-3 showing variable land uses, including, commercial area, religious, and recreational areas source: [7]



Figure 5: showing the mosque area and the surrounding buildings of the second phase, which consists of 9 floors. Source (Authors,2021)



Figure 6: Shows different kinds of commercial areas for inhabitants, like hyper markets and small shops activities. Source: (Authors, 2021)

5.3 Specifications of the residential units within “Al-Asmarat” neighborhood

The area of the residential units within “Al-Asmarat” project is 60 meters, and it consists of 2 rooms + a hall, is delivered red fully furnished and ready for direct accommodation [8]. In addition, the buildings of the third phase of the project contain two electric elevators and Firefighting unit. Moreover there are a number of services provided in the project, like, training and rehabilitation centers, Nurseries, schools, Places of worship “mosques and churches”, Sports fields, theatre, Health units, Commercial shops, Police, fire and ambulance stations, Children's gardens and large areas of green areas [5].

6 THE METHODOLOGY AND EMPIRICAL RESEARCH

The following section presents an explanation of the conceptual framework adopted in this research, including the studied aspects of informal settlements in general and the case study field work. Consequently, The chosen field work, “Al-Asmarat” area, presents one of the projects’ initiatives adopted by the Egyptian Government to compensate the inhabitants which was previously illustrated by the researchers

6.1 The case study framework

This study depends on the analytical qualitative approach using certain factors and indicators which was illustrated and identified by “ **Quality of Urban Life indexes**”(QOUL) [9]. The “QOUL”’s presents a number of factors and attributes illustrated by a number of researchers and were proven afterwards by a fruitful number of experts. Those factors are supposed to examine the satisfaction of the life quality of a certain urban area.

Moreover, the factors which presents urban and social indicators were applied in contemporary indexes and examined on many international case studies [10]. Furthermore, the frameworks, and indexes selected were chosen to be applicable for implementation on various urban communities across the city.

The research used **eight categories of socio-urban criteria** based on analysis and synthesis processes including a pilot experts’ validation. Those eight categories are, **Housing, Main services & Amenities, Recreational, Infrastructure, Mobility, Safety, Planning, Social inclusions & Networks.**

The experts had before rated the importance of each indicator and gave it a certain efficiency percentage [9] , then the authors highlighted the

highest efficiency indicators which had the highest points. The indicators then were filtered and synthesized based on the objectives of the Empirical research in **Al-Asmarat area** to present the **Efficient quality of Urban life index (EQOUL)**. Figure 7

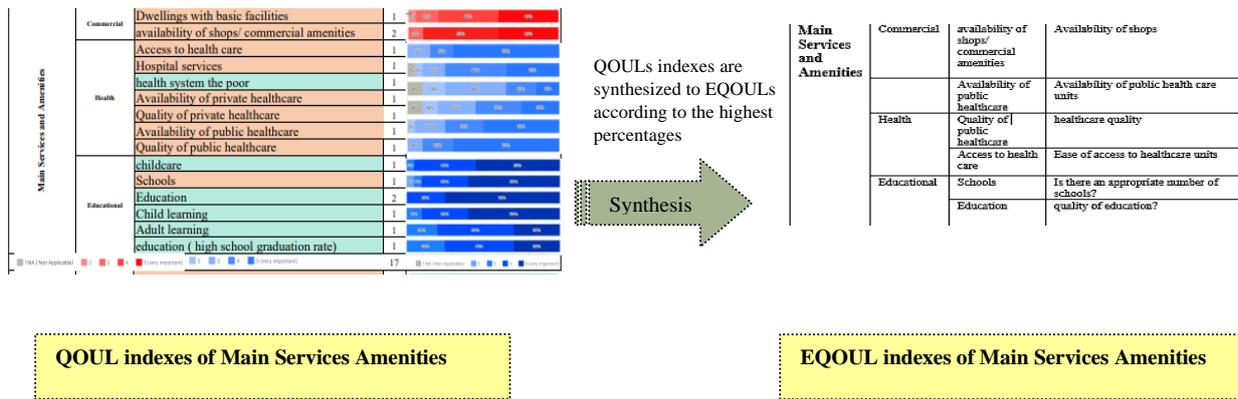


Figure 7: Showing an example of one of the factors of QOULs with the evaluation of experts of priority and how it was synthesized according to the efficient indexes. (Source: Authors, 2022)

The synthesized indicators were then illustrated into a questionnaire directed to the actual inhabitants in the area to examine, on ground, if those kinds of projects had accomplished its comprehensive development within the post-occupancy of the actual inhabitants. Finally, the research highlights the result of the empirical research with certain conclusion of the positive and negative points of Al-Asmarat project with recommendations to enhance the development process as a whole, figure 8.

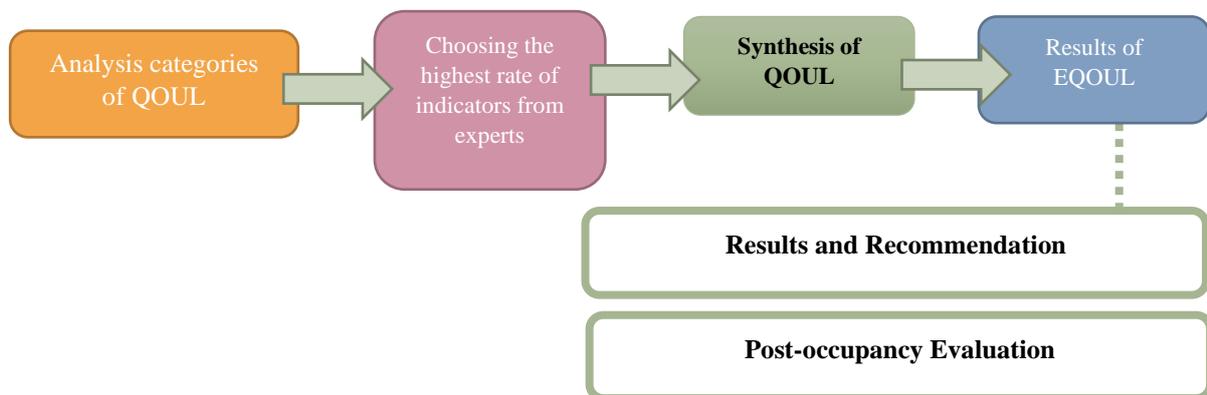


Figure 8: showing the methodology of the empirical research including analysis, synthesis, and evaluation Source (Authors, 2021)

6.2 Indicators and interpreted questionnaire

The concluded indicators were synthesized into a number of questionnaires according to each section. the researchers submit by conducting this questionnaire to identify the quality of life in the new projects according to the opinion of the residents of the place - this study is carried out by Experts specialized in the field of urban design and community development For scientific research purpose, table1.

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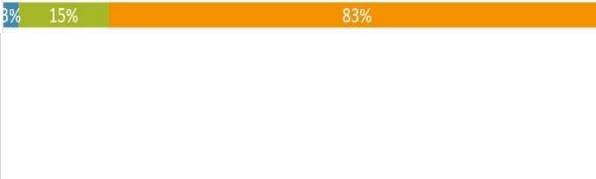
Table 1: Presents the factors of the Efficient quality of Urban Life and the questionnaires based on it, which was oriented to the inhabitants (EQUL).(Source: Authors 2021)

Factor	Sub-factors	chosen Indicators	Questions	Strong/ Suitable 3	Moderate Suitability 2	Weak /Low suitability 1	answer from
Housing		Average housing sales price / affordability	Is the rent or ownership price appropriate? (yes / to some extent / not appropriate)				Inhabitants
		Variety of housing options	What is the possibility of choosing between different housing units? (Different designs or housing in other housing project)				Inhabitants
Main Services and Amenities	Commercial	availability of shops/ commercial amenities	Is there enough number of shops for buying weekly necessities?				Inhabitants
		Availability of public healthcare	Are there enough public health care units?				Inhabitants
	Health	Quality of public healthcare	Is the healthcare quality suitable?				Inhabitants
		Access to health care	Is it easy to reach healthcare units?				Inhabitants
	Educational	Schools	Are there enough schools? (Was it easy to Transfer your child from his previous school to a school here ?)				Inhabitants
		Education	Is the quality of education for your child here better compared to education in the previous areas of residence?				Inhabitants
Recreational		availability of parks / green space (public)	Are green areas and public places enough?				Inhabitants
		cultural opportunities	Are there awareness seminars / exhibitions / cultural tours enough?				Inhabitants
		Recreation	Are recreational places enough?				Inhabitants
		Sport and leisure activities	Are sports places enough?				Inhabitants
Infra structure	provision	Sewage	What is the quality of the sewage network?				Inhabitants
		Electricity	What is the quality of Electric lines?				Inhabitants
		Water availability / supply	What is the quality of the water supply network?				Inhabitants
		Telecom (Mail /Telephone/ internet access)	Are means of communication (phone / internet / mail) available?				Inhabitants
	Quality	Quality of telecommunications	What is the quality of communication network?				Inhabitants
Mobility	Transportation	Transports	What about of your satisfaction with public transportation? In case of dissatisfaction, the reason: (unavailable - unsafe - high cost - latency to work large)				Inhabitants
	Walkability	walking trips	Is the arrival time (for services/transportation) on foot suitable?				Inhabitants
Are there suitable paths for walking movement in your different inner trips?							
safety	subjective/ perceived safety	free to circulate without danger	Are you feel safe within movement from a place to another?				Inhabitants
		feeling protected / safe	Are you feel safe for your properties and children in general?				Inhabitants
	objective/ material safety	Rate of violent crimes	What is your estimate of the crime rate here?				Inhabitants
Planning		Urban density	Illustrated by research and on site				researcher
		activity density	Is it easy to do outdoor activities like waking, gathering, shopping or children playing in the place after seven at night?				Inhabitants
			How much is your satisfaction with the annual celebrations of the place? (Ramadan - Feasts - Easter ...)?				Inhabitants
Social inclusion and networks		community cohesion	Do you Know your neighbors? In which level? at the level (building = weak -street = moderate, area= good)				Inhabitants
	How much is your sense of belonging to the place?					Inhabitants	
		volunteering and social activities	Do neighbors help each other in times of need? In which level?				Inhabitants
	How much is the volunteering between families in charitable work for others (teaching / caring...)?					Inhabitants	

6.3 Results & Discussions

After interviewing around 80 inhabitants from different places in *Al Asmarat*, it was discovered that around **43%** of the interviewees were inhabitants of *El Asmarat* from 7 years ago, 30% were inhabitants from 1 year ago, and 27% lived from only 6 months . The results of the discussion and the questionnaire was as follows:

Table 2: Results and discussions of aspects and attributes of EQUL , according to the questionnaire of the inhabitants.(source: Authors 2021)

Factor	Sub-factors	chosen Indicators	Questions	
Housing		Average housing sales price / affordability	Is the rent or ownership price appropriate? (yes / to some extent / not appropriate)	
		Variety of housing options	What is the possibility of choosing between different housing units? (Different designs or housing in other housing project)	
<p>Users Comment:</p> <ul style="list-style-type: none"> • Inhabitants who considered that the rent price is inappropriate, mentioned that rent is a financial burden on them, especially that their source of income is unstable. • Sources of income for some families were related to businesses in the vicinity of their previous residence (a seller in the Manshiet Nasser market - a waste collector from the previous area in which he was staying for the purpose of recycling - a bird breeder) and this is not allowed in Asmarat • The residents explained that the projects offered for work inside Asmarat as a result of the low return on them, and that their nature is suitable for women's work (sewing - manual work). • The design of all units was the same, and the users did not see a problem in that, especially that their previous homes were mostly of smaller spaces with public bathrooms. • The dwellings lacked places to spread laundry, but later they allowed the residents to put sawmills on the balconies <p>Researchers note</p> <ul style="list-style-type: none"> • Although the opportunity to choose between the place of residence is weak, but in the same time, the government took into consideration that the location of Al-Asmarat is not far from their previous homes, and the choice of the ground floor for the elderly was given due consideration to the health status of the elderly • Many residential units added curtains to the balconies to achieve privacy - especially since it is noted that the balconies and windows are opposite the neighboring buildings. 				

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Main Services and Amenities	Commercial	availability of shops/ commercial amenities	Is there enough number of shops for buying weekly necessities?	
		Availability of public healthcare	Are there enough public health care units?	
	Health	Quality of public healthcare	Is the healthcare quality suitable?	
		Access to health care	Is it easy to reach healthcare units?	
	Educational	Schools	Are there enough schools? (Was it easy to Transfer your child from to a school here ?)	
		Education	Is the quality of education for your child here better compared to education in the previous areas of residence?	
<p>users Comment:</p> <ul style="list-style-type: none"> • Some residents tried to sell some goods outside the mall as a source of income for them, but there is no license to do so and there are always security campaigns that prevent this in order to preserve the organization of the neighborhood • The health units are open and have free days for examination, but they are closed at night. Therefore, during the night periods, there is a lack of medical services inside Asmarat • It is allowed to enroll children of Asmarat residents in schools in Asmarat, but the residents complain that the number of classes is high, which weakens the students' academic achievement, and the residents had to rely on remedial lessons, which represents a financial burden on them. <p>Researchers note:</p> <ul style="list-style-type: none"> • The mall and goods are available, but it is noticeable that the mall is overcrowded from the inside with buyers (the flat is not enough) 				
Recreation-al		availability of parks / green space (public)	Are green areas and public places enough?	
		cultural opportunities	Are there awareness seminars / exhibitions / cultural tours enough?	
		Recreation	Are recreational places enough?	
		Sport and leisure activities	Are sports places enough?	
<p>Users Comment:</p> <ul style="list-style-type: none"> • Most of the residences do not overlook the available green areas • The use of sports venues is carried out in an organized manner from the management of the place - from organizing families' appointments to regulating the intensity of use 				
Infra -structure	provision	Sewage	What is the quality of the sewage network?	
		Electricity	What is the quality of Electric lines?	
		Water availability / supply	What is the quality of the water supply network?	

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		Telecom (Mail /Telephone / internet access)	Are means of communication (phone / internet / mail) available?	
	Quality	Quality of telecommu nications	What is the quality of communication network?	

Users Comment:

- The electricity network is available and of high quality, however some residents say that they cannot enjoy this opportunity, because he cannot charge the electricity consequently.

Mobility	Transpo rtation	Transports	What about of your satisfaction with public transportation? In case of dissatisfaction, the reason: (unavailable - unsafe - high cost - latency to work large)	
	Walkab ility	walking trips	Is the arrival time (for services/transportation) on foot suitable?	
			Are there suitable paths for walking movement in your different inner trips?	

Users Comment:

- The majority of movement within the neighborhood is walking
- Internal transportation is mostly based on shared taxis as microbusses or toktoks are prohibited within the neighborhood. The dissatisfaction with external means of transportation is caused by the high price of the trip as a result of the need to ride more than one means of transportation to reach their destinations.

Researchers notes:

- It is noticed that the movement paths are clean, but the rate of green areas and trees is weak in the streets.

Safety	subje ctive/ percei ved safety	free to circulate without danger	Are you feel safe within movement from a place to another?	
		feeling protected / safe	Are you feel safe for your properties and children in general?	
	object ive/ mater ial safety	Rate of violent crimes	What is your estimate of the crime rate here?	

Users Comment:

- The majority of the population describes the crime rate as average, and shows that compared to their previous housing, it has become lower
- Some residents explain that the feeling of safety and security has increased with time as a result of periodic monitoring operations and intense police activity

Researchers note:

- The layout of the Asmarat neighborhood provides clear traffic paths, and has a high safety provision of the population

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Planning	Urban density	Residential Density	By calculating the housing density = 441 people / feddan, which is a very high density 18420*4.5= 82,890 (person) 82,89/188= 441 P/F This very high density
	activity density	Is it easy to do outdoor activities like waking, gathering, shopping or children playing in the place after seven at night?	
		How much is your satisfaction with the annual celebrations of the place? (Ramadan - Feasts - Easter) ?	
<p>Users Comment:</p> <ul style="list-style-type: none"> • Movement at night is applicable for the residents in the summer due to the low temperature <p>Researchers note:</p> <ul style="list-style-type: none"> • The availability of night lighting on the roads - and the clarity of the movement network • There are still some decorations hanging between the houses for the celebration of Ramadan which shows that there are sharing in celebrations between neighbors. • The very high density may cause social problems 			
Social inclusion and networks	community cohesion	Do you Know your neighbors? In which level? at the level (building = weak ·street = moderate, area= good)	
		How much is your sense of belonging to the place?	
	volunteering and social activities	Do neighbors help each other in times of need? In which level?	
		How much is the volunteering between families in charitable work for others (teaching / caring...)?	
<p>Users Comment:</p> <ul style="list-style-type: none"> • It was taken into consideration within the transfer of families who used to live in one area to a close vicinity, as well as the availability of public places where they can meet. <p>Researchers note:</p> <ul style="list-style-type: none"> • The paths between the buildings are paved and clean, allowing children to play 			

7. CONCLUSION AND RECOMMENDATIONS:

An average percentage of satisfaction of attributes of the Efficient Quality of Urban Life index (EQU) matrix is calculated, thus the final results show the following:

- The factor of Housing showed the lowest percentage of satisfaction as shown in figure 9, where 57% only of residents were satisfied by the average housing sales price and the variety of housing options indexes.
- The mentioned reasons of dissatisfaction that they can't afford the new living expenditures because it was different from their previous living in the informal settlements.

That's why the research recommends establishing certain job opportunities for those residents, in order to compensate their daily expenditures in their new living area.

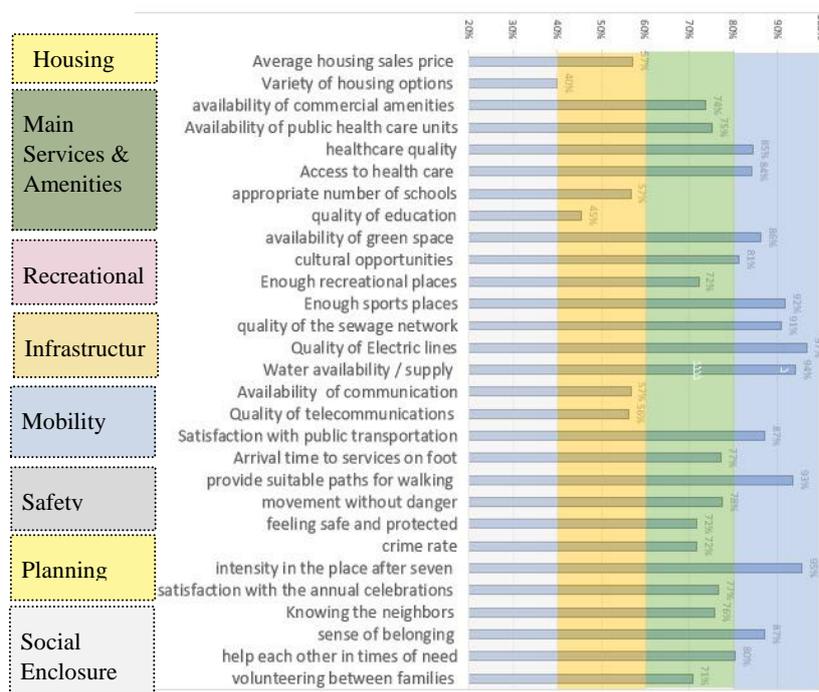


Figure 9: Results of satisfaction of (EQUL) according to the Eimpirical research. (Source: Authors 2021)

- It's worth mentioning that the most successive aspect according to the users' opinion is the quality of infrastructure, reaching about 82% of satisfaction in most indexes, Figure 9, which is suspectedly based on the new constructions of the whole area.
- The inhabitants also appraised the safety and security of the place, reaching satisfaction of 93%. They mentioned that safety is the dominant factor for their continuity of living in "Al-Asmarat" which makes them feel safe for their children.
- One of the weak attributes which was mentioned by the dwellers is the inability of redesigning or choosing the designs of their units. This attribute's satisfaction reached only 42%, which means that the users need to integrate their design decisions to the units. For example, a number of dwellers mentioned that they need a place for animals' breeding, which is not applicable in the offered units. They added also that if they had the choice, they would have chosen a roof top unit, where they can breed their birds.

That's why the research recommends offering a number of design choices for the inhabitants' units in the future projects.

The research recommends within comprehensive development, the inhabitants' capabilities should be taken in consideration. Surveys can be initiated to illustrate their own jobs or crafts, which can be taken as an opportunity for investors in such projects.

The research also recommends increasing the number of trees within the streets of the neighborhood, where the inhabitants showed their willingness to participate in the plantation process.

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