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Different Methods Of Achieving Indicators Of Quality Of Urban Life In Relation To Population Levels; Case Study: Government Housing In Cairo

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ABSTRACT

The study and measurement of quality of life are currently of global importance. In addition, one of the seventeen objectives of the 2030 Agenda for Sustainable Development of the United Nations is to address the issue of sustainable cities and communities, as well as the population's economic, social, and cultural rights. Studies in the field of quality of life, specifically quality of urban life, have focused on particular indicators such as the infrastructure quality index, roads and transportation index, and local administration index, which were measured on all different urban patterns, with no emphasis on population levels and human factors that have a direct or indirect effect. In order to determine the economic, social, and cultural level of the population, the current study applies a framework for measuring the economic, social, and cultural factors that determine population levels to four government housing areas in Cairo: Economic Housing/Helwan, Atlas Housing /Mokattam, Swissry Housing /Nasr City, and Mubarak Housing/New Cairo. The SPSS software was utilized to evaluate the study areas based on the population and factor measurements. The results indicated significant differences in the population's economic, social, and cultural levels in the selected study areas, and consequently have a significant impact on the tools for applying urban indicators of quality of life, denoting that urban indicator of quality of life vary by location.

KEYWORDS: Quality of Urban life - Urban indicators – The population’s Levels Economic indicators - Social indicators - Cultural indicators.

1. INTRODUCTION

The significance of indicators in evaluating the efficacy of urban residential areas is based on their contribution at various time intervals and their ability to achieve their goals [1]. These indicators illustrate the need for a method to evaluate the quality of urban life [2].

This concept is based on the notion that the city is divided into distinct regions, each with its own uses, densities, land value, social composition, climate, and buildings [3]. Consequently, one of these regions is characterized by expanding wealth and abundant satisfaction of needs, while the others are neglected, with increased unemployment and poverty [4]. These individuals form their own small societies to meet their individual needs [5].

Consequently, each region must be addressed according to its capabilities and circumstances, its population's needs, as well as economic, social, and cultural conditions [6]. The primary indicators in evaluating this concept are the human being [7], as well as the search for an appropriate method to assess the indicators affecting urban indicators in order to arrive at a framework for determining specific indicators and methods for achieving them in order to enhance the quality of urban life in various residential areas [8].

2. LITERATURE REVIEW

Since the onset of the environmental crisis in the late 1960s, the concept of urban quality of life has gained worldwide traction [9], and it was utilized by government officials, designers, planners, and several others. Due to the complexity of the concept of quality of life, there is neither a consensus on the concept nor a standard form of measurement, and this does not reflect negatively on the concept's perceptions [10]. However, it depends on numerous variables that are not constant in all environments [11]. The human being is the user and the first beneficiary of the design process, whereas urban design has focused on the material aspect of the population while ignoring the human aspect [12].

2.1 Economic, Social, and Cultural Indicators of the Population

Economic indicators are among the most influential in determining the quality of life of individuals in societies, and the economy is the foundation of a society's renaissance [13]. The presence of the economy is indicative of the community's high quality of life [14]. Possessing a sufficient income to comfortably meet one's basic needs, with the option to save a portion of it [15]. Existence of revenue sufficient to fund government services. Determine your job security. In any of the societies, middle-class living expenses are represented [16].

Social indicators are the second most influential aspect of urban life quality [17]. The quality of residential areas cannot be achieved if residents find their living environments and social interactions unacceptable [18]. Several nations strive for social justice. Society must prioritize the health care system to continue improving individuals' quality of life [19]. There are numerous options for obtaining medical care, including the availability of specialized medical centers, hospitals, and pharmaceuticals [20].

Every citizen has a state-guaranteed right to culture, and the state is obligated to support culture and make all cultural indicators available to all groups of people without discrimination [21]. To improve the cultural indicators of a population [22], it is necessary to assist individuals in acquiring quality educational opportunities and to provide adequate educational resources outside of schools, universities, specialized educational institutions, and libraries [23]. Its capacity to accept students, its ability to enroll them, the availability of relevant technical methods, and other indicators that ensure an appropriate learning environment are considered [24].

2.2 Assessment of Urban Indicators

Developing any urban community begins with identifying its problems and needs. Then, prioritizing needs according to what is available in the state budget [25], civil society, and the participation of the private sector to achieve the quality of urban life for this community by measuring the population’s economic, social, and cultural levels before and after its development [26]. The quality of urban life indicators approach is considered one approach that holistically looks at things because it reflects the population’s economic, social, cultural, psychological, physical, and health conditions of the local

population [27]. This helps to assess whether the change has occurred or has begun in these areas [28]. Quality of urban life indicators help understand how to act at the individual and collective levels [29].

Evaluating the urban quality of life is complex, multidisciplinary, and multidimensional, highlighting the importance of incorporating multiple disciplines when evaluating a region's urban quality of life [30]. Therefore, each of these dimensions should be considered when evaluating. It is possible to conclude that urban planning to achieve sustainable development is related to urban life quality [31].

2.4 Measuring The population's Economic, Social and Cultural Indicators

To measure the population's economic, social, and cultural levels, these indicators are complex; thus, it extracted 10 indicators from these levels.

The population economic level including Five indicators such as: The unemployment ratio indicator, The dependency ratio indicator, The female employment ratio indicator, Employees in the government sector indicator, and the percentage of workers in the and private sector indicator [32].

The population's social level was deduced Two indicators such as: The average number of family members indicator, and the person's share of health services indicator [33].

In the population's cultural levels, was deduced Three indicators such as: The ratio of the female to male education indicator, the Uneducated ratio indicator. The person's share of years of education indicator [34]. These indicators are calculated using equations or raw data from population data by the Central Agency for Public Mobilization and Statistics (CAPMAS) 2018 [35]. As show in Table 1.

Table 1. The economic, social and cultural indicators affecting quality of life and how to measure them. (By author)

		Sub- indicators	How to calculate
1	**Economic Indicators**	the unemployment ratio	(Number of unemployment ÷ total population)
2		the dependency ratio	(Number of unemployment ÷ Number of employees) ×100
3		the female employment ratio	((total female – unemployment female)/ (total male – unemployment male)) × 100
4		Employees in the government sector	(Number of employees in the public sector /Total number of employees)
5		the percentage of workers in the and private sector	(Workers in the private sector /Total number of employees)
6	**Social Indicators**	the average number of family members	(Total population ÷ Number of families)
7		the person's share of health services	(Number of beds in government hospitals / 10,000 persons)
8	**cultural Indicators**	The ratio of the female to male education	(Number of educated girls / numbers of educated males)

9		the Uneducated ratio	(Number of Uneducated/ Total population)
10		The person's share of years of education	(From population data by (CAPMAS) 2018)

3. METHODOLGY

Some international organizations tend to create systems to assess the quality-of-life indicators used in any urban community in the world. However, the researcher believes that it cannot be applied to all countries and urban communities because the population needs and the economic and social activities of each urban community change over time.

This discrepancy prompted the researcher to discuss and analyze the indicators affecting urban indicators by providing a clear guide to measure the impact of the population's economic, social, and cultural factors on urban indicators in order to improve the quality of life in urban residential areas.

3. 1. Research Problem

The different economic, social, and cultural indicators that create population levels. That affect of the urban indicators to achieve quality of life. And how to measure those indicators? Moreover, how these measurements can be compared to match the difference between society and culture. So, the same of the quality of urban life indicators for a residential area cannot be applied to a different area, based on the different economic, social, and cultural indicators of the population.

3. 2. The main objective of the research

It is to identify the methods and tools to achieve the indicators of the quality of urban life. Based on the effect of economic, social and cultural indicators of the population in residential areas. Through the application on 4 government housing areas in Cairo - Egypt.

3.3. Research Design

This research attempts to analyze the relationship between some of the population’s economic, social, and cultural indicators and their impact on the quality of urban life in residential areas. These indicators often cause a continuous change (because of their connection to human being), and they also change from residential area to another.

Then arriving at the methods to achieve and apply the quality of urban life indicators, according to the conditions of each residential area. As shown in Figure.1.

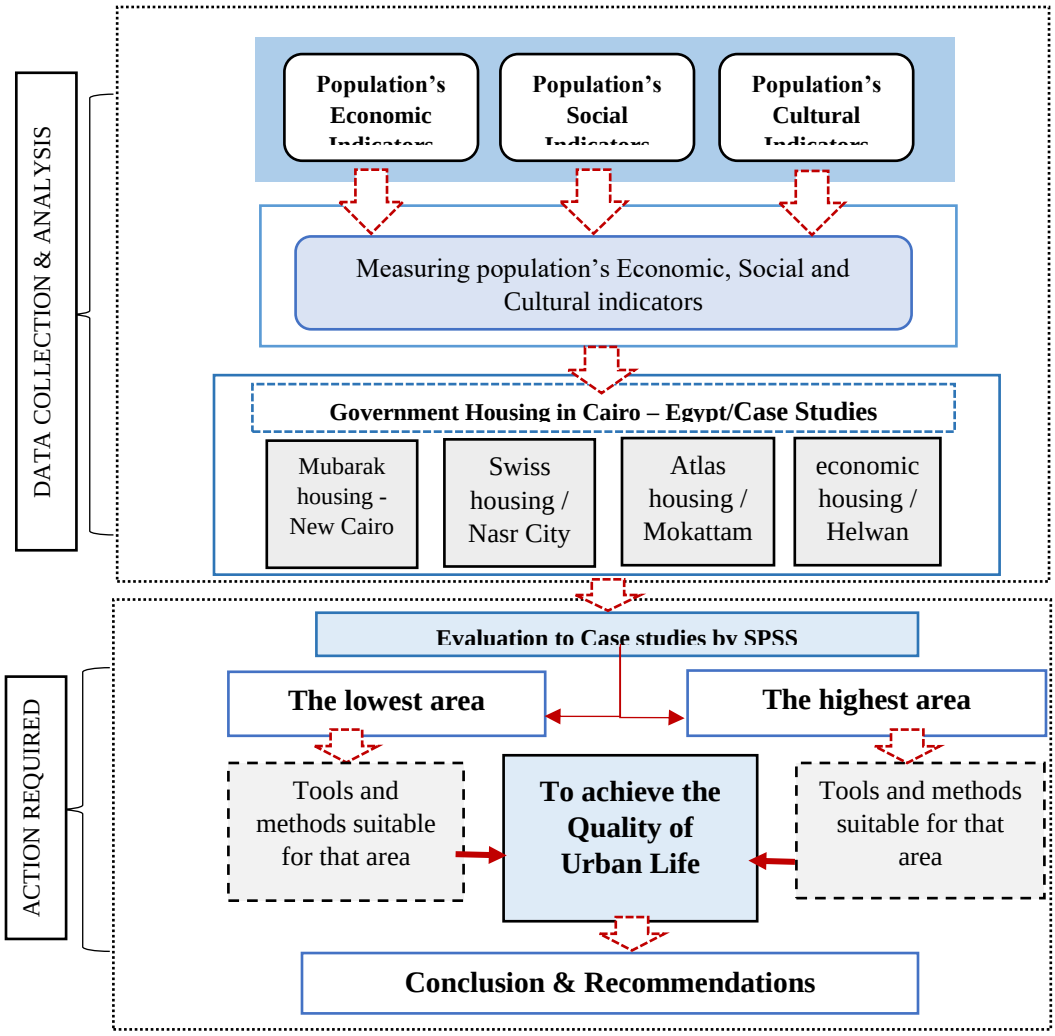

Figure. 1. Research Methodology.

3. 4. CASE STUDY

Egyptian governments and regimes have been interested in subsidized housing projects for what they call (middle-income) from the fifties of the last century until the current government. Because this model of housing is the most in need of development rather than reconstruction, and to improve the quality of life in those areas. The Egyptian government has spent billions of investments and support on these projects. However, the question remains, has the policy of building subsidized housing raised the quality of life and the suffering of families in possessing an adequate, safe, and healthy home? Has this policy failed or succeeded? Did the economic, social, and cultural factors affect urbanization and thus affect the quality of urban life indicators? In order to answer these questions, it is necessary to study and analyze some of the middle-income government residential areas. In Cairo, four areas for government housing were selected to study the impact of economic, social, and cultural factors on quality-of-life indicators: economic housing / Helwan as shown on **Figure. 2**, Atlas housing /Mokattam as shown on **Figure. 3**, Swissry housing / Nasr City as shown on **Figure. 4**, Mubarak housing / New Cairo as shown on **Figure. 5**.

Figure.2. economic housing / Helwan (by author)

Figure. 3. Atlas housing / Mokattam (by author)

Figure.4. Swissry housing / Nasr City (by author)

Figure. 5. Mubarak housing / New Cairo (by author)

4. Results

To assess the selected case study, this is done by measuring the economic, social and cultural indicators inferred of the population (10 indicators), these indicators are calculated using equations or raw data by the Central Agency for Public Mobilization and Statistics (CAPMAS) 2018.

In order to achieve the quality of urban life approach and evaluate the operational framework outputs through the population's economic, social and cultural Indicators, the results were incorporated to study the situation in the Statistical Package of Social Sciences (SPSS). Then, evaluate the case study by calculating the Relative Importance Index (RII).

Table 2. Measurement of the economic - social - cultural indicators for Government Housing Case Studies in Cairo and the Relative Importance Index (RII)

	Indicators		**Case Study**			
			economic housing	**Atlas housing**	**Swissry housing**	**Mubarak housing**
1	**Economic**	the unemployment ratio	48.7%	40.7%	38.9%	25.1%
2		the dependency ratio	95%	68.3%	63.9%	31.9%
3		the female employment ratio	12.1%	23.9%	35.8%	55.5%

4	**indicators**	Employees in the government sector	20.4%	9.3%	17.9%	22.2%
5		the percentage of workers in the and private sector	73.6%	86.3%	73.8%	63.7%
6	**Social indicators**	the average number of family members	3.89	3.89	3.4	3.3
7		the person's share of health services	5 beds	3 beds	6 beds	14 beds
8	**Cultural indicators**	The ratio of the female to male education	88%	94 %	95%	98 %
9		the Uneducated ratio	25%	20%	7%	9%
10		The person's share of years of education	62 students	56 students	42 student	36 students
Relative Importance Index (RII)			**0.437**	**0.393**	**0.696**	**0.837**

5. Analysis and Discussion

Arranging the government residential areas in Cairo case study based on the assessment of the economic, social and cultural indicators of the population from highest to lowest, as shown by the results. As shown in figure.6.

1. **Mubarak Housing**
   Received the highest assessment in the case study, with a value (0.837)
2. **Swissry Housing**
   The second place in the assessment in the case study, with a value (0.696)
3. **Economic Housing**
   The third place in the assessment in the case study, with a value (0.437)
4. **Atlas Housing**
   Received the lowest assessment in the case study, with a value (0.393)

Figure.6. Arranging the case study based on the assessment of the population indicators from highest to lowest

In figure.7. shown that:

1- Mubarak Housing

It is the most distinguished area in the case study of Cairo Governorate in terms of evaluating the economic, social and cultural indicators of the population.

2- Atlas Housing

It is the worst distinguished area in the case study of Cairo Governorate in terms of evaluating the economic, social and cultural indicators of the population.

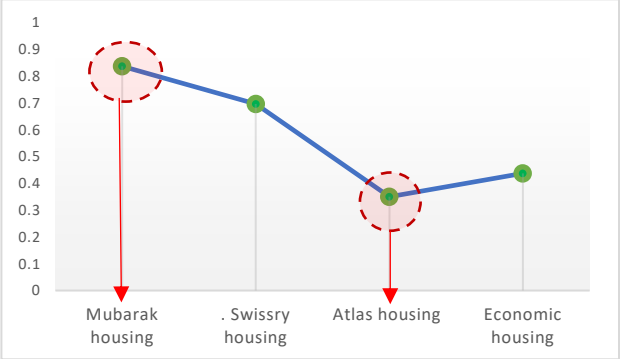

Figure.7. The highest and the lowest assessment in the case study

5.1. Research results: proposed framework

After the results of the evaluation of the case study, and the statement of the great difference between the results of measuring the economic, social and cultural indicators of the population in those areas, especially between Mubarak Housing and Atlas Housing. So, it is not possible to apply the same method to achieve indicators of quality of urban life. The researcher suggested the appropriate methods for each region based on the economic, social and cultural indicators of the population, with the aim of achieving quality of life. As shown in **Table.3.**

Table.3. the appropriate methods for Mubarak Housing and Atlas Housing to achieve quality of urban life.

The Urban Indicators		**methods of achieving indicators of quality of urban life**	
Main indicators	**Sub-indicators**	**Atlas housing**	**Mubarak housing**
Road infrastructure **Transportation**	Automated movement paths	-Availability of a network of interconnected streets -Attention to the quality of road paving (Including regular maintenance)	-Availability of rainwater drains on both sides of the road -Availability of traffic lights and signs
	Walking Paths	-Removing encroachments on the sidewalks to allow people to walk - The width of the Walking path is suitable for the density of the population	-Availability of a safe network of walking and bicycle paths on both sides of the street that connects housing with services -Availability of seats, directional signs and lighting
	service items to handicapped	-Availability of sidewalk ramps to handle changing levels and facilitating movement	-Availability of a safe path and provision of elements for ease of walking -Use paving materials suitable for wheelchair

	Bicycle paths	----------	-Availability of a safe network for bicycles with parking and services -Achieving the separation between bicycle, walking, and cars paths
Transportation	The residence is close to public transport stations	- Integration of different activities and uses and their occurrence near transport stations and residences	- Increasing shaded public transport stations with wifi -Reducing the time spent walking from the residence to the station
	Availability of transportation services	-Diversity of public transportation between buses, subways and minibuses - Availability of safe, environmentally and comfortable means at low prices.	-Availability of convenient public transportation To encourage people to use it, to reduce dependence on cars
Housing, urban design and the environment	Sustainable environmental design	-Building with less costly materials that are easy to maintain -Attention to the finishing of the external facades of buildings	- Availability of a residential building adapted to the local climate to achieve urban sustainability
	Open green spaces and parks- green areas - pocket gardens - playgrounds	-The use of open spaces in economic and social activities - Availability of safe areas to play for children	- Availability of neighborhood park -Availability of a small garden between the residential groups
Medical care	Proximity to emergency services and ambulance	-Availability with distress speed less than 10 minutes-	- Availability with distress speed less than 10 minutes
	Availability of health care centers - private public and specialized clinics	- Availability of Family Health Units - Family Planning Units	- Increasing the availability of specialized health care centers and private clinics
	Availability of hospitals - measures the distance to hospitals	- Availability and proximity of government hospitals 2-4 beds/1000 people	- A government hospital and a specialized hospital, available within the area's service scope.
Educational opportunities	proximity of primary, middle and secondary schools	- Availability of Kindergarten classes -Availability of public primary& secondary schools -Availability of technical secondary schools (industrial-commercial)	-Availability of experimental and formal schools -Availability of Japanese schools -Availability of international schools

	Availability of nurseries	-Availability of nurseries located inside the social services buildings in mosques	-Availability of nurseries, often in neighborhood centers or inside residential buildings.
	Availability of educational centers	-Availability of educational centers, and Quran memorization - inside the service buildings of mosques	-Availability of educational centers (language courses - arts, music and handicraft centers) in the neighborhood center
Security and social environment	Availability of private - public security (Security guards-cameras)	-Reducing negative spaces (secluded and dark areas) and turning them into positive ones -Availability of illuminated safe paths that encourage safe movement	-Availability of security services and men (private - public) -Availability of surveillance cameras
	Close to the police station	-Police point - service range (3-5) km - speed in response to distress less than 10 minutes	A major police station - service range (30) km - a speed of response to distress less than 7 minutes
Government services	Availability and proximity to firefighting and civil defense centers	-Availability of distress speed less than 10 minutes	-Availability of distress speed less than 10 minutes
	Availability and proximity of government services)	-Availability of a catering office, post office, etc. among the residential buildings	-Availability of government services in the neighborhood center
Religious facilities	Islamic	-Availability of a chapel for prayer - walking distance is less than 300 m -The local mosque-service scope (500) m	- The local mosque - service scope (500) m -The Great Mosque for a service range of 1 km
	Christian	-Availability of a small church / more than 50 Christian families	-Availability of a church Service scope 50-1000 Christian families Walking distance not more than 1 km
Culture and Arts Services	Community centers - mpu - open exhibitions	- Availability of a socio-cultural center - the number of served population (20-40) thousand people	Availability of community centers - mpu- open gallery - cultural and artistic events - women's club - studio - children's hobbies
	Close to theaters and cinemas	-Availability of cinemas and venues for celebrations within the cultural center	-Availability of theaters, cinemas and venues for celebrations in the neighborhood center area
	Close to public libraries	- Availability of a public library inside the cultural center	-Availability of a public library (for children - adults) , and study areas with internet access

Commercial services	Proximity to shopping centers more than 4000 m^2	----------	- Easy access to shopping centers and malls in the city centers
	Proximity to shopping centers for daily needs from 1000-3000 m^2	----------	- Increasing the daily needs of shopping centers in the neighborhood, the walking distance from 300-500 m
	Availability of retail stores (bakery - pharmacy- laundry – café...)	- Diversity between shops within mixed administrative and residential buildings	----------
Community participation	Achieving the principle of participation and empowerment	- Giving opportunities for residents to participate in the maintenance of buildings and open areas - Supporting of local youth councils	- Participation in decision making -Encouraging cooperation between community leaders and local specialists

6. Conclusions

One of the concepts that varies from place to place and from time to time within the same place is urban quality of life. As a result, each region must be addressed in accordance with its population's needs, culture, and economic, social, and cultural conditions.

The population's economic, social, and cultural indicators are the most important means of achieving urban life quality. Therefore, the study identified the indicators influencing urban indicators of quality of life, how these indicators are measured, and how these measurements can be compared to account for differences in society and culture.

The framework's results were obtained by measuring the impact of the population's economic, social, and cultural indicators on urban indicators to achieve a quality of life. By applying it to four government housing study areas in Cairo, Egypt. Among the findings of previous measurements of the research areas.

It was discovered that the Mubarak housing area is more distinguished, and the Atlas housing area is the least distinguished in evaluating the population's economic, social, and cultural indicators, so the two areas cannot be measured using the same method.

After the results of the evaluation of the case study, and the statement of the great difference between the results of measuring the economic, social and cultural indicators of the population in those areas, especially between Mubarak Housing and Atlas Housing. So, it is not possible to apply the same method to achieve indicators of quality of urban life.

Finally, the study proposed a framework for different approaches to achieving urban quality of life indicators in those two distinct areas. This requires special treatment through an independent strategy for each city itself, and quality of urban life indicators paint the integrated picture. This city determines the progress made in the economic, social, urban, and environmental fields.

List of Abbreviations

(CAPMAS): the Central Agency for Public Mobilization and Statistics.
(SPSS) : the Statistical Package for the Social science.

REFERENCES

1. Ahmed M. Selim, Doha M. Saeed, “Infrastructure Projects for Green Cities between Implementation Challenges and Efficiency Indicators,” Civil Engineering and Architecture Vol. 9(2), pp. 347 - 356, (2021). 2332-1091 E-ISSN: 2332-1121, DOI: http://dx.doi.org/10.13189/cea.2021.090208
2. Hair L., Kramer M., Office of Water, Office of Sustainable Communities, “City Green: Innovative Green Infrastructure Solutions for Downtowns and Infill Locations,” EPA, United States Environment; Protection Agency, EPA 230RI6001, May 2016. www.epa.gov/smartgrowth
3. UN Habitat III Issue Papers on Urban and Spatial Planning and Design; UN Habitat: New York, NY, USA, 2015.
4. Ahmed M. Selim, Pasent H.A. Yousef, Mohamed R. Hagag, “Smart infrastructure by (PPPs) within the concept of smart cities to achieve sustainable development,” Int. J. Critical Infrastructures, Vol. 14, No. 2, (2018). this publication at: https://www.researchgate.net/publication/347273208
5. Council for Economic and Development Affairs, “Quality of Life Program 2020 Document-Implementation Plan," KSA, Vision (2030). http://vision2030.gov.sa
6. Michael Pacione, “Urban Environmental Quality and Human Wellbeing—a Social Geographical Perspective,” Landscape and Urban Planning, Vol. 65, PP. 19-30, (2003). DOI: https://doi.org/10.1016/S0169-2046(02)00234-7
7. Marans R., Stimson R. Eds, "Investigating Quality of Urban Life Theory, Methods”, Part of the Social Indicators Research Series book series SINS, volume 45. Number: 2011937028, (2011). https://link.springer.com/book/10.1007/978-94-007-1742-8#editorsandaffiliations
8. Das. D., "Urban Quality of Life: A Case Study of Guwahati,” Social Indicators Research Vol. 88, Issue (2): PP. 297-310, (2008). DOI: https://doi.org/10.1007/s11205-007-9191-6
9. Turkoglu H., “Sustainable Development and Quality of Urban Life. Procedia - Social and Behavioral Sciences,” Vol. 202, PP. 10–14, (2015). DOI: 10.1016/j.sbspro.2015.08.203
10. Vlasov D., Majorzadehzahiri A., Amin M. S., “Evaluate quality of urban life,” E3S Web of Conferences, Vol. 263, Article Number 05035, PP. 1-8, (2021). DOI: https://doi.org/10.1051/e3sconf/202126305035
11. Rezvani M. R., Mansourian H., Sattari M. H., “Evaluating Quality of Life in Urban Areas (Case Study: Noorabad City, Iran),” Social Indicators Research, Vol. 112(1), PP. 203–220, (2012). DOI:10.1007/s11205-012-0048-2
12. Ghalehteimouri K. J., Hatami A., Asadzadeh H., “Measuring the quality of life and city competitiveness: A methodological framework for the Iranian metropolis,” Journal of Urban Culture Research21, pp. 90-111, (2020). DOI: https://doi.org/10.14456/jucr.2020.14
13. Turkoglu H., "Sustainable development and Quality of Urban Life," Procedia - Social and Behavioral Sciences, vol. 202, PP. 10-15, (2015). DOI: https://doi.org/10.1016/j.sbspro.2015.08.203
14. Gilman R., Easterbrooks S., Frey M., "A preliminary study of multidimensional life satisfaction among deaf/hard of hearing youth across environmental settings," Social Indicators' Research, Vol. 66, PP. 143-164, (2004). DOI:

https://doi.org/10.1023/B:SOCI.0000007495.40790.85

15. Djafri R., Osman M. M., "Measuring social housing dimensions: a case study of urban areas in Algeria," International Journal of Housing Markets and Analysis, Vol. 14(2), pp. 351-370, (2021). DOI: https://doi.org/10.1108/IJHMA-03-2020-0028
16. Zeng W., Huo X., Yu, Z, "Humanistic demand and spatiotemporal perspective in the evaluation of urban life quality—A case study of Shandong Province in China," IOP Conference Series: Earth and Environmental Science, Vol. 580(1), 012065, (2020). DOI: http://dx.doi.org/10.1088/1755-1315/580/1/012065
17. Ghalehteimouri K. J., Hatami A., Asadzadeh H., "Measuring the quality of life and city competitiveness: A methodological framework for the Iranian metropolis," Journal of Urban Culture Research21, pp. 90-111, (2020). DOI: https://doi.org/10.14456/jucr.2020.14
18. Ali A., Sharafi H. A., Ghazanfarpou H., "Analysis urban life quality, case study residents of Rostamabad City," American Journal of Engineering Research (AJER), E-ISSN: 2320-0847 P-ISSN: 2320-0936, Vol. 03, Issue-03, pp. 322-329, (2014).
19. Grum B., Kobal Grum D., "Concepts of social sustainability based on social infrastructure and quality of life," Facilities, Vol. 38(11/12), PP. 783–800, (2020). DOI: 10.1108/f-04-2020-0042
20. Jooseok Oh., "Residential mobility and quality of life between metropolitan areas: The case of South Korea," Sustainability (Switzerland), Vol. 12 (20), 8611, pp. 1-14, (2020). DOI: https://doi.org/10.3390/su12208611
21. Cheng X., Van Damme S., Uyttenhove P.," A review of empirical studies of cultural ecosystem services in urban green infrastructure," Journal of Environmental Management, Vol. 293, 112895, (2021). DOI: https://doi.org/10.1016/j.jenvman.2021.112895
22. Nikoofam M., Mobaraki A., "Assessment of quality of life in the urban environment; case study: Famagusta, N. Cyprus," Civil Engineering and Architecture, Vol. 8(5), pp. 860-872, (2020). DOI: http://dx.doi.org/10.13189/cea.2020.080513
23. Ahmed M. Selim, Pasent H.A. Yousef, Mohamed R. Hagag," Risk allocation for infrastructure Projects by PPPs- under environmental management and risk assessment mechanisms," Int. J. Risk Assessment and Management, Vol. 22, No. 1, (2019). this publication at: https://www.researchgate.net/publication/347273427
24. Vlasov D., Majorzadehzahiri A., Amin M. S.," Evaluate quality of urban life," E3S Web of Conferences, Vol. 263, Article Number 05035, PP. 1-8, (2021). DOI: https://doi.org/10.1051/e3sconf/202126305035
25. Jernej Tiran, "Measuring urban quality of life: Case study of Ljubljana," Acta geographical Slovenia, Vol. 56, No. 1, (2016). DOI: http://dx.doi.org/10.3986/AGS.828
26. Qusen Zumaya, J., "Sustainable Housing Indicators and Improving the Quality of Life: The Case of Two Residential Areas in Baghdad City," IOP Conference Series: Earth and Environmental Science, Vol. 754, No. (1), 012002, (2021). DOI: 10.1088/1755-1315/754/1/012002
27. Ahmed Selim, "Managerial Smart Governance Model and Indicators as an Evaluation Methodology to promote Public-Private Partnership in Infrastructure Projects," Port Said Engineering Research journal (PSERJ), The Faculty of Engineering, Port-Said University, 1110-6603 Online ISSN: 2536-9377, (2021). DOI:

https://dx.doi.org/10.21608/pserj.2021.54652.1082

28. K. Hatkar, N. Hedaoo. “Dely Analysis by Using Relative Importance Index Method in Infrastructure Projects”. International Journal of Civil Engineering and Concrete Strutures, Vol. 1, No. 3, October 2016.
29. Council for Economic and Development Affairs, “Quality of Life Program 2020 Document-Implementation Plan," KSA, Vision (2030). http://vision2030.gov.sa
30. Ministry of housing, "Quality of Life Standards Manual- Standards concerned with the quality of urban life in residential communities in the Kingdom of Saudi Arabia," Quality of Life Program, KSA, 2020. https://drive.uqu.edu.sa/_/dart/files/.pdf
31. Qusen Zumaya, J., “Sustainable Housing Indicators and Improving the Quality of Life: The Case of Two Residential Areas in Baghdad City,” IOP Conference Series: Earth and Environmental Science, Vol. 754, No. (1), 012002, (2021). DOI: 10.1088/1755-1315/754/1/012002
32. Nikoofam, M., Mobaraki, A., “Assessment of quality of life in the urban environment; case study: Famagusta, N. Cyprus,” Civil Engineering and Architecture 8(5), pp. 860-872, (2020). DOI: http://dx.doi.org/10.13189/cea.2020.080513
33. B. Ogenis, K. Jannes., “Green City Concept and a Method to Measure Green City Performance over Time Applied to Fifty Cities Globally: Influence of GDP, Population Size and Energy Efficiency,” Sustainability, Vol. 10, issue 6, (2018). DOI: 10.3390/SU10062031
34. Ankur Joshi, S. K., Likert Scale: Explored and Explained. British Journal of Applied Science & Technology. 2015, DOI:10.9734/BJAST/2015/14975
35. Central Agency for Public Mobilization and Statistics, "Census-Population and Housing Conditions- Governorates, "Cairo-Population and Housing Conditions, 2018. https://www.capmas.gov.eg/Pages/Publications.aspx?page_id=7195&Year=23354