Quality of Urban Life Indexes' Analysis to Initiate Socio-Urban Based Criteria

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Abstract

There are calls to review the city's ability to fulfil resident's spectrum needs in order to increase QOL. The interest of this study is to trace the social and urban indicators mentioned in current well-known indexes' factors as base to identify some guide lines that may help when enhancing QOUL in cities. The paper is extracted from a PhD thesis that is aiming at enhancing QOUL through the assessment of socio urban indicators as a baseline in Cairene communities. It consists of three main parts in addition to introduction and conclusion. Starting by literature review that discusses the concept of QOL verses QOUL, well known assessment indexes; with review to social and urban indicators. Followed by a comparative analysis between mentioned indexes based on the main factors including; Urban, social, Environmental, Economic, moreover political and governmental factors. Followed by a detailed qualitative analysis focuses on social and urban indicators. Then discussion reflected in the interrelationship between Factors and indicators to develop a proposal socio urban assessment Criteria. An eight categories socio urban criteria is proposed based on analysis and synthesis processes including rate of repetition of each indicator in studied indexes. A pilot experts' validation is presented in this paper.

Keywords: Quality of Life, Socio-Urban indicators, City, Assessment indexes.

1. INTRODUCTION

To induce people's quality of life; it is important to identify factors affecting people's life in a certain urban area; This will help to encourage and accelerate the impact on resident's everyday life directly. Rankings and awards for good cities are simply a way to foster better urban life. [1] The indexes and rating systems are crucial in evaluating the level of quality of life in urban areas. They pinpoint the important indicators that affect people's life. However, until now there is no agreement –either local nor global- on which index should be used and why. On the level of local context, where the resources are limited and the interventions must be prioritized, the low level of quality of life is a complex issue. In order to address that issue in Egyptian context, there is a need for compatible adopted socio-urban indicators that could be handled and put as priorities to enhance quality of urbanism then the quality of life for citizens. Hence, the research builds on the previous efforts to extract the most influential and effective indicators from available indexes.

This paper aims at developing a proposal to Socio Urban Criteria to enhance Quality of Urban Life in Cairene communities, based on reviewing the different well known indexes used internationally, with a special focus on how QOL could increase through working on urban and social pillars, Factors, and indicators. It assumes that working on these factors on micro urban level may induce people satisfaction towards their city. Moreover enhance rank of Egyptian cities in international indexes.

Some indexes showed Egypt ranked 80th [2], Unfortunately, it has a low rank, which indicates low quality of life to its residents. Moreover, in a pilot investigation held in 2017 with residents in different cairene communities. a no. of 173 parents, were asked to rate their overall satisfaction of the quality of urban life in their city (0-5, 5= complete satisfaction). According to this investigation more than 60% of the sample were not satisfied regardless they live in a suburb, low or even high dense communities. [3]

One problem- measurement issue- in current Quality of Life assessments is that there is no further study to identify whether Egypt performs poorly in all of mentioned determinants or only few of them. Another problem regarding the current indexes of QOL is that they work on macro level in which they consider QOL in one area as same as a neighboring informal area for example. May be if the assessment tools worked on developing more micro urban scale indicators rather than Macro scale ones the QOUL of people increase in same cities.

2. METHODOLOGY

This study uses the descriptive qualitative approach to identify initial factors and indicators that present Quality of Urban Life. In addition to analytical approach in which it analyzes the urban and social indicators in contemporary indexes that have been applied already on many international case studies. Literature review includes a brief content analysis for eight international assessment indexes in particular. The review focuses on

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existing academic literature and good practices in QOL assessment across the world. The frameworks, and indexes selected in are chosen since they could be adopted to be implemented on different levels across the city. While this list may not be comprehensive, it tries to systematically undertake a majority of the current research and practice on the subject internationally.

Then the factors of each one of them are synthesized in Table 1, followed by a detailed qualitative analysis to their urban, and social indicators is shown in Tables 2,3. A comparative analysis then done regarding main factors of these indexes. This analysis is aiming at identifying the importance of social and urban pillars, moreover, a set of socio-urban assessment criteria which can help urbanists to figure out the possible leverage areas of intervention that may enhance the quality of people urban life; through criteria will be deduced in Table 4.

In addition, an experts' pilot survey using an online questionnaire is used to verify the proposed criteria, and rank its importance using relative weights according to Cairene communities. Experts were asked to rate importance and relevance of indicators presenting each indicator of initial criteria of the eight socio urban factors. The results of questionnaire are also presented in Table 4.

3.   QOL AS A CONCEPT VERSUS QOUL

Quality is one of those expressions which are used almost by everybody. The concept of the quality of Life is considered as a comprehensive concept that includes many different aspects, is usually based on two main components which are objective and subjective. [4] studies about QOL usually includes the environmental aspects related to urbanism and cities, moreover human and social aspects that reflect individuals' satisfaction about their lives and their communities [5]. While Quality of life is defined as the degree of well-being felt by an individual or group of people inside the city where they use to live. The difference between the standard of living, and QOL is that QOL is an intangible concept; consequently, it cannot be measured directly. It consists of two components which are physical and psychological. The physical aspect includes things such as health, safety, and protection, while the psychological aspect includes stress, worry, pleasure and other positive or negative emotional states [6].

QOL is not studied in the nowhere, it is always related to where people live. This what makes it more accurately to be defined as QOUL, in which the domain of built environment is added. One main pillar of QOUL as a concept is being contextual, and can't be generalized universally. Although there are some common concepts about it, the way to reach it can't be unified. QOL relatively differs from one country to another, as it usually considers the context, and culture in which people live [7]. As people perception about their environment may differ in different cultural backgrounds.

In a review of the literature on QOL, in 2004, Mulligan et al. broadly interpret QOL as the satisfaction that a person is receiving from surrounding human and physical conditions, conditions that are scale-dependent and can affect the behavior of individuals [8]. Quality of life also could be translated into livability of a place. In this context, it means that in an urban

society, it relates to the common experiences of residents from urban environment and the ability of the city to meet such needs; thus the importance of the urban pillar of QOL appears. [7]

QOUL is mainly relating QOL, to place. By place, it is meant the geography or environments of individuals such as households, neighborhoods, and communities. [9-10] Some researchers believe that definition of QOL more accurately reflects quality of urban life [11-12].   QOUL affects how people behave in addition to their life satisfaction and happiness. Moreover, it has broader implications for research and urban policy. For example, QOL in general and QOUL in particular can: [12-14]

- Underlie the demand for public action.
- Affect the livability of cities' residents, and motivate their location decisions.
- Provide a set of indicators which allow policy makers and planners to assess the effectiveness of their efforts [15].
- Have broad implications for patterns of regional migration, economic growth, and environmental sustainability [16].

3.1 Measuring QOL

Since the late 70s, a growing body of literature has tried to produce theoretically consistent quality-of-life rankings for urban areas [17]. Quality of life is usually depending on a patch of factors. Each factor is measured by an indicator or more. Some of these indicators are classified as objective and others are subjective. [18] However, measuring QOL has no satisfactory unified method or index due to concept's nature. Literature has offered a number of different approaches for measuring major alternate indexes of QOL. [19] They were divided into four main approaches which are:

1. The personal well-being approach: which measures life-satisfaction of individuals;
2. The livability comparisons approach: which focuses on comparing different urban areas according to a number of objective indicators assumed to reflect quality of life;
3. The market/resident approach: in which housing price and/or wage differentials are theorized to compensate for QOL differences between urban areas;
4. The community trends approach: which stresses the role of QOL within a system of ongoing development processes.

Each approach of them focus on social, or urban needs for individuals wellbeing, however they may tackle it from one perspective or another. They are usually depending on some certain contextual criteria. Thus, principles that guide the measurement, or assessment of QOL need to be considered within the context of the current interest in the concept of quality of life as a social construct, and unifying theme. [20]

The QOL indexes are usually developed with different sets of indicators; reflecting some common factors; they differ in both their weight and application. The indexes also vary in their method to weight each indicator of same aspect from subjective to objective measures. Another, important issue regarding current QOL measures, is their validity. QOL measures, designed with a specific target population in mind, in a specific social context, may not capture the totality of life experience

for other populations in different contexts and settings. Hence, the validity of a generic measure of QOL has to be demonstrated across a variety of populations in different contexts. [18]

4. QOL, QOUL INDEXES AS A BASELINE FOR ASSESSMENT TOOL

All around the world, a lot of organizations are interested in studying QOL, and citizens' satisfaction. A variety of indexes were proposed and used to score and rate cities and countries according to their quality of life. These organizations differ in interests and methodologies, however none of them is urban based. [21]

4.1 Criteria of Choosing baseline indexes.

Internationally, there are many QOL indexes to start from, the authors set some criteria to choose baseline indexes. These criteria include; The index must have a clear practical purpose, The index should be a well-known intentionally authorized index, The index must include urban factors even if not mentioned clearly as main factors, different factors must be presented by social and urban indicators that can be tackled by urbanists on contextual micro to macro urban –from community to city – levels, and The index should help public policymakers develop and assess programs at all levels of aggregation.

4.2 Introduction to QOL baseline indexes.

One of the most popular and widely used indexes are Quality of Living by Mercer consultants. Another example is Quality of Life index by The Economist Intelligence Unit (EIU), and YOUR BETTER LIFE INDEX by The Organization for Economic Cooperation and Development (OECD). These different indexes focus on a number of common aspects as they consider them the main cores of quality of life. These aspects include: Housing, Income, Jobs, Community, Education, Environment, Governance, Health, Life Satisfaction, Safety and Work-life balance. Each index of those values some different factors including some urban, and social criteria.

Mercer's Quality of Living:
Quality of Living, for the purposes of Mercer's survey, analysis, and city rankings, is objective, neutral and unbiased. [24]. It measures the quality of living for expatriates based on 39 criteria grouped into 10 key categories as shown in Table 1 [24]. The index is factoring the inter- action of political, socio-economic and environmental aspects for this ranking [25]. Although, Mercers index has a pro that it depends on objective indicators, some of indicators cannot be applied on Egyptian context like Alcoholic beverages for example.

- Quality of Life index by The Economist Intelligence Unit (EIU): According to EIU, Quality of life reflects the degree of well-being felt by an individual or group of people inside the city where they use to live; this may be considered as an intangible concept. Thus, measuring it is not easily measured [25]. The index is composed of nine determinants, which reflect factors of life satisfaction. Table 1. It has been calculated for 111 countries in 2005, and some of its indicators were modified in 2017. One con about this index is that it's on the country level not the city

one. [21] They assumed implicitly that Cairo and Egypt are similar.

- Your Better Life Index, Organization for Economic Co-operation and Development (OECD): was established in 1988. It is basically based on objective measures; it provides a comparative value based on time series analysis. it illustrates an approach in which the development of a summary index value that provides some insight into both positive or negative directions. A total of 21 objective variables are presented representing nine "areas of social concern". [26] As presented in Table 1

- Quality of Life Survey: This survey is based mainly on subjective well-being expressed by the interviewed citizens; it correlates citizen wellbeing with eight indicators of quality of urban life. In this survey, the interviewees were asked about their opinions about perceptions of different aspects of city life. Moreover, it also included standard demographic information about citizens in 10 metropolitan areas in the world [27]. it includes eight sections Table 1; devoted to a specific aspect of the quality of urban life [28]. It was showing that the subjective well-being is strongly correlated with the opportunity of social relationships, which are given both by the town physical structure and by the existing social opportunities of life. The main pros of this survey are two things, the first is that it was applied in 10 countries, the other is that its indicators target metropolitans like Cairo in both developed and developing countries.

- The livability index: In the livability index, Scores are built on the neighborhood level. The assessed neighborhood gets a score of 100.the index includes seven livability categories. These categories are mainly urban like: housing, neighborhood, transportation, environment, health, engagement, and opportunity. Metric values and policy points within each category are combined to create the category score. Those category scores are then averaged to create a location's total livability score [26-29]. The main pro of the livability index is that both the scale of application and assessment factors are suitable for the scope of this research.

- City prosperity Index: (CPI) was developed by UN Habitat in 2018. It considers QOL as a part of five branches presenting The Wheel of Urban Prosperity in addition to Productivity, Infrastructure development, Equity and social inclusion, and Environmental sustainability [30]. It is a composite index used to measure the overall achievements of a city according to the six dimensions of prosperity. [31] The CPI Index measures how cities create and distribute socio-economic benefits and prosperity. [30] The CPI index produces information at city level, and according to data availability, at neighborhood level. They use these five dimensions to define prosperous city [32].

- Happy city index: (HCI) is developed by Happy City in collaboration with the New Economics Foundation (NEF) in collaboration 2017, and updated 2019. The index focuses on conditions that create 'sustainable wellbeing'. [33] It was designed to show how well cities fairly could provide the conditions that create citizens wellbeing. In HCI, cities are given overall scores and rankings in three dimensions which are City Conditions, Equality, and

Sustainability. Each of these domains is further divided into sub-domains concerning key policy areas within each domain. The index consists of 26 indicators [33]. The main pro in HCI is that it deals with needs of different spectrum of residents to enhance social inclusion and equity.

All mentioned indexes aim at enhancing quality of people's life in their cities, some of their factors are common and others differ according to the approach of each.

Table 1. Comparing Factors of Quality of Life Indexes, HAPPY CITY INDEX, and City Prosperity Index, (authors,2019).

pilar/ factor key			Mercer	EIU	OECD	QOL survey	Johnston's QOL	city livability index	CPI(QOL)	HCI
Urban (basic services)				Material well being	Housing					
Detailed Urban factors	Educational		Economic environment	Healthcare	Income	Economy	Health	HOUSING	Productivity	Work
	Housing		Socio-cultural environment	political Stability, freedom	Jobs	Culture	Public safety	NEIGHBORHOOD	Infrastructure development	Health
	Health & Medical		Medical and health considerations	security	Community	Education	Education	Access to life, work, and play /proximity of destinations	Equity, social Inclusion	Education
	Infrastructure		Schools and education	family life	Education	Welfare	Employment		Environmental. Sustainability	place
	Recreational, public Space		Natural environment	Community life	Environment	Safety	Earnings &income		QOL	Housing
	Social, and cultural		Public services and transport	climate and geography	Governance	Environment	Poverty		Public Space	Safety
safety and Security			Recreation	Infrastructure	Health	City administration	Housing	TRANSPORTATION Safe and convenient options	Community Cohesion	transport
Governance			Consumer goods	Education	Life satisfaction	Community life	Family stability	ENVIRONMENT	material safety & security	Green Space
Political			Housing		Safety		Equality	HEALTH Prevention, access and quality		Community
Economic			Political and social environment		Work-life balance			ENGAGEMENT Civic and social involvement		participation/ such Isolation
Environmental								OPPORTUNITY		Culture
factors that are considered as constructs								Inclusion and possibilities		Local Business

5. DEVELOPING A SOCIO-URBAN ASSESSMENT CRITERIA

The previous literature reviews of assessing QOL, QOUL in relation provide an insight into the need and potentials of proposing socio-urban based criteria to develop QOUL in Cairo communities. When QOL or QOUL are assessed; it is important to consider the different factors and indicators of the current assessment tools. As the goals of QOL may be common, but the methodologies of reaching it cannot be unified.

As shown in Fig 2 that QOUL can also be presented as a comprehensive concept which includes mainly five pillars which are: Socio -Urban pillar including Safety, Governance pillar, Political pillar, economic and environmental pillars. The social and urban ones present two thirds of their factors and indicators. Scholars have identified a set of objective and subjective indicators that may be used to evaluate urban QOL in a city or neighborhoods within a city under those factors. [9]
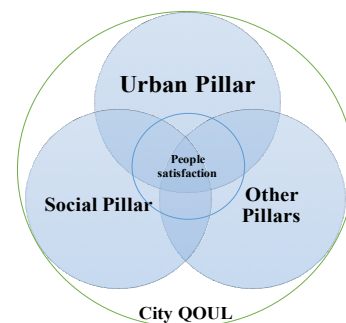

Fig. 2: Main pillars of QOUL concluded from factors of different indexes, (Authors, 2019).

Thus this part will try to set a current situation analysis as a base line for the Socio Urban criteria to enhance QOUL. The following comparative analysis Table 1 is based on set of factors which are commonly approved. it compares factors of

quality of life identified by the different QOL and QOUL assessment tools mentioned above.

5.1 QOL, QOUL factors analysis in different indexes

The different indexes focus on a number of common aspects – Factors- as the main core of quality of life, the main factors mentioned in Table 1 are: Political, Economic, Environmental factors in addition to urban factors including: Housing; Educational, Health & Medical facilities; Social, and cultural amenities, and opportunities; Recreational public spaces; Infrastructure; moreover, safety and Security. Each factor is given a color key to make it easier in comparison visualization.

Through analysis of different factors of each index; it was found that Socio urban indicators presents more than 60% of indicators mentioned in different indexes as shown in Fig.3 and mentioned in details in Table 1. When focusing on socio urban qualities and indicators shown in Table 2, and Table 3 in addition to other indicators (see references 24-32), there will be a direct impact on QOUL moreover current position of Egyptian cities in current ranks. This refers to the importance of working on socio urban qualities to enhance QOL in city and its relevance to research significance.
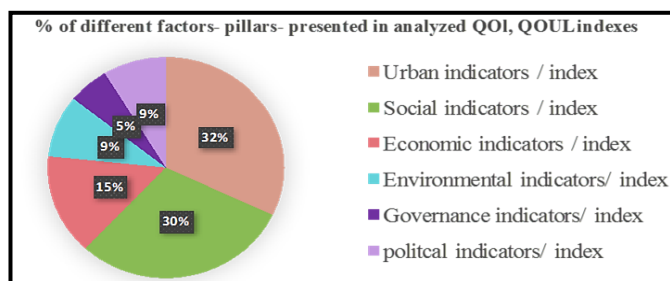

Fig. 3: Comparing % of indicators in each of factors presented in different indexes, (authors,2019).

5.2 Factors' Synthesis concluded through comparitive analysis:

- Urban factors are presented in basic services promoted as (Education, Health, Housing, Recreational amenities prompted, and public space, infrastructure), moreover social, and cultural opportunities.
- Education factor is mentioned in all indexes except city livability index. Social, urban factors are presented in all indexes.
- Housing was mentioned in five indexes which are: Mercer, OECD, Johnston's QOL, City Livability index, and HCI. Recreation as an urban facility doesn't appear continuously, however it presents an important factor in social interaction and public life.
- QOL is mentioned as one of five factors in City Prosperity Index.
- Some factors could be considered as constructs by selves like (neighborhood in city Livability index, and community in HCI, in addition to L inn City Prosperity Index.

- Political factor is usually presented by equity and/or civic engagement, and sometimes it is included with social environment.
- Economic factors are usually not correlated with socio-urban needs as they present standard of living not quality of living.
- Natural environment is mentioned in all studied indexes except HCI.

5.3 Detailed comparative analysis of Socio urban indicators.

When looking at previous mentioned and other similar lists, it appears that even while different indexes are using similar criteria as main categories, they do reach different results according to indicators under each factor and its relative importance. As most of indexes are oriented to their countries or the firms developed them. This leads to some main issues, the first issue is that when trying to increase QOL in socio-urban perspective (QOUL); it is highly needed to develop compatible indicators; it is important is to develop them in a contextual approach that present different factors. Another issue is that, to induce conditions related to residents wellbeing; it is not fair to focus on same indexes designed to fit other places in the world, presented in a holistic number, and depends on macro scale indicators. As QOUL is always linked with perceived qualities, available resources, community culture, and their needs. These issues not only differ from one country to another or either from one city to another in the same country, it can differ from one community to another in same city.

So when proposing a checklist, it is important to include both micro and macro scale indicators. Tables 2 and Table 3 is going to focus on the social and urban indicators developed by each matrix mentioned above. They present a qualitative comparative analysis in which the number put in front of indicator presents the rate of repetition in each index, in addition to sum of indicators presenting each factor. After this qualitative analysis, a categorizing process is done based on eight socio-urban factors were proposed within comparative analysis done between factors and indicators of selected indexes. These 8 factors shown in Fig 4 and Table 4 are: Housing, Main services and amenities including two main sub factors which are provision and quality, Safety, mobility and social inclusion are main qualities for urban environment on different scales, moreover Planning, infrastructure and recreational opportunities provided in the city.
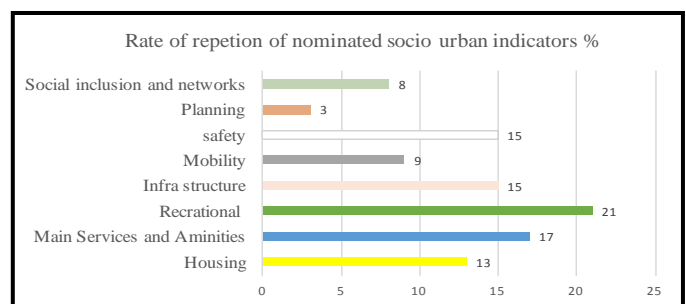

Fig.4: Presenting the percentage of different socio urban factors using no of indicators presenting each factor.

Table 2: Detailed collective matrix of urban indicators Quality of Life Indexes, HAPPY CITY INDEX, and City Prosperity Index, (Authors,2019)

category	Indicators under each Factor	Quality of Life Survey	Johnston's QOUL Index	OECD Better Life Index	Mercer's Quality of Living survey	Equality-of-life index	Livability Index	City Prosperity Index	Happy city index	rate of repetation
	no. of indicators included / index									
urban	New privately-owned housing units		1							1
	Average housing sales price / affordability		1				1			2
	Housing expenditure			1						1
	Dwellings with basic facilities			1						1
	Rooms per person			1						1
	housing								1	3
	Schools					1				1
	transports	1				1	1	1		4
	availability of shops/ commercial amenities	1					1			2
	availability of parks / green space (public)	1							1	3
	free to circulate without danger	1								1
	Sewage					1		1		2
	Electricity					1		1		3
	Water availability / supply					1		1		3
	Mail /Telephone					1				1
	Housing household appliances and furniture					1				1
	access to different housing types						1			1
	variety of housing options						1			1
	Household maintenance and repair					1				1
	Quality of road network					1				1
	Mass transit usage									1
	Quality of public transport					1				1
	Quality of international links					1				1
	Availability of good quality housing					1				1
	Quality of energy provision					1				1
	Quality of water provision					1				1
	internet access									0
	Quality of telecommunications					1		1		2
	mixed use neighborhood						1			1
	Urban density									1
	activity density						1			1
	convenient transportation options						1			1
	accessible trans. system design						1			1
	walking trips						1			1
	safe streets speed limits, crash rates						1			1
	congestion						1			1
	public space							1		1
	no. of urban indicators / index	4	2	3	8	7	12	6	2	51

Table 3: Detailed collective matrix of social indicators Quality of Life Indexes, HAPPY CITY INDEX, and City Prosperity Index, (authors,2019)

category	Indicators under each Factor	Quality of Life Survey	Johnston's QOUL Index	OECD Better Life Index	Mercer's Quality of Living survey	Equality-of-life index	Livability Index	City Prosperity Index	Happy city index	rate of repeation
	no. of indicators included / index									
social	cultural opportunities	1			4	1	1		1	8
	tourism	1								1
	childcare		1							1
	health system the poor	1								1
	support to elderly & disabled people	1								1
	feeling protected / safe	1					1			2
	meeting with friends and neighbors	1								1
	volunteering and social activities	1							1	2
	Rate of violent crimes		1	1		1				3
	Crime				1				1	2
	Rate of property/ petty crimes		1			1				2
	% of pop. Collge Educated		1							1
	Average SAT scores		1							1
	Rate of divorce		1							1
	% of families"intact"		1							1
	lack of stress /Anxiety								1	2
	dignity									1
	mutual interaction									1
	support and communication								1	2
	education									2
	personal eligibility & function / Worthwhile								1	2
	recreation						1	1		3
	personal independency									1
	goals									1
	values and priorities									1
	social role & supports									1
	Quality of support network/ personal relations			1					1	2
	Autonomy Happiness								1	1
	Life satisfaction			1					1	2
	Feeling safe walking alone at night			1						1
	Time devoted to leisure and personal care			1						1
	Sport and leisure activities				1	1				2
	Media and censorship				1					1
	Child learning								1	1
	Children's wellbeing								1	1
	Adult learning								1	1
	education (high school graduation rate)						1			1
	multi generational communities (age diversity)						1			1
	social engagment: cultural, arts , and Entertainment facilities						1			1
	social involvment , neighbours relation						1			1
	material safty & security							1	1	2
	community cohesion							1	1	2
	social inclusion							1		1
	Generalized trust								1	1
	Social or religious restrictions					1				1
	no. of Social indicators / index	7	7	5	7	5	7	4	15	69

6. PROPOSING KEY INDICATORS OF QOUL ASSESSMENT TOOL CHECK LIST.

The detailed analysis mentioned 51 social indicators mentioned in studied international matrixes, moreover 69 urban indicators with a total number of 120 indicators. However, some of these indicators are tackling same issues using different ways of presentations. During filtration and synthesis processes based on scope of factor and indicator presented, and how it affects people socio urban life across the city; the number of indicators was compacted and integrated to 64 indicators mentioned in Table 4.

Table 4: Detailed indicators of QOUL with experts' assessment on cairene communities

Factor	Sub-factors	Common Indicators	Rate of repetition	Grade of imp according to experts Questionnaire
Housing		New privately-owned housing units	1	33% 39% 28%
		Average housing sales price / affordability	2	11% 21% 32% 37%
		Housing expenditure	1	10% 45% 30% 15%
		Rooms per person	1	5% 40% 25% 30%
		Housing household appliances and furniture	1	10% 15% 35% 35% 5%
		Variety of housing options	2	20% 25% 55%
		Household maintenance and repair	1	15% 15% 20% 50%
		Availability of good quality housing	1	11% 26% 63%

1 NA (Non Applicable) 2 3 4 5 — **13**

Factor	Sub-factors	Common Indicators	Rate	Grade
Main Services and Amenities	Commercial	Dwellings with basic facilities	1	15% 40% 40%
		availability of shops/ commercial amenities	2	10% 50% 40%
	Health	Access to health care	1	15% 15% 70%
		Hospital services	1	5% 5% 15% 40% 35%
		health system the poor	1	10% 15% 40% 20% 15%
		Availability of private healthcare	1	10% 10% 25% 30% 25%
		Quality of private healthcare	1	
		Availability of public healthcare	1	5% 20% 25% 50%
		Quality of public healthcare	1	10% 20% 70%
	Educational	childcare	1	
		Schools	1	
		Education	2	
		Child learning	1	
		Adult learning	1	
		education (high school graduation rate)	1	

1 NA (Non Applicable) 2 3 4 5 (very important) — **17**

Factor	Sub-factors	Common Indicators	Rate	Grade
Recreational		availability of parks / green space (public)	3	20% 70%
		public space	1	55% 45%
		cultural opportunities	8	20% 55% 25%
		tourism	1	15% 45% 25% 15%
		recreation	3	25% 30% 45%
		Time devoted to leisure and personal care	1	20% 35% 25%
		Sport and leisure activities	2	10% 10% 55%
		social engagement: cultural, arts , and Entertainment facilities	1	5% 5% 40% 55%
		meeting with friends and neighbors	1	20% 35% 45%

1 2 3 4 5 — **21**

Factor	Sub-factors	Common Indicators	Rate	Grade
Infra structure	provision	Sewage	2	5% 10% 10% 76%
		Electricity	3	5% 10% 5% 81%
		Water availability / supply	3	5% 19% 76%
		Telecom (Mail /Telephone/ internet access)	2	5% 14% 24% 57%
	Quality	Quality of road network	1	14% 29% 57%
		Quality of energy provision	1	5% 14% 29% 52%
		Quality of water provision	1	19% 5% 76%
		Quality of telecommunications	2	10% 10% 29% 52%

1(NA) 2 3 4 5 very important — **15**

Factor	Sub-factors	Common Indicators	Rate	Grade
Mobility	Transportation	transports	4	
		Mass transit usage	1	
		Quality of public transport	1	
		convenient transportation options	1	
		accessible trans. system design	1	
	Walkability	walking trips	1	

1 NA 2 3 4 5 Very important — **9**

Factor	Sub-factors	Common Indicators (Extacted from Urban indicators / Extacted from Social indicators)	Rate of repeation	Grade of imp according to experts Questionnaire
safety	subjective/ perceived safety	free to circulate without danger	1	
		safe streets speed limits, crash rates	1	
		feeling protected / safe	2	
		personal independency	1	
		Feeling safe walking alone at night	1	
	objective/ material safety	Rate of violent crimes	3	
		Crime	2	
		Rate of property/ petty crimes	2	
		% of families "intact"	1	
		material safety & security	1	
	1 NA 2 3 4 5 Very important		15	
Planning		mixed use neighborhood	1	
		Urban density	1	
		activity density	1	
	1 NA 2 3 4 5 (Very Important)		3	
Social inclusion and networks		Quality of support network/ personal relations	1	
		multi generational communities (age diversity)	1	
		social involvement , neighbors relation	1	
		community cohesion	2	
		social inclusion	1	
		volunteering and social activities	2	
	1 NA 2 3 4 5 Very Important		8	

Each of these factors have a number of detailed indicators mentioned in Table 4 that could be used as guidelines to enhance the quality of the built environment with different importance to be mentioned case by case. A validation process example of mentioned socio urban indicators is presented in 5th column of Table 4 in which experts rated degree of importance of criteria relevant to Cairene communities.

According to expert's survey on cairene communities; Safety, Mobility and recreational facilities come at the 1st ranks of interventions needed. Moreover, working on definite leverage criteria like in safety factor for example, the main subjective indicators are free circulation without danger in addition to rate of violent crimes. While in recreation need of green and public spaces is most needed. However, if it was applied on certain community results may have changed and be more accurate to community specific needs.

One main obstacle about international indexes of QOL is that however they are promoted to be international, there is no common definition to what should be defined as Urban factor and what should be considered as objective or subjective indicators. Sometimes it could be found that recreation is considered as a factor with a set of indicators. While in other cases, it is considered as an indicator to measure other factors. Housing as atopic also has the same problem; once it is found under material security; in another index it is considered as one main factor to be measured by objective indicator like number of New privately-owned housing units, and Average sales price or subjective indicators reflecting quality and diversity.

Additionally, as the indicators are drawn from the international indexes; they would have direct influence on city score. The suggested dimensions and principles of urban quality of life aim to guide and assist public policy makers, urban planners, and designers to raise the urban quality of life of an area with an important note regarding the need to a layer of contextuality to be made according to case by case in application according to a set goals and approaches to reach them.

7. CONCLUSION

QOL is a comprehensive concept that cannot be separated from physical environment leading to mentioning it as QOUL is more accurate. It should elastic concept, including different goals and methods to be reached. QOUL includes two domains to be perceived which are subjective and objective, each domain deals with a varying number of factors that differ from one index to another, however they deal with almost same subjects.

The objective pillar of quality of life is concerned with economics, health, politics and physical components of urbanism. while the subjective pillar gives more focus to people perception and their acceptance to current conditions, and their willing to develop those conditions.

Some of the indexes discussed have focused on how cities could help people to have better, happier, more prosper lives. For example, enhancing walkability, Bikeability, and quality of public space in the city have a very direct and efficient reaction in both environmental and social livability of cities. A criticism that may be directed to current indexes, is that most of them deal with a static number of factors. These factors are presented by a number of indicators on a macro level. In case like Cairo

this is totally misleading as the variations in population and their conditions are very high; May be dealing with a more micro or even miso scales would be more effective.

If the aim is to enhance QOUL; then it is important to tackle the urban challenges faced by communities in order to find an applicable approach to reach it. This may be done through different creative perspectives dealing with approved international factors, and presented by locally developed indicators which are affecting leverage needs. Like in the case of Cairene communities, in which experts rated priorities according to city needs, however if it was applied in a certain community more specific leverage interventions may have appeared.

The research identified QOUL socio-urban indicators through descriptive analytical methodology dealing with qualitative urban conditions. An approach that targets different socio urban indicators upraised from the contextual problems of Cairene communities, with reflection to experts' perspective to tackle leverage problems.

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المؤشرات بين مقارنة دليل :المدينة في الحياة جودة تعزيز
لـلـتقـيـيم الـقـيـاسـية

الحياة جودة تحقيق كيفية حول السؤال البحث يتناول تسعي الذي العالمية المفاهيم أحدث عدوالتي بالمدن؛ العمرانية جودة علي العمل إمكانية حول الفرضية تتمحور لتحقيقه المدن المدن في العمرانية البيئة جودة زيادة طريق عن المدن في الحياة ذلك بعديتطرقثم الحياة؛ جودة مفهوم بمناقشة البحثي بدأ بها مع الحياة جودة لتقيـيم العالمية الأمثلة أشهر بعض لاستقراء مقارنة في والعمراني الاجتماعي البعدين على التركيز عوامل بترشيح البحث يخدتم.منهما كل لعناصر تفصيلية في الحياة جودة لتعزيز إرشادية كقواعد استخدامها يمكن ومؤشر الـمديـنة.