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Assessment of Livability Indicators in the Gaza Strip Case Study: "Southern Remal" Neighborhood

تقييم مؤشرات قابلية الحياة في قطاع غزة دراسة حالة: "حي الرمال الجنوبي"

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A Thesis submitted in partial fulfilment of the requirements for the degree of Master of Science in Architecture

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إقىرار

أنا الموقع أدناه مقدم الرسالة التي تحمل العنوان

Assessment of Livability Indicators in the Gaza Strip Case Study: "Southern Remal" Neighborhood

تقييم مؤشرات قابلية الحياة في قطاع غزة دراسة حالة: ''حي الرمال الجنوبي''

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> تقييم مؤشرات قابلية الحياة في قطاع غزة دراسة حالة "حي الرمال الجنوبي"

Assessment of Livability Indicators in the Gaza Strip - Case Study "Southern Remal" Neighborhood

وبعد المناقشة العلنية التي تمت اليوم الأحد 15 ربيع أول 1439هـ، الموافق 2017/12/03م الساعة

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وبعد المداولة أوصت اللجنة بمنح الباحث درجة الماجستير في كلية *الهندسة / قسم الهندسة المعمارية.* واللجنة إذ تمنحه هذه الدرجة فإنها توصيه بتقوى الله تعالى ولـزوم طاعتـه وأن يسخر علمـه في خدمة دينه ووطنه.



Abstract

Being aware of challenges the Gaza Strip faces, and the existing crises on different levels: environmental, political, social, economic and especially the energy crisis, that creates a large gap between reality of life in the Gaza Strip and indicators of livability, as well as official international and local statistics that warn of the Gaza Strip's non-livable area over the next few years, in this sense, scientific research and practical initiatives should be supported to review all policies of urban planning and built environment according to the concepts of livability and sustainable development.

Objectives: In order to achieve above goal in an environment that is subject to many challenges such as the Gaza Strip environment, this study focuses on exploring concepts of livable communities, developing a conceptual framework that highlights the objectives and principles of livability and identifying its indicators and measurements. In addition, the study is an attempt to apply livability policies in the Gaza Strip reality by proposing recommendations that draw a potential vision to build livable Gaza Strip. This study is also an inspirational start for all interested planners, researchers and architects to do more researches, as well as to be a simple theoretical reference for decision-makers to support any future policies or projects targeting the urban environment, social and economic sectors in the Gaza Strip.

Methodology: The study is based on descriptive and analytical approaches and collecting evidences and relevant data to be presented gradually starting with theoretical debate of livability and its related topics and the Gaza Strip conditions, then analytical approach where livability indicators were assessed in a study area, "Southern Remal", in Gaza city.

Findings: Finally, the study reached many results and recommendations, the most important of which is understanding of all aspects of livability, which will form a strong knowledge base for adopting strategies and effective policies that enrich work plans that target urban and housing projects in the Gaza Strip. These steps lead undoubtedly to enhance the quality of life there.

الملخص

في ظل التحديات التي يواجهها قطاع غزة وسلسلة الأزمات التي تعصف به من أزمات بيئية وسياسية واجتماعية واقتصادية وأزمة الطاقة خاصة مما خلق فجوة كبيرة بين واقع الحياة في القطاع من جانب والمؤشرات العالمية لجودة الحياة من جانب آخر، بالإضافة إلى الإحصائيات الرسمية الدولية منها والمحلية والتي تنذر بعدم صلاحية قطاع غزة للحياة خلال السنين القليلة القادمة، من هذا المنطلق كان لزاما أن يتم دعم البحث العلمي وتعزيز المبادرات العملية التي تعيد النظر في سياسات تخطيط المناطق الحضرية والبيئة المبنية وفق مفاهيم قابلية الحياة والتنمية المستدامة.

أهداف الدراسة: لتحقيق الهدف أعلاه في بيئة تحفها الكثير من التحديات كبيئة قطاع غزة جاءت هذه الدراسة لتوضيح مفاهيم المجتمعات الصالحة للحياة وتضع إطار عمل مفاهيمي شامل يبرز أهداف هذا المفهوم وأولوياته ومبادئه، ويلقي الضوء على مؤشراته وطرق قياسها، إضافة إلى محاولة تطبيق سياساته في واقع قطاع غزة وصولاً لتقديم المقترحات والتوصيات الأمثل التي ترسم الرؤية المحتملة لبناء قطاع غزة صالح للحياة. كما تشكل هذه الدراسة بداية ملهمة ومعمان المحتملة للعاء في واقع قطاع غزة وصولاً لتقديم المقترحات والتوصيات الأمثل التي ترسم الرؤية المحتملة لبناء قطاع غزة صالح للحياة. كما تشكل هذه الدراسة بداية ملهمة ومحفزة لجميع المهتمين في هذا المجال من مخططين وباحثين ومعماريين، وكذلك لتكون ملهمة ومحفزة لجميع المهتمين في هذا المجال من مخططين وباحثين ومعماريين، وكذلك لتكون مرجعا نظريا مبسطا للتعرف على جوانب المفهوم من قبل صناع القرار، وتسهيل عملية الاستفادة مما ورد فيها لتفعيل التوجه نحو التطبيق الفعلي على كافة المشاريع الحالية والمستقبلية التي تستهدف البيئة العمرانية والبنية المجتمعية والاقتصادية في قطاع غزة بكافة من قبل صناع التوار، وتسهيل عملية مرجعا نظريا مبسطا للتعرف على حوانب المفهوم من قبل صناع القرار، وتسهيل عملية والمستقبلية التريا منا ورد فيها لتفعيل التوجه نحو التطبيق الفعلي على كافة المشاريع الحالية والمستقبلية التي تستهدف البيئة العمرانية والبنية المجتمعية والاقتصادية في قطاع غزة بكافة مستوباتها.

منهجية الدراسة: تعتمد الدراسة المنهجية الوصفية والتحليلية وجمع الأدلة والمعلومات وعرضها بالتدرج بداية من المدخل النظري لجوانب المفهوم وواقع قطاع غزة وحتى الدراسة التحليلية التي تم خلالها تقييم مؤشرات المفهوم في مجاورة الرمال الجنوبي من مدينة غزة.

النتائج: ثم تخلص الدراسة إلى عدد من النتائج والتوصيات، ومن أهم التوصيات ضرورة تحقيق الفهم الكامل لجوانب المفهوم والذي سيشكل قاعدة غنية بالمعلومات للانطلاق نحو وضع الاستراتيجيات والسياسات الفاعلة التي تثري خطط العمل التي تستهدف قطاع المشاريع العمرانية والإسكانية وغيرها في قطاع غزة، هذا التوجه سيؤدي بلا شك إلى تحسين جودة الحياة لدى المواطنين.

Dedication

To whom I owe for their endless support, encouragement, and compassion,

My parents, brothers, sisters, wife and lovely son

I do dedicate this humble thesis

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I wish to extend my sincere thanks to those who participated in producing this work. First, I am grateful to ALLAH (SWT) for the support received to accomplish this thesis.

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List of Abbreviations

PSP	Precinct Structure Planning
GAA	Growth Areas Authority
GVRD	Greater Vancouver Regional District
Cities PLUS	Cities Planning for Long-Term Sustainability
MUtopia	Modelling and visualization platform for developing
	sustainable precincts
IAF	Institute for Alternative Futures
AARP	American Association of Retired Persons
TEAM	The Electors Action Movement
NARC	The National Association of Regional Councils- USA
EIU	Economic Intelligence Unit
QUT	Queensland University of Technology
VCEC	Victorian Competition and Efficiency Commission
ODPM	Office of the Deputy Prime Minister - England
QOL	Quality of life
GDP	Gross Domestic Product
UAE	United Arab Emirates
OECD	Organization for Economic Co-operation and
	Development
HDI	Human Development Index
GNI	Gross National Income
GLCI	Global Livable Cities Index
EPA	Environmental Protection Agency
SDGs	Sustainable Development Goals
SG	Smart Growth
SGN	Smart Growth Network
NAHB	National Association of Home Builders - USA
VTPI	Victoria Transport Policy Institute - Canada
NU	New Urbanism
SGA	Smart Growth America
CNU	Congress for New Urbanism - USA
TOD	Transit-Oriented Development
FIA	Federal Transit Administration - USA
H-GAC	Houston-Galveston Area Council - USA
DOT	Department of Transportation - USA
HUD	Housing and Urban Development - USA
	Iransit Cooperative Research Program - USA
PCBS	Palestinian Central Bureau of Statistics
MUM/y	Million Cubic Meters per Year
	Coastal Municipalities water Utility- Gaza
MOA	Ministry of Agriculture - Gaza
WIU LINED	Wolld Health Olganization
MOH	Ministry of Health
	Palastinian Water Authority
IWA	raitsuman water Aumonity

United Nations
Office for the Coordination of Humanitarian Affairs - The
United Nations
Gaza Electricity Distribution Company
Mega Watt
Food Security Sector
United Nations Relief and Works Agency
United States Dollar
Chloride
Nitrate

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CHAPTER 1 INTRODUCTION

CHAPTER 1 INTRODUCTION

1.1 Background and Context

The quality of life is a key goal of all human societies since ancient times, and the human nature is always striving to develop itself and improve the environment around it in order to meet its needs and achieve its aspirations. The quality of life within the community is one of the objectives of livability. The relationships and daily interaction between the people of a society is necessity for the survival and growth of this society, so the community that strengthens and supports these relationships will reap the benefits, the most important are prosperity and development.

In this context, livable communities support this interaction between different generations. On the other hand, these communities provide various services to them, where an integrated environment for living, survival and prosperity will be created.

Therefore, the studies and scientific research through this perspective have great importance these days, with a very high growth rates in terms of population, especially in the developing world and the consequent deterioration at all levels and a severe shortage of environment resources etc. All that is alarming danger to mankind in different regions around the world, including Gaza Strip - the case study of this research- which has very high population density and growth rates, as the latest statistics indicate that the population there is more than two million people, this rapid growth rates, with a series of crises in the environmental, economic, social and political levels, have led to many urban problems, as well as insufficient level of services and challenges that may be difficult to overcome. Unfortunately, these problems negatively affect the quality of life of individuals and communities.

This study focuses on exploring conceptual framework that highlights the concepts of livability and livable communities: objectives, priorities, principles and also to highlights its indicators and measurements. The study is an initial attempt to apply livability policies in the reality of Gaza Strip to provide the best recommendations that draw a potential vision for building a livable Gaza Strip.

1

This chapter introduces the key ideas and thinking behind this thesis and the issues it aims to address. It introduces the research problem, significance and objectives of the study and defines the scope of the work undertaken.

1.2 Research Problem

The Gaza Strip suffers from many crises and difficult challenges that put residents' life at risk. Under the siege imposed on it for more than 10 years and under the punitive measures, livability indicators deteriorate year after year at different levels, which is consistent with the predictions of international organizations where reports have been prepared and alarm the danger about the possibility of life in Gaza Strip over the next few years. So, this study was carried out to assess livability indicators in one of the neighborhoods of Gaza City, the largest city in Gaza Strip. For this purpose, the study aims to propose the conceptual framework of livability as non-common locally or in Arab world, as well as to assess the concepts' indicators in the reality of daily life in the Gaza Strip, in order to form a comprehensive vision, which enables the researcher to make the necessary recommendations and achieve the overall objective of the study.

1.3 Research questions

Question 1: What are the concepts of livability and to what extent these concepts intersect with the Gaza Strip conditions.

Question 2: What are the main livability indicators influencing the daily life in the Gaza Strip.

1.4 Scope

This study focuses on the concepts of livability and all related aspects, and to what extent the reality of the Gaza Strip intersects with these issues to make the necessary recommendations for future livable the Gaza Strip. Therefore, the geographical location of the case study is "Southern Remal" neighborhood in Gaza city, while researcher depends on all collected data until the date of thesis preparation.

1.5 Significance of the study

The importance of the study is due to the fact that it is one of the few studies in the Arab world that discusses livability from many aspects. Also due to scarcity of specialized studies in this field at the national level, which focus on an important region in our country, where the Gaza Strip suffer from deterioration and hard crises. Hence there is a need for a comprehensive study of the livability and its' relationship with the Gaza Strip reality at the present time, which is limited in size and has high growth rates. These conditions are alarming danger in the future and emphasize the urgent need for such study.

Working to remove the expected danger is one of the top priorities that efforts must be made towards achieving it. The solution can not be initiated without sufficient knowledge of the concept, its principles and indicators etc., where this knowledge will significantly help and support decision-makers and researchers in shaping a potential vision for a livable Gaza, and this is precisely what is expected in this research as outcomes.

Based on the above, the importance of the study can be summarized as follows:

- This study prepared in light of the lack of specialized studies on this scientific area that assess the reality of Gaza Strip according to livability indicators, and therefore the study meets the growing need to provide such studies.
- The study discusses the relationship of livability in all its aspects with the deteriorating Gaza Strip and highlights the large gap in this relationship, which necessitates the efforts and time to minimize this gap and draw the perceptions and policies of livable Gaza. This study is considered the first step on this challenging way.

1.6 Objectives of the study

This study aims to find a solid knowledge of one of the most important topics globally "livability", which include identifying principles, strategies and indicators etc. where the reality of the Gaza Strip will be assessed regarding that, and with focusing on its growing and unmet needs. The study also reviews some experiences in building livable communities in order to get lessons learnt. Lastly, the study rephrases the requirements in line with the reality of Gaza Strip through recommendations to get the potential vision for a future livable Gaza.

In order to achieve the above aim, the following objectives will be carried out:

• To study theories and principles of livability and livable communities to have in-depth understanding and knowledge.

• To assess the respondents' opinions about the reality of Gaza Strip according to livability indicators and principles.

• Identify the constraints to be overcome by rethinking and developing perceptions in order to successfully build a livable Gaza strip.

• To develop mechanisms and strategies that reviewed in recommendations, which may orient concerns of planners, experts, engineers, and also decision makers, organizations and governments to adopt livable communities' policies in the Gaza strip.

1.7 Research Methodology

The research depends on the descriptive and analytical approach as well as the collected evidences and present it in a scientific method that ranging from the theoretical approach, which defines the dimensions of livability and its aspects, as well as review of the circumstances and conditions of Gaza Strip.

This leads to the practical approach, which depends primarily on the questionnaire in order to state the basics and policies that can be applied on Gaza Strip and achieve the goal of the study.

The research methodology can be divided into:

First: Theoretical approach

• Literature review of several sources such as scientific published and unpublished related researches, as well as books and references, also statistics and facts contained in international and local scientific conferences, and the statistics shown on official websites as Palestinian Central Bureau of Statistics website.

• Study and analysis of a case study that applied the concepts of livability.

• Review the reality of Gaza Strip and current crises and highlight the intersection between it and the principles of the livability.

Second: Practical approach

- A field survey which was conducted by distributing questionnaires to assess livability indicators in the Gaza Strip, where South Remal neighborhood was a study area.
- Data analysis and discussion. Statistical Package for the Social Sciences, (SPSS) was used to perform the required analysis.

• Making recommendations that contribute effectively in prosperity and development of Palestinian community and enhance the quality of life of his residents.

1.8 Research constraints

- Lack of awareness and knowledge about livability and the impact of its involvement in national policies, which led to the difficulty on interpreting some facts of the study to several bodies, including decision makers.
- The continuous volatility of the conditions in Gaza Strip, which has caused a dispersion in the stability of collected data on the long term.

1.9 Overview of thesis

Chapter One

This chapter introduces the subject matter of the work enabling the reader to understand the background and context, and includes: Research Problem, Research questions, Significance & Objectives of the study, Research Methodology, Research constraints, Overview of thesis and lastly review of related studies.

Chapter Two

In this chapter, historical background is reviewed, and definitions of livability and livable communities is discussed in detail from the perspective of different researchers and various views of: academics, policymakers and private providers. Then the chapter highlights the key dimensions of livability, principles of livable city, benefits of livability. Additionally, the relationship between the interchanged concepts of sustainability and livability will be presented. In the same context, new concepts intersect with livability will be discussed in this chapter, such as: the quality of life, smart growth, new urbanism etc. By the end of the chapter, a case study will be presented and analyzed in order to have lessons learnt and maximize the knowledge.

Chapter Three

This chapter discusses the measurement tools, which were referred as survey lists of most livable cities, such as the Economist Intelligence Unit's "global livability ranking", and "Mercer Quality of Living Survey" etc. On the other hand, the second part of this chapter reviews the indicators of livability in all its aspects, identifying indicator, explaining the criteria of livability indicators and giving some examples of livability indices.

Chapter Four

This chapter gives a brief overview of Gaza Strip, as well as identifying the current situations in Gaza Strip based on international reports in various sectors such as water, health, education, energy sources, food security, income, jobs and housing.

Chapter Five

This chapter describes the methodology used in this research. The adopted methodology to accomplish this study uses the following techniques: the information about the research design, research population, questionnaire design, statistical data analysis, content validity and pilot study.

Chapter Six

This chapter will represent the research findings and the statistical analysis of the collected data as part of this study. The purpose of this chapter is to provide a comprehensive overview of the entire data set collected and the characteristics of the respondents. In addition, it serves to describe the statistical procedures applied to the data in order to interpret and apply the data to the research problem.

Chapter Seven

The final chapter will draw conclusions, main findings and recommendations of the thesis.

1.10 Relevant studies

The study benefited from many scientific researches and references that discussed many debates that related to the research topic, and due to the scarcity of Arabic references, the study mainly depends on foreign references, and taking into account to be recent.

In his Master thesis, **Powell (2014)** reviewed the concept of livability and its importance in the planning of new neighborhoods and cities. The study confirmed that this concept is valuable and able to increase the positive impact on people's lives through its applications in planning processes. Through research on four great areas: community strength, environment and open space, participation and access to services and facilities, this study- that has Cardiff Bay as case study- proved that policies do not give enough consideration to livability factors in the planning of new neighborhoods.

In their main question "What are the key indicators for Melbourne neighborhoods?" **Lowe et al. (2013)** provided an overview about reviews and researches on livability indicators, their studies also provide guidance on the impact of planning on health and well-being outcomes. In the same context, the study showed that there is a strong overlap between livability, social determinants of health and environmental sustainability. At the end of this study, eleven domains of policies that affect livability were identified and studied and then linked to changes in behavior and outcomes of health and wellbeing.

Leby & Hashim (2010) have a study to explore livability dimensions and attributes in the eyes of neighborhood residents and to assess their importance by conducting a field survey with total of 170 questionnaires, and this made this study so related to my study. Authors have found that four dimensions are always used in most studies that seek to understand livability. They therefore identified sixteen attributes to be the indicators of these four dimensions. Results revealed that safety is the most concerning to neighboring residents, while social issues are the least important factor. Thus, efforts and policies should be focused on ensuring the overall safety and to secure neighborhoods and reduce fear of crime and crime itself. This for sure will lead to achieve residents' satisfaction.

An attempt to explore the transforming to a livable community in the absence of political stability has been examined by **Lucero, Ismail & Kishawi (2016)** where Gaza Strip was assessed as case study. This paper offers some integrated strategies to build a livable community. Using Kate Raworth's Economic Doughnut, the paper summarizes the current conditions in Gaza Strip using key indicators (including health, unemployment, infrastructure, education and the environment), also the paper presents some of the obstacles. The focus of the paper is the authors' description of a livable community in the context of the challenges and opportunities present in Gaza Strip. The study confirmed that sustainability and livability are processes, not end-states or projects to complete. These processes are always changing, evolving and maturing as our understanding matures.

To identify livability index, **Carmichael, Gleason, Lehrmitt, & Luppino** (2007) outline the roadmap to explore this index for the Westminster City Council, where the authors created an environmental sub-index and an outline for an overall composite index for the city. They concluded that the outcome of their work would be an important step in improving the Council's performance and services, which lead to enhance quality of life of its constituents.

Kashef (2016) examined in his analytical study of urban livability the various literature that discuss the idea of livable cities. Where the study combines academic concepts related to urban planning fields with popular culture and recent measuring tools that rank cities around the world according to the standards of living and services available. In this context, the study presented an analytical assessment of the various measurement indicators and provided an accurate understanding of urban livability.

CHAPTER 2 UNDERSTANDING LIVABILITY

CHAPTER 2 UNDERSTANDING LIVABILITY

2.1 Introduction

In this chapter, historical background is reviewed, and definitions of livability and livable communities are discussed in detail from the perspective of different researchers and various views of: academics, policymakers and private providers. Then the chapter highlights the key dimensions of livability, principles of livable city, benefits of livability. Additionally, the concept of sustainability and sustainable development are presented with clarifying the relationship between the interchanged concepts of sustainability and livability, how they differ and how they are similar. In the same context, this chapter and due to the emergence of new concepts intersect with the subject of study and affect it, discussion reviews several related concepts, such as: the quality of life, smart growth, new urbanism, transit-oriented development and placemaking. In the end of this chapter, a case study will be presented and analyzed in order to have lessons learnt and maximize the knowledge.

2.2 Overview

Nowadays, the rapid urban growth of large cities produces societies in which people live in a competitive globalized life. In today's increasingly global and interconnected world, over half of the world's population 54 % lives in urban areas and by 2050 that percentage will rise up to 70 % percent (United Nations, 2014).

Due to the rapid growth of cities, changes take place on the environmental, economic and social levels, as a result, the quality of life in these cities will affected and damaged, many problems will arise, such as deterioration of infrastructure, transportation networks, housing, urban planning, energy and water resources, etc. Therefore, it is important to work hard to address these problems in order to make cities environmentally sustainable, socially righteous and economically strong. Researchers around the world seek through research studies at all levels to draw a comprehensive vision of risks diagnosis and develop urgent and sustainable plans to overcome all problems. Briefly, we should improve the livability of our cities.

In order to achieve a real step towards contributing to develop solutions and plans, it is necessary to acquire sufficient knowledge about the most essential relevant concepts and principles, hence this study is so important.

Powell (2014) assumes that livability is a basically contested concept that needs to be discussed in the wider sense of the sustainable development agenda.

2.3 Historical background

The search of livability is currently the most important topics that considered the core of discussing of urban issues around the world. Germans talk about Lebensqualita, Swedes call it livskraftighet, the Dutch speak of leefbaarheid, while Britons and Americans use the term liv(e)ability (Kaal, 2011). For Hovey (2008) the term livability receives a considerable popularity in the American language: Organizations promoted more livable communities. Our cities livability is being improved. An outstanding public discussion about livability meaning is aroused by politicians, journalists, and commentators. A raft of rankings, produced by academics, think tanks, news organizations, and others, tell us exactly which are the most livable and which are not.

A comprehensive view of a livable community is similar to plan and design an ideal environment. These communities have many characteristics that are ideal and comprehensive, they are safe and secure communities, and include all facilities and services, even secondary ones, with solid infrastructure and strong economy, also they are environment friendly communities.

Of policy programs, business philosophies, and political manifestos' point of view, to improve a city's degree of livability seems to be one of the basic concerns of several actors ranging from the local and state government spheres to business and civil society. Local governments refer to livability when discussing efforts to counter petty crime and improve active citizenship and social cohesion (Hovey, 2008). Housing corporations use livability to justify their gentrification projects, while social movements use livability in their calls for environmental improvement and

citizen participation in policy making (Andersen & Van Kempen, 2003). The issue of urban livability has also had a huge impact on urban studies, catalysing a plethora of studies in urban planning and geography dedicated to identifying new ways to improve and measure urban livability (Hankins and Powers, 2009; McCann, 2007; Pro⁻ hl, 2002 & Evans, 2002).

The issue of urban livability is, however, not something recent. In an intriguing analysis of Vancouver politics in the late 1960s and 1970s, urban geographer Ley observed the rise of 'a new ideology of livability' adopted by The Electors Action Movement (TEAM): an urban reform party in the city of Vancouver, this new ideology amounted to a new approach to urban development, TEAM used a language of livability to challenge the dominant, growth-cantered approach which was to be replaced by a more 'humane, socially progressive, and aesthetic' policy: a focus on people rather than on the city's economy (Kaal, 2011). Key elements of its policy agenda were a focus on participation, aesthetics, pollution control, more parks, neighborhood preservation, and mixed land use (Ley, 1980). The concept of livability was used in other Western countries as well. In 1971, American Vice President Spiro Agnew used the term in his closing address of an international conference on cities in Indianapolis (Kaal, 2011). Agnew hailed European cities for their charm, their human scale, their livability', as opposed to American cities which by contrast, sprang up as transitory settlements places on the way to someplace else (Leapman, 1971). In the 1970s at Philadelphia International Airport, travelers, nonetheless, were welcomed by a sign that read: America's Most Livable City (Ley, 1980). In another article, Ley has argued that since the 1970s livability has been a dominant category of urban discourse used by various groups in the urban arena, each with their own conceptions of urban livability, these different conceptions, according to Ley, reveal much about the various publics who have competed for the power to define the quality of urban life (Ley, 1990, p. 34). Other scholars have picked up on this (McCann, 2004; Uitermark, 2005 and Hankins & Powers, 2009).

Advocates of a critical approach to urban studies have argued that livability discourse often reflects the interests of elites who pursue an agenda of urban growth and are representing upper and middle-class interests (Kaal, 2011). They have characterized livability as a discursive frame that both enables and legitimates

entrepreneurial policy initiatives (McCann, 2004, p. 1913), and as a discourse which privilege[s] consumption and individual choice over collective responsibility and civic morality (Hankins & Powers, 2009, p. 851).

2.4 Theoretical elaboration

2.4.1 Introduction

The enhancing of livability to be a reality in our lives is the desire of everyone, individuals, organizations and governments. As a starting point, it is necessary to identify the meaning of this concept and identify the most important factors affecting it. Pacione (2003) describes livability as: a relative, rather than an absolute term of which the precise meaning depends on the place, time and purpose of the assessment, and on the value system of the assessor. There is no single definition of the livability in politics and science, the concept of livability has been a description of a condition of urban life (Kaal, 2011). According to Szalai (1980) the concept of livability functions as a container in which almost everything fits: sustainability, quality of life, well-being etc.

It is noticeable, from what is mentioned above, that the term is so general, and potentially has many aspects. Therefore, researchers, policymakers and academics added many points of view to their understanding of the concept in different ways, which caused conceptual confusion.

In this chapter, the understanding of the concept will be from three perspectives: the scientific or academic debate, the policy making field and private providers field. This division is made, because the context in which the concept of livability is used in science, policy making and private providers is not similar. Before that understanding, I will review the experience of The National Association of Regional Councils in USA to illustrate the lack of consensus about the Concept; What Is Livability?

2.4.2 Difficulty building consensus concepts of livability

NARC "The National Association of Regional Councils" - USA conducted two different types of analyses to demonstrate the lack of consensus in defining one concept of livability. First, NARC created a word cloud, using www.wordle.net to show a clear review of the different ways in which the literature defined livability. This word cloud weighed each word in 18 definitions of scholarly and practitioner of livability, which was reviewed by NARC depending on the number of times the word appeared in each definition. NARC found that most definitions of livability included transportation, community and quality, which indicated that practitioners of the concept focus on similar themes but do not have one single definition.

Secondly, NARC conducted a search on the term of livability in all text of scientific research and scholarly journals published between 1976 and 2011 in EbscoHost database, and also search on livable in the subject terms. The conducted search included 800 scientific articles within these criteria. NARC then isolated each article based on their nexus to the goals of the Partnership, removing journals that referenced animal or plant health, medicine or book reviews and found 707 journals that discussed the livability concept. After grouping the articles based on relevant key words, a clear picture emerged about the existence of varied ways that the scholarly field understood livability. As illustrated in Table (2.1), the ten most common descriptors included: (NARC, 2012)

• urban planning	 cities and towns;
• policy;	 housing;
• urban growth;	• transportation;
• social;	• quality of life;
• community development; and	• sustainable development

Table (2.1): The ten most common descriptors in Key Word Chart

Number of scholarly journals	Theme
	Urban Planning
93	(Urban Planners, City Planning)
	Cities and Towns
79	(Capital Cities, City Councils, Livable City,
	Living Cities, Walkable City, Small Cities,
	Sustainable, Inner Cities, City Dwellers, City
	Traffic, Municipal Ordinances, Reclaiming
	Cities & Towns, New York City)

Number of scholarly journals	Theme
68	Policy Urban (19), Housing (13), Economic (9), Government (8), Social (8), Environmental (4), Cultural (2), Urban Transportation (1), Employment (1), Fed Aid to Transportation (1), Military (1), Public (1)
<u></u>	
68	(Development, Housing, Public, Dwellings,
	Low Income, Homelessness, Rental, Infill,
	Home Ownership, Discrimination, Apartment
	Houses, Community Housing Services,
	Authorities, Inclusionary Housing Programs,
	Landlord and Tenant, Retirement Communities,
	Right to, Solar, Housing Market, House Buying,
	Suburban Homes, Finance, Construction,
	Discrimination, Apartment)
63	Urban Growth
	(Urban Renewal, Population Density, Urban,
	Sprawl, Urban Agriculture, Decline, Forestry,
	Fringe, Heath Island Effect, Indicators, Plants,
	Poor, Research, Runoff, Urban-Rural Migration,
	Urban-Suburban Migration)
60	Transportation (Urban, Public Transit, Walking, Traffic
	Congestion. Buses. Coastwise Shipping.
	Waterways, Ferries, Human Powered Vehicles,
	Inland Water [Freight] Transportation,
	Intelligent Transportation Systems, Interurban
	and Rural Bus Transportation, Mixed Mode
	Transit Systems, Traffic Flow, Trucking, Urban
	Mass Transportation, Bicycles, Cycling, Air
	Travel, Airports, and State, Safety measures)
58	Social
	(Capital, Aspects, Change, Groups, Movements,
	Participation, Sciences, Indicators, Networks,
	Impact, Action, Context, Factors, Interaction,
	Justice, Marginality, Media, Network Theory,
	Norms, Prediction, Reproduction, Services,
	Interaction, Conditions, History)

Number of scholarly journals	Theme
56	Quality of Life
	(Life, Satisfaction, Happiness, Well-Being,
	Aesthetics, Cost & Standard of Living,
	Nightlife, Night Clubs)
46	Community Development
	(Urban, Rural, Community and Rural
	Development, Community Development
	Corporations)
42	Sustainable Development
	(Buildings, Communities, Design)

(Source: National Association of Regional Council NARC 2012)

The following themes of livability appeared as the most commonly active themes representing ways that practitioners achieve their livability goals in. These themes include:

- Sustainability
- Smart Growth
- Complete Streets
- Lifelong Communities
- Safe Routes to Schools
- Context Sensitive Solutions/Design
- New Urbanism
- Transit-Oriented Development

• Placemaking

2.5 Defining livability

Vine (2012) noted that discourses of livability are nothing if not various, concepts seem to be re-produced with each new generation. However, differences in tendency can be found based on 'who' defines the concept and for 'what' purpose (Lloyd, Fullagar & Reid, 2016). Therefore, it is important to browse the various views of: Academics, Policymakers and Private Providers.

2.5.1 Academic perspective

Academic perspective of livability is full of important debate, and includes a great variation when talking about generalizable definition of the concept. For example, De Chazal (2010, p. 586) argued that livability can be simply seen as a mere expression of values or desires and livability meaning is predicated upon differing and shifting values. He suggests that the definition of livability should be:

An expression of desires related to the content with life in a specific location of an individual or a group of individuals (De Chazal, 2010, p.587). Van Kamp et al (2003) cited in (De Chazal, 2010, p.595) also suggests that livability doesn't have a certain definition and rather describes the term in the form of 'desires' represented by 'domains' (such as personal and community development, physical environment).

Furthermore, Buys et al (2013) summed up with that what forms a livable place is complicated, very personal and is related to the place people prefer to live at and how they see their environment subjectively. In this context, livability represents what Vine (2012) depicts as a theory of daily life as it fastens attention on the required elements for regular functioning and socialite use of place. For (De Chazal, 2010, p.595), the way ahead is to somehow deal with these "messy" individual values along with the related material outcomes in a neat fashion and place them in a particular context. McCrea and Walters (2012, p. 3) tried this, in their study of inhabitants within two outskirt undergoing change, defining 'livability' as an individual's point of view and their personal evaluation of the quality of both tangible (e.g., public infrastructure) and intangible (e.g., sense of place) features of place. As such, livability was seen as experienced in the context of the civil environment (i.e., the subjective social environment) as opposed to being "derived from" the civil environment (i.e., the objective physical environment).

At the end, there is no unanimity of one definition of livability by the most of academics due to its relativistic use as a concept for a series of ideas about place and daily life as well as its appeal to the human being or to a community (Vine 2012, p.119). This has been one of the main challenges for researchers trying to develop a more objective and community oriented definition of livability (Lloyd et al., 2016).

2.5.2 Policy perspective

Despite the absence of a globally accepted definition, livability as an ideology has grown in importance and livability agendas are now prominent at state and national government level in Australia and globally (Vine, 2012). Defining livability for the purposes of research or policy development is even more difficult as it implies a process whereby a city can be transformed over time environmentally, economically and socially (Lloyd et al., 2016). Salvaris (2012) noted that for many countries, including Australia, economic production and growth has been the key indicator of progress often overriding any focus on the social environment and certainly any framework that fully integrates the economic, social, environmental, cultural and democratic dimensions, However, over the last decade Canada, for example, has moved toward a more equitable, sustainable and comprehensive model of progress.

Timmer and Seymoar (2006) described the provincial planning process in Vancouver, Canada, as dealing with not only long-term future livability, but also with people's outstanding satisfaction with their daily experience of living in the region, Their definition involved four key elements: (1) governance and citizen participation; (2) common values and a sense of identity and place; (3) entire communities, essential downtown core, industrial clusters, and green area; and (4) natural resource flows, green corridors, energy networks, communication, active transportation networks. The Australian Government has also attempted to define livability, more broadly and thoroughly, in Our Cities, Our Future a national urban policy document (Department of Infrastructure and Transport, 2011): Livable cities should facilitate residents and visitors achieving a wide range of goals such as a high quality of life and health and wellbeing by being rightful, socially inclusive, inexpensive, accessible, healthy, safe and resilient, They have charming built and natural environments and supply a diversity of choices and chances for people to live their lives, share fellowship, and raise their families to their fullest potential.

Based on what explained above, the term livability is a comprehensive one aims to provide preferred outcomes that all residents desire, even they do not have the access to the same opportunities.

In conclusion, Promotion of livability and livable cities is an important approach used by governments and policymakers to gain various economic investment opportunities.

2.5.3 Private provider perspective

Countries and governments around the world are encouraging tourism and attracting capital as the cornerstones of the country's strong economy, for this reason that they seek to elevate and enhance their cities and regions and create competition
between them to obtain the highest ranking of Livability indices and measures, the city's high ranking is considered as an incentive for individuals, groups and institutions around the world to visit that city and this is leading indeed to gain many benefits.

Therefore, Governments all the time watch the information contained in Livability indices and measures, published by many private organizations. The policy-makers in these countries form policies that improve and enhance the appearance and performance of their cities over time. It is exchangeable interest in which leading providers of livability organizations produce indicators that indicate which cities are more livable, on the other hand, policymakers develop plans to achieve this goal, indeed this leads to increase competition between countries and cities to support tourism as well as investment, and strengthen economy. This have become big business for private providers of livability to re-publish their assessment every year, which is policymakers keen to know very well.

Mercer Consulting, Economic Intelligence Unit (EIU) and Monocle Magazine, have emerged as leading providers of livability indices (Meares and Owens 2012). All of these outcomes are integral to the growth of key industries in contemporaneous cities, Thus, in the competition to become the most livable city in the world, indices effectively define what properties are most important in a city or country and which properties are important to external stakeholders observing progress and assessing potential (Lloyd et al., 2016).

The Monocle's Quality of Life Survey, derives a list of the top 25 most livable cities in the world using an index of eleven criteria including safety/crime, international connectivity, climate, tolerance, urban design and business conditions (Queensland University of Technology (QUT) 2009, Meares and Owen 2012). The EIU World's most livable city index allows for comparison between regions and cities according to several indicators including: environment, education, infrastructure, stability and health care. There are many other indices can measure livability such as Mercer's Worldwide Quality of Living Survey and Better Life Index' of OECD, etc. which will be discussed later.

Ultimately, indices are attractive because they produce objective, quantifiable measures of livability at a broad population level and place emphasis on factors which governments can influence directly (QUT 2009).

2.5.4 Other definitions

Despite the common usage of the term 'livability', much of the literature provides only an implicit definition of the concept. In such cases, the meaning of livability must be derived from the context or choice of indicators (Van Kamp, I. et al., 2003). Where definitions are plainly stated, livability is given a various range of meanings, with no standardized definition or theoretical framework employed in the literature (Lowe et al., 2013). The Centre for Livable Cities Singapore (2011) define livability as the city with splendid planning, create a lively, appealing and secure environment for people to live their life, work and play, it also comprises good governance, a competitive economy, high quality of life and environmental sustainability. Shuhana et al., (2012) opined that high quality of living will affect citizen's lifestyle, health condition and shows steadiness of the built environment. Livability according to Castellati (1997) means experiencing oneself as a real person in the City. In a similar way, Southworth (2007) consider it as determinant of how well the City works for its residents.

Ruth and Franklin, (2014, p.18) see livability as an effort to form a concept about the needs and wants of civil habitants, with a wide range of factors such as food and water, shelter, energy, public health and safety, entertainment, waste management, education, social engagement, economic wellbeing and creativity all being taking into consideration. Livability involves broad human needs ranging from basic security and food to beauty, cultural expression, and a sense of belonging to a society or a place, it refers to the extent to which the features of a specific place can, as they interact with one another and with activities in other places, satisfy inhabitants by meeting their social, economic, and cultural needs, promoting their health and well-being, and maintaining natural resources and ecosystem functions (Lloyd et al., 2016).

As a crosscutting concept, livability contributes to the assessment of the accumulative impacts of public and private actions and failures to act, and helps catch some of the externalities neglected or inaccurately valued by market techniques and these techniques include risk/reward assessments, and consumer, lending and investment policies, business, and government purchasing decisions (Lloyd et al., 2016). Victorian Competition and Efficiency Commission (2008) suggested that livability mirrors the wellbeing of a community and covers the many characteristics that make a location a place where people want to live now and in the future.

2.6 Key Dimensions of Livability

The above-mentioned definitions of Livability indicate that the concept has several dimensions, after reviewing many studies, Livability has three key dimensions: environment, social and economy.

2.6.1 Environment dimension

This dimension represents the vital infrastructure for residents and the linkage between them and the natural world around them, it is the only source of the natural resources on which people depend on their lives, and have variant jobs. This dimension has a great influence on the other two dimensions, and it is important to take care of it and work to protect and develop it. The environmental dimension also includes energy efficiency, material efficiency, biodiversity, emissions, water consumption and waste. Climate change, decadence of natural or built-up environment over time may render a place un-livable while technological invention and precise planning and design may make places previous un-habitable a livable environment (Yang, & Zheng, 2011).

2.6.2 Social dimension

This dimension measures resident's satisfaction in particular area with their living conditions, it includes justice in many aspects, such as distribution of natural resources and equal opportunities for individuals to enjoy community facilities, availability of entertainment and other important facilities, as well as satisfaction of system of governance and individual freedom, it also includes many phenomenon such as poverty, discrimination, crime, etc.

2.6.3 Economy dimension

It is the third main dimension which has emerged within the debate on livability. As economic development and resources distribution is clearly uneven around the world, it is hard to draw a line in terms of average income or apiece GDP as a definite standard of livability (Yang, & Zheng, 2011). Economy is considered as fundamental to resident's life, it includes their ability to obtain food, shelter, as well as higher-order needs such as education, health care, also includes the purchasing power of the average resident. The efficiency of economy depends directly on the availability of natural resources in an area that consumption is required to be efficiently rationalized to meet the needs of current and future generations.

If sufficient functioning ceases within any of these three domains, human settlements can quickly break down, resulting in social conflict, poverty, population loss, and high levels of environmental health problems. This major "golden triad" of livability embraces vastly shared goals—economic competence, social justice, and environmental preservation (National Research Council, 2002).

According to Lynch (1998), dimensions are performance characteristics that measure an attribute against a human purpose, embedded in the dimensions is acknowledgement that they support a set of general human values and needs. Dimensions are interconnected and mutually supporting⁴ they measure on a scale, for example, from zero to one, few to many, or high to low, the five basic dimensions are vitality, sense and perception, fit, access and control and ownership (Lynch, 1998).

Generally, the chosen dimensions will vary depending on the discipline, culture and objectives of the researchers (Van Kamp et al., 2003; Pacione, 2003). Omuta (1988), in his effort to measure the objective and subjective particularity of life to determine the livability of diverse districts in Benin City, applied five broad dimensions: amenities, housing, employment, nuisances and socio-economic factors. Heylen (2006) draws our attention to four dimensions of livability that are often watched in Flanders and the Netherlands, namely quality of the residence, quality of the physical environment, quality of the socialite environment and district safety. Some of the dimensions are used by Visser et al., (2005) to show their impact on house price in the Netherlands. The attributes are classified into four dimensions: the house physical characteristics, the social characteristics of the residential environment, the physical characteristics of the residential environment, and the functional characteristics of the residential environment.

In Holt-Jensen (2001) study to improve a deprived neighborhood, the four factors considered by residents to be important for a good living location are aesthetics, functionality, social relations and individual factors. In another study ODPM (2006) that reports on the livability of cities in England, the researchers have four key livability themes as well as their indicators. These themes are environmental quality, physical location quality, functional place quality and safer places. Table (2.2) shows the livability dimensions used in five selected studies.

ODPM (2006)	Heylen (2006)	Visser et al (2005)	Holt-Jensen (2001)	Omuta (1988)
Environment	Dwelling	Housing	Aesthetics of living	Employment
quality	Social	Social environment	environment	Housing
Physical	environment	Physical	Personal	Amenity
environment	Physical	environment	Social relations	Educational
Functional	environment	Functional	Functional	Nuisance
environment	Safety			Socio-economic
Safety				

 Table (2.2): Livability Dimensions defined in the selected studies

Note: ODPM is "Office of the Deputy Prime Minister" (Source: Office of the Deputy Prime Minister, 2006)

A glance at the various studies found that several livability dimensions, such as functional, physical and social environments, are selected in all cases, which reflects people's common understanding of living environment quality. In addition, housing and safety are also widely used in most studies.

However, it is good to note that these dimensions might not have exact the same content and meaning in all studies or researches, even though the same term might be used (Mousavi, 2012).

2.7 Defining a livable city

According to (Oxford dictionary online), livable in English is an adjective that means worth living. According to (Cambridge dictionary), if a building or place is livable, it is suitable or good for living in. Quality of life in a city depends on ability of the residents to access various sources, as food, clean air, affordable housing, open green spaces, as well as access to education and jobs, also in these cities residents have all their essential needs including safe water, public health, communication and transportation networks, etc.

There are those social groups for whom a livable city is one where those elements have been maintained or renewed which have always been an integral part of friendly places of people. These are, as Peter Smithson once nicely said relations between streets and buildings, and buildings among themselves, and trees, and the year seasons, and embellishment, and events and other people (Palej, 2000).

Making cities livable means basic infrastructure and environmental services to alleviate poverty through inclusive economic growth (Asia Development Bank, 2008). There were many attempts to define and describe "The livable cities". Salzano (1997, 7 p. 3) explained that a livable city is a linkage between the past and the future: the livable city honors the mark of history (our roots) and honors those who are not born yet (our posterity). A livable city is a city that maintains the signs (the buildings, the sites, the layouts) of history. A livable city is also a city that struggle against any waste of the natural resources and that we must leave intact for the humankind, that is, for our posterity. Thus, a livable city is also a 'sustainable city': a city that satisfies the present inhabitants needs without reducing the future generation capacity to satisfy their needs. In the livable city both social and physical elements must cooperate for the well-being and progression of the community, and of the signal persons as members of the community. A livable city is a city where common spaces are the centers of social life and the foci of the whole community. A livable city must be strengthened, or restored, as a continued network – from the central areas to the more remote settlements – where bicycle-paths and pedestrian paths bind together all the sites of social quality and of the community life.

As Crowhurst Lennard and Lennard (1987) have suggested, Livable cities pay attention to the creation of architecture, streetscape and public space design that facilitate the presence of city-dwellers in the public domain and in the heart of the city. Such cities are also committed to reducing traffic and to resolving problems of safety, pollution and noise by utilizing a variety of mechanism. The livability of a city is also determined by the access that its residents have to participate in decisionmaking to meet their needs. To be livable, a city must put both sides of the coin together, providing livelihoods for its residents, ordinary as well as abundant, in ways that maintain the quality of the environment (Evans, P., (ed.), 2002). According to Idrus et al, (2007), the livable city as a healthy, safe, economically growing, and socially, culturally and politically vibrant entity within its green ambience captures the essence of a sustainable city. A livable city is a city where one can get a healthy life and where I have the opportunity for easy mobility – by foot, by bicycle, by public transportation, and even by car where there is no other option. The livable city is a city for everyone. That means that the livable city should be catchy, worthwhile, safe for children, for older people, not only for the people who earn money there and then go and live outside in the outskirts and in the surrounding communities. For the elderly people and for the children and, it is particularly important to have easy access to areas with green, where they have a place to play and meet each other, and talk with each other. The livable city is a city for all (D. Hahlweg, 1997).

According to Cools (1997), the city must be seen as a living organism in which balance must be maintained in order to function properly. Timmer and Seymoar (2006), in designing a Livable Vancouver, compare the city to the living organism and according to them, the brain and nervous system refer to the governance structures, the heart refers to the city spirit and place identifiers, the different organs are the residential, industrial, open spaces and other hubs while the circulatory systems refer to the transportation routes and nodes and infrastructure networks, as shown in Table (2.3)

Livable City	Components	Description
Metaphor		
The brain and	Governance and	A livable city engages the active involvement of a
nervous system	Participation Monitoring	diversity of citizens in visioning, planning, implementing
	Measuring,	and monitoring regional plans and place-based solutions
	Learning	to challenges. The monitoring capability of a livable city
		is equivalent to the nervous system in a living organism.
		A livable city develops the capability to measure progress
		towards its goals, to encourage experimentation and test

Table (2.3): The city as a living organism

		new ideas, to learn from experience, to adapt strategies in
		order to take into account dynamic circumstances and
		shifting priorities, and to quickly respond to opportunities
		and challenges.
The heart	Common	A livable city contains an active public realm for
	Values, a Sense	reflecting the essence of itself, for creating and
	of Identity and	reinforcing a common identity, for dialogue about
	Place	common values, for remembering history, for celebration
		and festivals, and for socialization of children and young
		people.
The organs	Complete	A livable city contains complete communities with
	Communities,	mixed-use and affordable housing close to shopping,
	Vital Downtown	employment, cultural centers and pedestrian-friendly
	Core, Industrial	transportation networks; a vital downtown core with
	Clusters, Green	public spaces and economic activity; industrial clusters
	Space	with shared infrastructure; and green space including
		agricultural lands and parks.
The circulatory	Natural Resource	A livable city is connected through the flow of resources
system	Flows, Green	that sustain its activities including water, materials,
	Corridors,	sewage, and waste; through access to energy resources;
	Energy Grids,	through green corridors for biodiversity habitat and
	Communication,	recreation; through access to the communication systems
	Transportation	including information and communication technologies;
		through a transportation network that prioritizes walking,
		public transportation and efficient movement of goods.

(Source: Timmer & Seymoar, 2006)

The most inclusive definition is provided by Vukan Vuchic (1999) who expresses that the concept should embrace those elements of home, neighborhood, and metropolitan area that all contribute to health, safety, economic opportunities and welfare, mobility, convenience, and recreation. The adjective livable for a city connotes a desired quality of life for its residents - including attractive public places, social activities, provision of a particular level of privacy, as well as a sense of community. The term livable is defined even more broadly as embracing the city's social health, economic soundness, and environmental viability.

2.7.1 Principles of a Livable City

A livable city has many features and specifications as well as many principles. These components are derived from the many different definitions that have already been mentioned previously. According to H. L. Lennard (1997) principles of a livable city includes:

1- It is the opposite of the dead city, where people are segregated and isolated.

2- Dialogue is important.

3- The public realm offers many activities, celebrations, festivals that bring all of its inhabitants together, events that bring opportunities for its citizens to be together, not in the specialized roles and functions that they usually occupy, but as full human beings.

4- A good city is not dominated by fear, not by a conception of fellow human beings as evil and subhuman.

5- A good city offers the public realm as a place of social learning and socialization that is indispensable for children and young people. All of the inhabitants of the community serve as models and teachers.

6- Cities must meet many functions – economic, social and cultural. In so doing, however, there has been a trend for the modern city to over-specialize in one or two functions; other functions are being sacrificed.

7- All inhabitants confirm and value each other.

8- Aesthetic considerations, beauty, and meaning of the physical environment must have high priority. The physical and social environments are two aspects of the same reality. Just as it was a mistake to think that city inhabitants can have a good civic and social life in an ugly, brutal and physically inhospitable city.

9- The wisdom and knowledge of all inhabitants are appreciated and used.

10- People are not intimidated by experts, whether architects or planners, but show a sense of caution and distrust of those who make decisions about their lives.

In June (2009), U.S. Secretary of Transportation Ray LaHood, U.S. Secretary of Housing and Urban Development Shaun Donovan, and U.S. Environmental Protection Agency Administrator Lisa P. Jackson announced the new Interagency Partnership for Sustainable Communities and its six livability principles to act as a foundation for interagency coordination. The interagency promotion of livability aims to help America's neighborhoods become safer, healthier, and more vibrant. The Partnership will encourage the incorporation of livability principles into Federal programs, while better protecting the environment, promoting equitable development, and helping to address the challenges of climate change. According to their partnership, the Livability Principles as follows: • **Provide more transportation choices:** develop safe, reliable, and economical transportation choices to decrease household transportation costs, reduce our nation's dependence on foreign oil, improve air quality, reduce greenhouse gas emissions, and promote public health.

• **Promote equitable, affordable housing:** expand location- and energyefficient housing choices for people of all ages, incomes, races, and ethnicities to increase mobility and lower the combined cost of housing and transportation.

• Enhance economic competitiveness: improve economic competitiveness through reliable and timely access to employment centers, educational opportunities, services, and other basic needs by workers, as well as expanded business access to markets.

• **Support existing communities:** target Federal funding toward existing communities—through strategies like transit oriented, mixed use development, and land recycling to increase community revitalization and the efficiency of public works investments and safeguard rural landscapes.

• **Coordinate and leverage Federal policies and investment:** align Federal policies and funding to remove barriers to collaboration, leverage funding, and increase the accountability and effectiveness of all levels of government to plan for future growth, including making smart energy choices such as locally generated renewable energy.

• Value communities and neighborhoods: enhance the unique characteristics of all communities by investing in healthy, safe, and walkable neighborhoods—rural, urban, or suburban.

2.8 Benefits of Livability

Livability represents the level of quality in the social, built and natural environments around us that affect lives of residents, employees, visitors as well as old people, the young and all age groups. Benefits of livability outcomes are various, an effective and numerous, to name a few:

- Valued and Engaged Community:
 - 1- Governments in livable communities facilitate the democratic process by encouraging the direct contribution of the public which aimed to participatory

endeavor to shape the present and future of the nation, the public in these communities also participates in short and long-term decision making either on simple issues or critical ones.

- 2- Individuals and various institutions in the community can achieve their own goals as well as the vision of their city, by partnering with City government, that cooperation would facilitate the availability of opportunities that would not have been possible without such joint cooperation.
- 3- People in livable communities will acquire knowledge, awareness and enjoy mental and physical health.
- People in livable communities find a safe, clean and attractive community, they already feel proud to belong to it:
 - 1- Neighborhoods in these communities are safe and have low crime rates, a reduced carbon footprint through waste management and recycling.
 - 2- Architectural designs are compatible and consider existing culture.
 - 3- Livability policies enable communities to preserve natural resources while reducing pollution.
- Livable communities have advanced level of Accessibility:
 - 1- A fit infrastructure that provides Safe and accessible pathways to all residents by encouraging walkability and cycling, and ensure that infrastructure is accessible to disabled people, this indeed encourages community social interactions.
 - 2- Livability policies make trips shorter for those who choose to drive, this can reduce the need for auto travel, which in turn leads to reduce energy use.
 - 3- Affordable public transportation options in these communities supports the health and vitality and contributes in reducing the emissions of vapors and toxic gases.
 - 4- Livability leads to convenient access to city services such as recreation centers, governmental institutions, parks, etc.
- Livable communities Offer high-quality amenities:
 - 1- Built environment that facilitate cultural events can bring together a wide range of people who can interact with each other, this in turn supports the cohesion and unity of community.

- 2- Business districts lead to have more vibrant community where citizens can live, learn, work and play.
- Livable communities support economy:
 - 1- Livable communities link housing and transportation in order to improve access to services, this generate significant savings for households and businesses.

2.9 Related common concepts

2.9.1 Livability and sustainability

There is clearly an overlap between the concepts of sustainability and livability, while several researches used these terms interchangeably, other studies considered them different. The following discussion compares livability and sustainability.

2.9.1.1 Sustainability and sustainable development

The term sustainability is derived from a Latin word sustinere (tenere, to hold; sub, up). Sustain can mean "maintain", "support", or "endure" (Harper, Douglas 2017; Onions, Charles, T. ed 1964).

More generally, sustainability is the ability of systems and processes to endure. The organizational principle of sustainability is sustainable development, which encompasses the four interrelated areas: economics, politics, ecology and culture (James, et al. 2015). Sustainable development and environmental science are the main keys of sustainability (Kahle, & Gurel-Atay, 2014). The Wandemberg (2015) also defined sustainability as a process of achievement of a common ideal. The UN World Commission on Environment and Development (the Brundtland Commission) defined sustainability as being concerned about the accelerating deterioration of the human environment and natural resources and the consequences of that deterioration for economic and social development (Brundtland, 1987, para.1).

In the same context Brundtland Commission defined Sustainable development as "development that ensures that the needs of the present are met without compromising the ability of future generations to meet their needs" (Amekudzi et al. 2011; Rue et al. 2011; Sanford et al. 2011). Many researchers have found that the previous concept refers to the triple bottom line concept, where it includes considerations for the environment, the economy and social quality of life as illustrated in Figure (2.1) (Amekudzi et al. 2011; Rue et al. 2011; Sanford et al. 2011).



Figure (2.1): Illustration of the Triple Bottom Line Concept

(Source: Amekudzi et al., 2011)

2.9.1.2 Sustainable development goals

United Nations (2015) stated that the Sustainable Development Goals (SDGs) include seventeen future international development targets where 92 paragraphs, with the main paragraph (51) outlining the 17 Sustainable Development Goals and its associated 169 targets were adopted on 25 September 2015 by the Official Agenda for Sustainable Development. This included the following seventeen goals:

- 1. **Poverty** End all poverty forms in everywhere.
- 2. **Food** End hunger, achieve food security and improved nutrition and promote sustainable agriculture.
- 3. Health Ensure healthy lives and promote well-being for all at all ages.
- 4. **Education** Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.
- 5. Women Achieve gender equality and empower all women and girls.
- 6. **Water** Ensure availability and sustainable management of water and sanitation for all.

- 7. **Energy** Ensure access to affordable, reliable, sustainable and modern energy for all.
- 8. **Economy** Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.
- 9. **Infrastructure** Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.
- 10. Inequality Reduce inequality within and among countries.
- 11. **Habitation** Make cities and human settlements inclusive, safe, resilient and sustainable.
- 12. Consumption Ensure sustainable consumption and production patterns.
- 13. **Climate** Take urgent action to combat climate change and its impacts.
- 14. **Marine-ecosystems** Conserve and sustainably use the oceans, seas and marine resources for sustainable development.
- 15. **Ecosystems** Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.
- 16. **Institutions** Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels.
- 17. **Sustainability** Strengthen the means of implementation and revitalize the global partnership for sustainable development.

As of August 2015, there were 169 proposed targets for these goals and 304 proposed indicators to show compliance (UNSC, 2015)

2.9.1.3 The difference between sustainability and livability

While livability and sustainability have conceptual overlap throughout the literature, many studies adopted that they are separate but complementary. Often, livability was the described by literature as a strategy for local, community-focused action (Young & Hermanson, 2013).

livability related to community-level development, economic, public health, social equity and pollution exposure (Litman, 2011). Additionally, Rue et al. (2011) stated that livability may focuses less on large environmental goals, but provides more details and mechanisms that aim to enhance accessibility, lower transportation and housing costs, coordinate federal policies and investments and transportation choices, thus livability support solutions at the neighborhood and society level. In the same context, the community or human experience in a specific place are the focal points of livability rather than environmental impacts found in the approach of triple

bottom line (Sanford, 2011). On the hand, Rue et al. (2011) concluded that meeting the present needs and supporting future generations are the target of sustainability. Unlike livability goals, sustainability goals included enhancing air quality, water, reducing climate impacts, increasing energy efficiency and decreasing greenhouse gas emission. Similarly, Sanford (2011) stated that sustainability focused on sustaining; human society without harming the natural environment.

2.9.1.4 The similarity between sustainability and livability

Many researchers continued to use the two concepts interchangeably and discussed livability principles to support sustainability goals. The Partnership for Sustainable Communities strengthened the link between sustainability and livability when sustainable community is defined as places where economic and natural assets can be balanced so that local residents' various needs can be met now and in the future (The Partnership, 2011, para. 5). Young & Hermanson (2013) explained that sustainability and livability may work on different scales, but both can achieve similar outputs. Rue et al. (2011) proposed that both concepts support environmentally sustainable travel options and economic development, and address human health and social equity issues.

Table (2.4) below summarizes some of the differences and similarities between the two concepts according to three criteria: scale, context, and potential (Gough, 2015).

(from Gough 2015, Table 1)	LIVABILITY	SUSTAINABILITY	SIMILARITIES	TENSION	Complementarity
			Change-Oriented,	Looplan Clabel and	Livability Needs Sustainabiliy to Consider Larger Scale and Longer- Term Problems, and Sustainability
SCALE	Local	Local to Global	Common Agenda	Beneficiaries	Locally Relevant Conditions
CONTENT	Shifting with Stakeholder	Global Intergenerational Economic, Environmental	Overarching Goals Identified by Shared	Shorter-term Livability Concerns v. Larger Equity and Long-Term Issues in	Livability Needs Sustainability for the 3 Es to Be Considered Locally, and Sustainabiliy Needs Livability
POTENTIAL	Tangible and Easily	Compelling and Social Change	Require Common Understanding for Coordinated Action	Relevance of Outcomes and Different Stakeholder Groups	to Resonate With Local Actors Livability Needs Sustainability to Ground Investments for Future Change, and Sustainability Needs Livability to Demonstrate Practical Relevance and Feasibility

Table (2.4)): Some	of	the	differences	and	similarities	between	livability	and
sustainabili	tv								

(Source: Gough, 2015)

2.9.2 Quality of life

Most people understood the term Quality-of-life (QOL) as 'goodness of life' and to be able to live happily and successfully within the environment (Brown and Brown, 2005). The interest in quality of life is increasing and there is a growing awareness that it's important to take a broad rather than a narrow view when any kind of physical or social improvement is being thought about that aims to benefit people, (Jones, 2002).

While there is no specific definition of quality of life, many definitions listed below provide an overall sense of what is meant by the term:

- "To what extent a person enjoys the important possibilities of his or her life" (Hancock, 2000).
- "The outcomes of interaction between economic, health, social and environmental conditions, which affect social and human development" (Ontario Social Development Council, 1999).
- "... the feeling of satisfaction, fulfilment or wellbeing resulting from factors in the external environments" (Swain, 2002).
- "A popular expression that, in general, connotes an overall sense of supportive and pleasant environment when applied to a community and wellbeing when applied to an individual (Hancock, 2000).

QOLs' Standard indicators include not only employment and wealth, but also the physical and mental health, the built environment, social belonging, education and recreation and leisure time, (Gregory et al., 2009). Sirgy (2001) argues that QOL is a wide concept and can be understood in different areas such as needs approach and health approach, QOL as life satisfaction versus happiness and the resource management approach. The term quality of life has a comprehensive definition that can be deducted from the above mentioned and understood as the outcome of the interaction between the constructional, environmental, social and economic cases which has a major impact on Man (Mostafa, 2008).

On the other hand, when discussion the relationship between quality of life and livability, the distinction lies in the difference between the user experience of the amenities and any related health benefits (quality of life) and the presence and quality of those amenities of the built and natural environments (livability). For example, livability might be focused on the transportation choices residents can have, quality of life refers to the related health benefits can be received by residents who can choose another travel modes. In a few words, livability refers to amenities and services in a community, whereas quality of life refers to how those amenities shape the experience of residents. The following table (2.5) provides an example of factors that have an effect on community livability, and the related quality of life benefits that could be expected to accrue (VanZerr & Seskin, 2011).

Table (2.5): Examples of community livability	y factors	and their	related	quality
of life benefits.				

]	Livability Factors	Quality of Life Benefits				
Economic	availability of jobs, services, and	disposable income, recreation and				
Development	retail	leisure time				
Housing	affordability, location, diversity of	shelter, safety, and security				
	housing types					
Environmental	air quality, aesthetics, noise, water	physical and mental health, protection				
Quality	quality, greenhouse gases, parks	from some natural hazards				
	and open space					
Community	community cohesion, historic and sense of belonging, sense of pla					
Development	cultural resources, educational community resiliency, social cap					
	opportunities	upward mobility				
Transportation availability of multi-modal independence of movement, re-						
	connected networks; mobility;	and reliable travel times, physical and				
	safety; accessibility of jobs, mental health					
	housing, and services; streetscape	2				
	attractiveness					
Equity	equitable distribution of amenities	sense of social justice, exposure to				
		diverse ideas				

(Source: Least Cost Planning Project Management Team, 2011)

2.9.3 Smart Growth

Smart Growth (SG) appeared as a method to develop sustainable communities and implement livability (Geller, 2003; Rue et al., 2011; Victoria Transport Policy Institute, 2011). The U.S. Green Building Council (2009) confessed SG as an effective approach to enhance sustainable development and added the principles of SG into their guide of neighborhood development, Leadership for Energy and Environmental Design Neighborhood Development (LEED ND). The National Association of Home Builders (NAHB) (2011) also adopted policies of Smart Growth to ensure more efficient land use and to serve as a model for green building and green development (Young & Hermanson, 2013). The previous authors also created principles to enable a state or local government as well as developers, to create SG by adhering to some principles. The principles included:

- Mix land use;
- Take advantage of compact building design;
- Create a range of housing opportunities and choices;
- Create walkable neighborhoods;
- Foster distinctive, attractive communities with a strong sense of place;
- Preserve open space, farmland, natural beauty and critical environmental areas;
- Strengthen and direct development towards existing communities;
- Provide a variety of transportation choices;
- Make development decisions predictable, fair and cost effective; and
- Encourage community and stakeholder collaboration in development decisions

According to the literature reviewed, SG principles support livability in both urban and rural environments (Young & Hermanson, 2013).

2.9.4 New Urbanism

New Urbanism emerged as a tool to create communities' livability (Kochera et al., 2005; Rue et al., 2011; VTPI, 2011). Based on studies of the Congress for New Urbanism (CNU) (2011), principles of NU included the creation of walkable design, destinations reachable by walking, creating human scaled environments and public spaces, housing choices for all ages and income levels and livable streets through compact and bicycling or transit. Conversely, VTPI (2011) concluded that NU includes, "a set of development practices to create more efficient, attractive and livable communities" (para. 1).

2.9.5 Transit-Oriented Development

Because transit-oriented development (TOD) focuses on mixed-use developments near public transportation, practitioners often discussed TOD in ways that support the Partnership's strategy of increasing transportation options. Many researchers identified TOD as an often-used tactic for localities and regions to implement livable community strategies (Kochera et al., 2005; Rue et al., 2011; VTPI, 2011). Zimbabwe and Anderson (2011) stated that TOD has many benefits like enhancing access to jobs, increased land property values, reduced cost of building new infrastructure, increased transit agency revenues, creation of public places with a sense of place and improved public health (p. 2).

According to a report by the U.S. DOT and U.S. HUD (2008), TODs increase livability while improving access to transit. Further, they conclude that TOD can reduce transportation costs for working families and mitigate the negative impacts of automobile travel on the environment and the economy.

2.9.6 Placemaking

Many studies define placemaking to improve livability in neighborhoods, public spaces, cities and regions, by engaging residents to contribute in planning, improvement and transformation to their surrounding environment (Projects for Public Spaces, 2009). Placemaking supports livability by promoting transportation choices, increasing affordable housing, increasing economic development and supporting existing communities by creating places where people want to spend discretionary time.

Markusen and Gadwa (2010) concluded that placemaking supports livability because it has positive externalities: affordable housing and reliable transportation choices, an increase in public safety, community identity.

2.10 Case Study: Urban Livability in an Emerging Migrant City – Doha – Qatar

This case study explores the perceptions of livable urban environments in Qatar's capital city - Doha by residents who are immigrants to it for business purposes. These perceptions were explored through an attitude survey of 280 migrant professionals from different cultural backgrounds engaged in the high service sector and from four groups including westerners, middle-easterners, Indians, Southeast Asians. The way in which key livability factors are perceived by those five groups will be analyzed. Livability factors were classified into two categories: urban life and urban spaces. Urban life category included aspects that pertain to residential satisfaction, satisfactions of leisure and service spaces, traffic and movement

experience and shopping experience. Urban space category included attractiveness, iconicity, and familiarity, which were attitudinally explored in four public open spaces, this space category will not be discussed due to privacy of these spaces and its special relationship to residents' life there (Salama, & Wiedmann, 2016).

2.10.1 An overview of Doha

Qatar's capital city Doha was a fishing and pearl diving settlement. Today, it is home to more than 90% of the country's 2.0 million people, including over 80% foreign workers from other countries. During the 1970s, Doha was transformed into a modernized city. However, in the 1980s and early 1990s, the development process was slow compared to the preceding period due to a discouraging political atmosphere and the first Gulf war (Salama and Wiedmann, 2013-a). Since the end of the 1990s, the city has acquired a new geo-strategic importance. Through the shift of global economic forces, it is being developed as a service hub, joining other major cities in the region and entering a fierce competition (Wiedmann, Salama and Thierstein, 2012). One key aspect to establish Doha as a regional center of service sectors is however continuous immigration.

2.10.2 Examining livability

The targeted participants in the survey were from 43 companies within the advanced producer service sector in Doha These companies were selected based on criteria such as heir key roles in current developments and their overall size. The analysis showed that more than 70% of those companies have been in Doha for less than ten years and have recruited mainly expatriates. 351 employees shared their views during this study but 280 complete responses were received.

2.10.2.1 General profile of the survey participants

Table 2.6 shows the general profile of the survey participants from many aspects such as gender, average age, years in Doha and car ownership

Cultural	Ge	nder	Average	Years in	Car
Background	Male	Female	Age	Doha	Ownership
Western	59%	41%	39	3	81%
Middle Eastern	61%	39%	31	12	84%
South-East Asian	44%	56%	35	4	46%
Indian	81%	19%	35	8	73%

 Table (2.6): Overview of the four main groups of survey participants.

(Source: Salama & Wiedmann, 2016)

2.10.2.2 Relocation motives and residential profile

The participants were asked about their main motivations for moving to Doha. After analyzing as figure (2.2) show, it was clear that Western and South-East Asian respondents were too close where their main motives were the job opportunity, the professional experience and higher salaries than in their countries of origin. In both cases cultural factors play no role at all, while family life and safety are perceived as minor motives. On the other hand, it is contrast to participants from the Middle East, so that all motives are equally important. While respondents of the Indians migrants identify safety as a major motive in addition to the high salary. In the case of Indian a large majority of safety as a major motive in addition to the high salary and family life (Salama, & Wiedmann, 2016).



Figure (2.2): The main motives of the four groups to move and stay in Doha (Source: Salama & Wiedmann, 2016)

Participants were requested to share their residence location as well as their residence type. More than half of the respondents (54%) live in apartments in central urban areas followed by 38% who live in villas or apartments in gated residential communities in the urban periphery Figure 2.3. The remaining share of 8% lives in exclusive residential towers along the Northern waterfront. Approximately, about 20% of the respondents within each group did not choose their own residence, which is provided by their employers.

Notably, a majority from Western countries (56%) lives in the urban periphery, while only 26% live in central districts. For other groups, most respondents live in apartments in the rather densely populated areas close by C-Ring Road, one of the major urban arteries in the city. Neither Indian nor South- East Asian resides in waterfront developments. Approximately, about 20% of the respondents within each group did not choose their own residence, which is provided by their employers. Figure (2.3) show the three main locations of residences and the share of each group



Figure (2.3): The three main locations of residences and the share of each group (Source: Salama & Wiedmann, 2016)

2.10.3 Perceiving Urban Life

The urban life component aims at understanding how different groups perceive key livability factors. Factors included traffic experience, residential quality, shopping experience, leisure, and the overall attractiveness of the city as show in tables (2.7) below.

Cultural Backgrounds		Key Livability Factors Experience traffic			
2.	Middle Eastern	slight majority of Middle Eastern respondents 55% share the opinion that traffic experience is moderate			
3.	South-East Asian	a majority of 79% perceives it as pleasant			
4.	Indian	a majority of 66% perceives it as moderate			

Table (2.7). Experience traine as a key invalintly factors	Table (2.7):]	Experience	traffic as a	key]	livability	factors
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(Source: Salama & Wiedmann, 2016)

When participants were asked if they would actually prefer public transportation instead of using a car or taxi due to climatic conditions.

Table (2.8): I	Preferring p	ublic trans	portation	instead	of using	a car	or taxi
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Cultural Backgrounds		Key Livability Factors		
		Preferring public transportation instead of using a car or taxi due to climatic conditions		
1.	Western	a major share of 41% would rather use public transportation		
2.	Middle Eastern, South-East Asian and Indian	more than 70% prefer to drive a car instead of using a bus service		

(Source: Salama & Wiedmann, 2016)

Approximately 90% of all respondents are satisfied with their current residence, but in none of the four groups a majority can be found who would perceive their present housing conditions in Doha as an improvement to their former residence outside Qatar.

Table (2.9): Satisfying with current residence

	Cultural Backgrounds	Key Livability Factors
		Satisfying with current residence
1.	Western and Middle Eastern	only 20% experience their new residence as an improvement on their previous standard
2.	South-East Asian and Indian	almost 40% of Indian and South-East Asian interviewees identify their housing conditions as a significant improvement

(Source: Salama & Wiedmann, 2016)

They were furthermore asked to share their experiences and perceptions regarding the situation of commercial services and leisure spaces in Doha. 1.Shopping malls:

Malls are currently the main centers for shopping as well as for entertainment in Qatar. Most interviewees share the preference of shopping malls instead of shopping streets in central areas due to weather temperatures and humidity as well as their accessibility by car.

2. Visiting old downtown areas:

It is observed that old downtown areas are to a large extent avoided by most respondents.

Table (2.10)	: Experiences	and	perceptions	regarding to	visiting	old	downtown
areas							

	Cultural Backgrounds	Key Livability Factors			
		Visiting old downtown areas			
1.	Western	64% visit the old city only a few times per year			
2.	Middle Eastern and South- East Asian	50% visit the old city center every month			
3.	Indian	52% visit it only a few times per year			

(Source: Salama & Wiedmann, 2016)

While Middle Eastern and Western respondents mainly prefer to visit central areas in order to go to certain quality restaurants, a majority of Indian and South-East Asian participants visit downtown areas only to experience shopping. 50% of all interviewees within each group are satisfied with the current supply of commercial services in Doha.

3.how many hours per week they spend for leisure outside their residence

Ta	b	le	(2	.11	l):	Hours	per	week	for	leisure	outside	residence
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	Cultural Backgrounds	Key Livability Factors				
		Hours per week for leisure outside residence				
1.	Western and Middle Eastern	40% with a Middle Eastern or Western background usually spend more than 10 hours per week outside in shopping malls, hotels or public leisure spaces,				
2.	South-East Asian and Indian	less than 20% of the respondents with an Indian or South-East Asian background spend a similar amount of time outside.				

(Source: Salama & Wiedmann, 2016)

4. The main leisure spaces:

The main leisure spaces identified by the respondents are four major shopping malls, the old historic city core, the waterfront promenades as well as hotels.

	Cultural Backgrounds	Key Livability Factors							
		The main leisure spaces							
1.	Western	78% prefer to spend their leisure time in hotels							
2.	Middle Eastern	A majority prefers to spend leisure time in restaurants in the old city core							
3.	South-East Asian and Indian	and Indian prefer shopping malls and public spaces, such as the Corniche/the waterfront or Aspire Park							

 Table (2.12): The main leisure spaces

(Source: Salama & Wiedmann, 2016)

5. The distances to leisure spaces

In all four groups, a slight majority of around 58% assesses the existing leisure spaces as generally attractive.

Table (2.13): The distances to leisure spaces

Cultural Backgrounds		Key Livability Factors			
		the distances to leisure spaces			
1.	Western and Middle Eastern	only around 25% perceive the distances to leisure spaces as too far from their residences			
2.	South-East Asian and Indian	respondents perceive the distances to leisure spaces as too far from their residences			

(Source: Salama & Wiedmann, 2016)

2.10.4 Lessons and Challenges: Toward a Livable Doha

The inquiry into livability and its underlying factors uncovers a number of concerns and alarming figures. Traffic experience appears unsatisfactory, and low-quality housing construction and maintenance and insufficient parking spaces, school facilities, and shopping opportunities are major sources of discontent for the majority of respondents. Today, the continuous exchange of migrants hinders the demands of communities from having a more efficient impact on development patterns. It should be noted nonetheless that life in Doha is often still perceived as attractive due to high salaries, general safety and many professional opportunities in certain areas, such as construction, research and education (Nagy, 2006).

Based on the fact that the local population is a small minority of approximately 13 per cent of the total population, there is no coherent majority within Doha's society apart from the diverse groups of expatriates. Segregation patterns between nationals and expatriates are zealously maintained; furthermore, constraints to developing a less anonymous and more integrated society are also due to the continuous labor movement patterns and exchange of a large percentage of the expatriate workforce on a regular basis. In addition to social segregation by residential area, little effort, coupled with a lack of desire, has been made by decision-makers to develop more integrated environments and public realms to be used as platforms for an emerging society. Today, while shopping malls are the most frequently used leisure and entertainment spaces for higher income groups, low-income groups usually shop and stay close to their residences, a clear indication of social and income demarcation which extends beyond residential patterns (Salama, & Wiedmann, 2016).

Exploring the perceptions of migrant communities can become the basis of further in-depth research regarding the various potentials of how new demand-driven mechanisms, e.g. within housing markets, can diversify spatial developments in future. Thus, the outcomes of this study can be regarded as a first attempt to point out the potential key role of the various migrant communities in shaping a new urban identity in Qatar by investigating current perceptions of different cultural groups.

2.11 Conclusion

This chapter discussed a historical background of livability, where many scholars have noted the rise of livability in the late 1960s and 1970s, where the concept was used in various areas such as politics, sociology, economics and housing, and was considered a dominant category of urban discourse' used by various groups in the urban arena. Advocates of a critical approach to urban studies have argued that livability discourse often reflects the interests of elites who pursue an agenda of urban growth and are representing upper and middle-class interests

The chapter also reviewed the difficulty in building a consensus concept of livability by presenting two different types of analyses - to demonstrate the lack of

consensus in defining one concept of livability - that conducted by NARC "The national association of regional councils" – USA.

On the other hand, the concepts of livability were reviewed according to many recent and early studies, where livability was reviewed regarding to various views of: academics, policymakers and private providers.

In the same context, and in order to know more about the aspects of the concept, the dimensions of livability were presented, where after reviewing many studies, livability has three key dimensions: environment, social and economy.

Defining a livable city and its' principles were also reviewed. In addition, benefits of livability were discussed, they are various, an effective and numerous. For example, livable communities have advanced level of accessibility, offer high-quality amenities, safety and support economy and many other benefits.

In this chapter, many important concepts related to the concept were addressed, the concept of sustainability and sustainable development, its main principles and goals were presented with clarifying the relationship between the interchanged concepts of sustainability and livability. The study sought to discover differences and similarities between them based on many studies and researches, where many studies support a discrete relationship between sustainability and livability, many researchers use the two concepts interchangeably.

On the other hand, the term Quality-of-life was also discussed due to the intersect with livability. Smart Growth, New Urbanism, Transit-oriented development and placemaking concepts were also presented with clarifying the relationship between livability and them. In the end of this chapter, a case study of livable urban environments in Qatar's capital city - Doha was presented and analyzed in order to have lessons learnt and maximize the knowledge.

CHAPTER 3 MEASURES AND INDICATORS OF LIVABILITY

CHAPTER 3 MEASURES AND INDICATORS OF LIVABILITY

3.1 Introduction

Recently, many indices and studies have been published aimed to measure the livability and to assess global cities against each other regarding to its principles. These livability measures are typically used as a tool to make comparisons between cities with various outcome scores receiving widespread media attention (Woolcock, 2009).

In order to understand how cities are ranking according to livability indicators, the chapter will discuss the measurement tools, which were referred as survey lists of most livable cities, such as the Economist Intelligence Unit's "global livability ranking", and "Mercer Quality of Living Survey" etc.

On the other hand, the second part of this chapter will review the indicators of livability in all its aspects, identifying indicator, explaining the criteria of livability indicators and giving some examples of livability indices.

3.2 Rankings

According to Kashef (2016), despite the wide-ranging and relatively subjective interpretations of the latter constructs, numerous indices and measurement tools were developed over the last three decades to rank cities according to the amenities and opportunities afforded to their residents and visitors, safety and security, crime, climate, transportation, infrastructure, healthcare, public policies and services, business environment, cost of living, recreational amenities, education, housing, gross domestic product (GDP) per capita, sanitation, culture, air quality, and natural capital have been incorporated into quantitative models to compare and rank these cities, Qualitative aspects, such as lifestyle, well-being, happiness, tolerance, and environmental aesthetics, have also been compiled to benchmark urban livability on a global scale.

3.3 Measurable Criteria of Livability

Cities are in competition with each other in means of wealth, population, volume, and immigration and in this context, make an attempt to become different from each other by adding values to the products and to be choosed more by increasing their popularity (Kavaratzis and Ashworth, 2005).

The world's most livable cities is a term of survey lists which compare cities and classify them annually, and in a particular order depending on their living conditions. Regions with cities commonly ranked the 50 in top include Australia, New Zealand, North America, Northern Europe, and Western Europe (Mercer Quality of Living Survey, 2015). There are many examples of global organizations that publish such surveys as: Monocle's "Most Livable Cities Index", the Economist Intelligence Unit's "Global Livability Ranking", and "Mercer Quality of Living Survey" etc.

Each of these measurement tools, which we have referred previously as survey lists of most livable cities, includes several criteria as well as indicators for measuring living conditions in any city around the world, through these lists, cities are given a rank according based on each weighted indicator. Below, I will present the most important of this livability global ranking.

3.3.1 EIU livability ranking

The EIU livability ranking is probably the most comprehensive and farreaching of all livability ranking systems (Kashef, 2016). The EIU ranks cities on their livability as part of the Worldwide Cost of Living Survey. Living conditions are assessed using around 40 indicators, with each city being given a value between one and five for each indicator. As shown in table (3.1) and table (3.2), these scores are then grouped into five weighted categories to allow a rating of between 0 per cent and 100 per cent to be determined for each city; the lower the score the more livable the city. The five weighted categories of the EIU Quality of Life rating are: (Woolcock, 2009)

• Stability (25 per cent) — prevalence of petty crime, prevalence of violent crime, threat of military conflict, threat of civil unrest/conflict, threat of terrorism.

- Healthcare (20 per cent) availability of public and private healthcare, quality of public and private healthcare provision, availability of over-the-counter drugs, general healthcare indicators.
- Culture and Environment (25 per cent) climate (humidity/temperature rating, discomfort to travelers, cultural hardship), corruption, social/religious restrictions, level of censorship, recreation (sports, culture, food and drink), availability of consumer goods and services.
- Education (10 per cent) availability of private education, quality of private education provision, general public education indicators.
- Infrastructure (20 per cent) transport (quality of road network, quality of public transport, quality of regional or international links), housing (availability of good quality housing), utilities (quality of energy provision, quality of water provision, quality of telecommunications infrastructure).

EIU uses various data collection and measurement tools that involve public opinion surveys, raw quantitative data, and interviews with a broad spectrum of urbanites, professionals, and city officials. Surveys and interviews are conducted around the world, and the representative samples of respondents are drawn from Europe (30%), Americas (30%), (30%), the and other parts of the world (10%).

Rank	City	Country
1	Melbourne	Australia
2	Vienna	Austria
3	Vancouver	Canada
4	Toronto	Canada
5=	Calgary	Canada
5=	Adelaide	Australia
7	Perth	Australia
8	Auckland	New Zealand
9	Helsinki	Finland
10	Hamburg	Germany

Table (3.1): The world's most livable cities 2016

(Source: Kashef, M., 2016)

Country	City	Rank	Overall rating	Stability	Healthcare	Culture & environment	Education	Infrastructure
Australia	Melbourne	1	97.5	95	100	95.1	100	100
Austria	Vienna	2	97.4	95	100	94.4	100	100
Canada	Vancouver	3	97.3	95	100	100	100	92.9
Canada	Toronto	4	97.2	100	100	97.2	100	89.3
Canada	Calgary	5	96.6	100	100	89.1	100	96.4
Australia	Adelaide	6	96.6	95	100	94.2	100	96.4
Australia	Sydney	7	96.1	90	100	94.4	100	100
Finland	Helsinki	8	96	100	100	90	91.7	96.4
Australia	Perth	9	95.9	95	100	88.7	100	100
New Zealand	Auckland	10	95.7	95	95.8	97	100	92.9

Table (3.2): Top ten livable cities in 2013: 100=ideal; 0=intolerable

(Source: Economist Intelligence Unit; EIU 2013)

The EIU livability ranking compares 127 world cities and publishes annual reports that do not only list the top 10 best and worst cities in terms of livability but also cities that have achieved remarkable progress in their livability over the last 5years as shown in table (3.3) (Kashef, 2016).

 Table (3.3): Most improved cities over the last 5 years (livability scores over

 5years)

City	Country	Rank (out of 140)	Overall rating (100=Ideal)	Five years improvements + %
Bogota	Colombia	111	59.6	7.9
Harare	Zimbabwe	136	40.7	3.2
Dubai	UAE	77	74.2	2.9
Algiers	Algeria	134	40.9	2.9
Kuwait City	Kuwait	81	72.1	2.5
Dhaka	Bangladesh	139	38.7	2.5
Taipei	Taiwan	61	83.9	2
Colombo	Sri Lanka	128	49.8	1.8
Bratislava	Slovakia	63	81.5	1.7
Phnom Penh	Cambodia	126	51.4	1.6

(Source: Economist Intelligence Unit; EIU 2013)

Melbourne, Australia, has been ranked by the EIU as the world's most livable city for seven years in a row, from 2011 to 2017. Prior to 2011, Vancouver, Canada, was ranked the EIU's most livable city. Vancouver was ranked third in 2015 and 2016, while Vienna, Austria, was ranked second in those years (Wikipedia, 2017). In addition, the EIU livability ranking presents the change in livability score of cities surveyed (increase, decrease or no change) and it confirms that there is declining in a fifth of these cities as shown in figure (3.1)



Figure (3.1): The change in livability score of cities surveyed (Source: Economist Intelligence Unit; EIU 2016)

3.3.2 Mercer quality of living survey

According to Kashef (2016), The Mercer Quality of Living Survey mainly assigns a premium on quality of living in over 460 cities all over the world. This survey endeavors to help companies and expatriate professionals assess incentives and proper allowances for relocation. Quality of living is measured via 39 descriptors grouped in 10 classifications, namely, economics (banking regulations and services), health (private and public services, air quality, sanitation, and waste disposal), sociopolitical environment (crime, safety, and stability), sociocultural environment (media, censorship and personal freedom), utilities (transportation, traffic, and services), education (private and public), recreational facilities (restaurants, theaters, sports, and leisure), housing, and natural environment (climate, natural calamities, and weather extremes), market (availability of goods). Mercer does not only provide an overall livability score but also contrasts cities across all descriptors. This tool uses a grid that ranks cities according to diverse aspects related to living quality, thus, allowing users to determine which aspect carries more weight for them and then specify an exchange value to the selected variables. In addition to the international list of top10 livable cities, Mercer also lists the top-ranking cities in the Middle East,

Central and South America, North America, Europe, Asia, and Africa. The survey assigns a score of 100 to a base city New York (Kashef, 2016), and figure (3.2) shows the trends in global quality of living 2017: top 10 cities vs. bottom 10 cities.)



Figure (3.2): The trends in global quality of living 2017: top 10 cities vs. bottom 10 cities

(Source: The Mercer Quality of Living Survey 2017

The Mercer survey (2014) placed Dubai, UAE at 73, making this city the highest-ranked city in the Middle East and Africa regions. Abu Dhabi jumped 11 positions to stay at 78. Middle Eastern and African cities are generally ranked very low on the Mercer index because of regional instability, looming threats of civil war in various parts of the region, the Arab Spring with its disruptive political turn of events, lack of infrastructure, and substandard living conditions and health services. Five out of the bottom six cities worldwide are from the Middle East and Africa regions, with Damascus, Khartoum, and Baghdad scoring the lowest mainly because of internal conflicts.

3.3.3 Most livable city index (Monocle)

The most livable city index of Monocle is one of the best-known contemporary livability rankings. Criteria in this survey are safety/crime, international connectivity, climate/sunshine, quality of architecture, public transportation, tolerance, environmental issues and access to nature, urban design, business conditions, proactive policy developments and medical care. The audience of the 'Most Livable City Index' are the global creative middle class (S. Cairns, 2015).

3.3.4 Better life index (OECD)

The 'Better Life Index' of OECD is one of the best-known contemporary livability rankings. The OECD states that there is more to life than the cold numbers of GDP and economic statistics. This Index allows to compare well-being across over 30 countries worldwide, based on 11 topics the OECD has identified as essential, spanning material living conditions and quality of life. The audience of the 'Better Life Index' are the government, business and civil society (S. Cairns, 2015).

3.3.5 Human development index (OECD)

The 'Human Development Index' of OECD is one of the best-known contemporary livability rankings. A criteria of this index is among others the life expectancy at birth. The HDI also measures the education index (mean years of schooling and expected years of schooling) and the standard of living (GNI per capita). The audience of the 'Human Development Index' are the government, business and civil society (S. Cairns, 2015).

As noted above, the multiple indices and measurement systems differed in the number and quality of indicators used to measure and assess the livability of cities around the world. In this study, an attempt is made to benefit from all these systems by convergence between them and coming up with an integrated list of indicators that are suitable for the study area.

3.4 Livability indicators

Many policymakers and organizations in different societies monitor progression in the achievement of economic, environmental, and social goals, by using a carefully selected group of livability index or indicators over a period of time. A livability index is something other than the combination of indicators; it aims at providing an immediate contribution to policy intervention (Hortulanus, 2000). They are communication tools that can exhibit a given aspect improvement in society as well as identify problem areas. (Carmichael et al, 2007). Livability index creation is an organized effort to gather and disseminate a set of indicators that together tell a story about the progress and position of a jurisdiction or jurisdictions (U. S. Government Accountability Office, 2004). Livability indices expand information that provide officials with more insight into the dynamics of their constituency and allow officials to create policy appropriately (Carmichael et al, 2007).

3.4.1 Identifying indicator

It was significant to adopt an agreed conceptual framework about what assign an indicator and how to assess an indicator's utility.

Balsas, (2004) described that an indicator is a measure or a group of measures that describes a complex economic, social, or physical reality, and a measure is one data point that acts as a standard to tell us how well or poorly we are doing with respect to an indicator. An indicator is a measurement that mirrors the status of some environmental, social, or economic system over time. In General, an indicator focuses on a small, tangible, manageable, and telling piece of a system to give people a sense of the bigger picture (Redefining Progress, 2002).

Useful and Meaningful indicators mirror both measurable and desirable outcomes, Indicator creators expect the indicators to simplify complicated data sets and supply a clear perspective of the bigger picture. Indicators communicate trends in a community and spread an opportunity for a community to make vital changes. Figure (3.3) illustrates a number of indicator topics under the larger domains of environment, economy, and society and culture. The area linking the larger domains, highlighted in blue, represents common issues the domains share, such as diversity, opportunity, and sustainability (Carmichael et al, 2007).


Figure (3.3): A number of indicators under the larger domains of economy, environment, and society and culture

(Source: Carmichael et al, 2007)

3.4.2 Subjective vs. objective indicators

Indicators are divided into two main types: objective and subjective indicators, both are important for measuring livability, where objective indicators generally use and represent existing or collected data that measures concrete facts such as unemployment, crime rates, economic production, number of hospitals per capita and life expectancy etc. and often they are presented in figures and percentages, while subjective indicators are individuals' beliefs, perceptions and opinions about living conditions, including social, economic and environmental conditions, such as whether they feel happy with their jobs. Table (3.4) shows the difference between the two types.

Diener and Suh (1999) proved that subjective indicators are valid measures of what people perceive to be important to their happiness and well-being. However, through studies in the 1970s, objective indicators proved to encompass a small portion of people's perspectives of well-being (Haas, 1999). So many researchers use initially objective indicators for their studies, then they work on a combination of both.

There is a growing consensus around the world that such approaches balance the strengths and weaknesses of the different indicators and provide a better measure of quality of life in a region (Quality of Life and Well-being, 2005).

Frequently used objective social indicators	Frequently used subjective social indicators		
(represent social data independently of individual evaluations)	(individuals' appraisal and evaluation of social conditions)		
Life expectancy	Sense of community		
Crime rate	Material possessions		
Unemployment rate	Sense of safety		
Gross Domestic Product	Happiness		
Poverty rate	Satisfaction with "life as a whole"		
School attendance	Relationships with family		
Working hours per week	Job satisfaction		
Perinatal mortality rate	Sex life		
Suicide rate	Perception of distributional justice		
	Class identification		
	Hobbies and club membership		

Table (3.4): The difference between subjective and objective indicators

(Source: Quality of Life and Well-being, 2005)

3.4.3 Criteria of the livability indicators

In order to be useful, indicators should be set to highlight issues of concern, stimulate discussion for future actions, and give measures of progress. They must be quantifiable and measurable using valid data sources, defined clearly, be sensitive to changes in public policy, and linked to theory (West and Badham, 2008; Bracken, 1981; Balsas, 2004; Greenwood, 2008). A high-quality indicator should monitor the conditions of a city in order to aid city officials in accommodating and anticipating for future trends in the attributes index. With powerful indicators, a government has the capability to create positive change.

Lowe et al. (2013) in their Research Program for Melbourne Neighborhoods in Australia developed four specific criteria to assess the utility and the strengths and weaknesses of the livability indicators. These were:

- Is the indicator significant to livability and/or the social determinants of health and wellbeing in urban areas?
- Is the indicator specific and quantifiable?
- Can the indicator be measured at the appropriate level(s) and scale(s), so that local areas within a city can be compared?
- Is the indicator relevant to Australian urban policy?

When the indicator meets the above criteria, it can be considered as a valid one for measuring the livability of a community. On the other hand, and since livability attributes varies from community to another over the time, it is important to readjust and change the indicators periodically.

As noted in ranking cities section, all livability indices and measurement tools use a set of specific indicators, in addition to previous indicators mentioned in these indices, the following paragraphs review different types of indicators according to the different categories.

3.4.4 Examples of Livability Indices

1- Indicators of the Global Livable Cities Index (GLCI)

Economic performance	Economic openness	Infrastructure
GDP	Foreign direct investment	Telephone lines (subscribers per 100 people)
Real GDP growth rate	Trade to GDP ratio	Computer ownership (per 1,000 people)
Labor productivity per hour	State ownership of enterprises	Level of internet access (percentage population)
Household consumption expenditure per capita	Prevalence of trade barriers	
Unemployment rate	Number of free trade agreements	
Resilience of economy	Ease of doing business	
Gross fixed capital formation	Prevalence of foreign ownership	
Growth rate of consumer price	Tourism receipts	
Debt to gross national income ratio	Economic freedom	
	Hotel occupancy rates	
	International tourist arrivals	

Table (3.5): Indicators for economic vibrancy and competitiveness- GLCI Index

(Source: Global Livable Cities Index, 2014)

Table (3.6): Indicators for environmental friendliness and sustainability- GLCI Index

Pollution	Depletion of natural resources	Environment initiatives
Greenhouse gas emissions	Electricity generated from renewable sources (percentage of total electricity generated)	Participation in selected international environmental agreements
Sulphur dioxide emission	Consumption of oil per day	Stringency of environmental regulations
CO2 emissions in 2006	Threatened species (percentage of total animal species)	Terrestrial protected area (percentage of total land area)
Quality of the natural environment		Protected marine area (percentage of total marine area)
Water pollution (kilograms per day per worker)		Enforcement of environmental regulation
Nitrogen oxide emission		
Particulate matter concentration		

(Source: Global Livable Cities Index, 2014)

Table (3.7): Indicators for domestic security and stability - GLCI Index

Crime rate	Threats to national stability	Civil unrest
Number of homicide cases (per 10,000 capita)	Business costs of terrorism	Severity of political violence
Number of new drug offences (per 100,000 capita)	Fatalities of terrorist attacks (per million capita)	Conflicts of ethnic, religious, regional nature
Business cost of crime and violence	Natural disaster death toll (per million capita)	Violent social conflicts
Reliability of police services		

(Source: Global Livable Cities Index, 2014)

Table (3.8): Indicators for political governance - GLCI Index

Policy making and implementation	Government system	Transparency and accountability	Corruption
Government effectiveness	Functioning of government system	Transparency of economic policy	Control of corruption
Government consumption expenditure (percentage of GDP)	Effectiveness of judicial system	Voice and accountability	Corruption perceptions index
Collected total tax revenues (percentage of GDP)	Quality of e government	Violent social conflicts	
Regulatory quality	Political stability no violence & Rule of law		

(Source: Global Livable Cities Index, 2014)

Medical and healthcare	Education	Housing, sanitation and transportation	Income quality and demographic burden	Diversity and community cohesion
Infant mortality rate	Quality of education system	Percentage of urban population living in slums	Number of hours worked per year	Percentage of foreigners/ percentage of immigrants
Life expectancy	Tertiary enrolment rate	Percentage of population using improved sanitation	Human poverty	Number of religions
Government health expenditure per capita	Government expenditure on education	Population using an improved water source	Child dependency ratio	Attitudes towards foreign visitors
Number of hospital beds (per 1,000 population)	Higher education achievement	Quality of ground transport network	Old age dependency ratio	
Density of physicians (per 10,000 population)		Quality of roads		
		Quality of railroad infrastructure		
		Quality of electricity supply		

Table (3.9): Indicators for socio-cultural conditions - GLCI Index

(Source: Global Livable Cities Index, 2014)

2- Mousavi Indicators, 2012

Table (3.10): Physical dimension and indicators- Mousavi, 2012

Dimensions	Parameters	Indicators	Criteria for Indicators
Physical	Quality of Built Environment	Green Space	Ratio of green space to build surfaces
			Green surface to build surface density
		Density	Total buildup area to site area
			Ratio of population density
		Clean Environment	General Sanitary condition
			Municipality garbage collection

	Indicators	Criteria for Indicators
	Noise and Safety	Proximity to noise generating
		activities in the vicinity
		throughout the day
	Visual Character	Building materials, Color and texture
		Harmony in façade building
Public Realm	Condition and	The overall structural
Quality	Maintenance	condition of the building
		Degree of maintenance of buildings
		to public spaces
	Design	Well-designed
		Has a sense of
		enclosure
	User	Healthy
		Has a space for social
		interaction
		Fulfilling
		Relaxing
	Function	Community resource
		Vital and viable
		Functional
Levels of Derelict and Vacant Land	Ratio of vacant area to build area	Total area of vacant area to total built area
	Ratio of vacant building to total building	Total area of vacant building to total built area

(Source: The Role of New Development in Enhancing the Livability of Historic Urban Quarters 2016)

Table (3.11): Social and Safety dimension - Mousavi, 2012

Dimension	Parameters			
Social	Behaviour of neighbours			
Dimension	Community life and social contact			
	Sense of Place			
Safety	Number of Crime			
Dimension	Number of Accident			
	Feeling safety in area			

(Source: The Role of New Development in Enhancing the Livability of Historic Urban Quarters 2016)

Dimensions	Parameters	Indicators	Criteria for Indicators
Functional	The vitality	Commercial yield on non-	Commercial yield on non-
	and viability of	domestic	domestic
	services	property	property
		Diversity of uses	The variety of function in area
		Physical structure of the center	Physical structure in center
		Business representation and	Frequency changing of business in
		intentions to change	area
		representation	
		Proportion of vacant street-	The vacancy rate in commercial
		level	zone
		area	of area
		Customer views	The effectiveness of services in area
	Accessibility	Vehicular Accessibility	Public transportation
			Road type
			Transport Infrastructure
		Non-vehicular Accessibility	Street type sidewalks
			Pedestrian ways
			Cycling ways
		Streetscape	Street furniture
			Landscape elements Cleanliness
			Car parking (visual intrusion by side parking)
		Integration of modes	Integration of different public transportation modes
			Integration of private transportation & public transportation modes
		Safety of Roads	Traffic calming
			Segregated bike lanes
			Safe sidewalks

 Table (3.12): Functional dimension and indicators - Mousavi, 2012

(Source: The Role of New Development in Enhancing the Livability of Historic Urban Quarters 2016)

This study has benefited from previous indicators lists of livability, where some indicators that fit the conditions of the Gaza Strip were selected to be assessed. These indicators are: housing quality, safety, environment, health, facilities and amenities, open spaces and green areas, infrastructure and built environment, transportation and street networks, community cohesion and civic participation and economy.

3.5 Conclusion

This chapter discussed the most important measurement and ranking tools which were referred as survey lists of most livable cities, such as the Economist Intelligence Unit's "global livability ranking", "Mercer Quality of Living Survey", The Most Livable City Index of Monocle, The 'Better Life Index' of OECD and The 'Human Development Index' of OECD. Identifying these measurements is very important in drawing the indicators that have been adopted to judge urban areas and cities around the world according to the quality of life conditions. Thus, it is very useful to compare the cities of the world.

On the other hand, the second part of the chapter reviewed the indicators of livability, by identifying indicator, explaining the criteria of livability indicators and giving some examples of livability indices.

This chapter basically lay out the integrated knowledge of concept's indicators which are the most important part of the study on which we can evaluate and rebuild our perceptions about livability condition.

CHAPTER 4 AN OVERVIEW OF EXISTING CONDITIONS OF GAZA STRIP

CHAPTER 4

AN OVERVIEW OF EXISTING CONDITIONS OF GAZA STRIP

This chapter gives a brief overview of Gaza Strip, as well as identifying the current situations in Gaza Strip based on international reports in various sectors such as water, health, education, energy sources, food security, income, jobs and housing.

4.1 The Gaza Strip: overview

Gaza Strip is a small Palestinian territory on the eastern coast of the Mediterranean Sea, that borders Egypt on the southwest for 11 kilometers and Occupied territories "Israel" on the east and north along a 51 km border. The territory is 41 kilometers long, and from 6 to 12 kilometers wide, with a total area of 365 square kilometers (CIA, 2017). With around 1,88 million Palestinians, with a high density population of about 5,154 persons/km², and an annual population growth rate of 3.3% (Palestinian Central Bureau of Statistics- PCBS, 2016), it represents one of the most densely populated areas in The Middle East. Gaza Strip has five governorates comprising twenty-five municipalities, four joint councils, and eight refugee camps. Gaza city is the biggest and most condensed urban center with 700,000 inhabitants and a density exceeding 10,000 inh/sqkm while Jabalya Camp and Ash Shati Camp are considered the largest and the mostly dense camps with densities exceeding 50,000 inh/sqkm (Gaza Urban Profile UN-Habitat, 2014).

Gaza Strip is situated on a relatively flat coastal plain and located between lines 31° 16', 31° 45' latitude north and lines 34° 20', 34° 25' longitude east (GeoHack, 2016). Gaza Strip enjoys the eastern Mediterranean temperate climate, with mild winters, and dry, hot summers subject to drought. January is the coldest month with average temperatures ranging from 43°F to 59°F (6°C to 15°C) and July and August are the hottest months at 72°F to 91°F (22°C to 33°C) on average (New World Encyclopedia, 2017).

4.2 Overview of the Gaza Strip's conditions

In 2012, the United Nations conducted a study to predict and present the situation in Gaza Strip by 2020, and to see whether it will be a livable area. The study focused on a range of the most important issues that affect directly on the daily lives of the people in Gaza Strip, which will intensify in the coming years, even more if the political situation and closure stay as it is. This section summarizes the current conditions on the ground in the Gaza Strip using the most important key indicators.

Crises strike Gaza Strip from all sides: political, environmental, social and economic crises that make it very bad, unstable place to live, so that people can not predict what will happen tomorrow.

It is important that the residents of Gaza Strip enjoy all human rights through a safe life free of all forms of violence, as well as access to adequate health care, education and housing services, elect and hold accountable representatives of government and travel abroad for educational, medical, religious, commercial, cultural, and other purposes (UNCTs, 2012).

In July 2014, the Israeli army launched a military operation in Gaza which lasted for seven weeks of air strikes and ground operations. 2,100 Palestinians were killed and more than 500,000 persons were displaced at the hight of conflict. It had also destructed more than 13,000 homes and affected another 100,000, in addition to damaging 261 schools and 77 health facilities. Moreover, the war has severely affected an already deteriorated infrastructure, water, electricity and sanitary systems. The war has also targeted and destroyed more than 220 industrial facilities and caused more than \$200,000 Million losses in the agricultural sector (Detailed Infrastructure and Damage Assessment - UNDP, 2014).

4.2.1 Population Density

With around 1,88 million Palestinians, with a high density population of about 5,154 persons/km², and an annual population growth rate of 3.3% (Palestinian Central Bureau of Statistics- PCBS, 2016), Gaza Strip is one of the most densely populated areas in The Middle East. Gaza Strip has five governorates comprising twenty-five municipalities, four joint councils, and eight refugee camps that are characterized with high levels of poverty, poor infrastructure and lack of services.

The map in Figure (4.1) shows that the densest areas in Gaza are Refugee Camps with densities that exceed 40,000 persons /km², followed by the main cities of Gaza, Jabalya, Deir Al Balah, Khan Younis and Rafah Governorates with densities that range between 20,000 to 40,000 persons /Km² (Gaza Urban Profile UN-Habitat, 2014).



Figure (4.1): Densest areas in Gaza (Source: Gaza Urban Profile UN-Habitat, 2014)

4.2.2 Water

Access to clean water is a fundamental human right (OCHA, 2010). The Water and Natural Resources Authority in Gaza Strip warned of a major shortage in drinking water as a result of the frequent power cuts, this was stated by Deputy head of the Water Authority, Mazen al-Banna through a press conference on Sunday 14 May 2017; he added that the Gaza Strip is suffering from severe water shortage and pollution due to the depletion of the underground reservoir which is no longer drinkable (Al-Banna, 2017). The main source of water in Gaza Strip is groundwater from the coastal aquifer that provides about 98% of all water supplies, while the remaining 2% is provided through purchasing from the Israeli water company (MEKOROT).

Palestinian Water Authority- PWA (2014) stated that Gaza Strip is among the areas with the scarcest renewable water resources with average water consumption in 2013/2014 of 90 l/c/d of bad water quality exceeding the recommended standards. More than half of the available groundwater is used for irrigation (52%), while the remaining is used for domestic water supply and industry.

Governorate	Total Production	Total Consumption	System Efficiency	L/C/D Production	L/C/D Consumption
North	23,389,963	11,664,340	50%	180	90
Gaza	27,024,755	17,024,755	63%	123	78
Middle	13,636,819	8,287,506	61%	137	83
KhanYounis	14,702,700	8,997,143	61%	120	73
Rafah	9,712,729	6,089,174	63%	120	75
Total	88,466,966	52,062,918	58.9%	135.4	79.8

Table (4.1): Domestic water supply in Gaza Strip 2014

(Source: Palestinian Water Authority- PWA, Water Resources Directorate, 2015)

4.2.2.1 Water supply quality

The World Health Organization (WHO) estimates that contaminated water is responsible for 26% of all disease in Gaza and 50% of children suffer from water-related parasitic infections. According to PWA (2015), Chloride concentration of the groundwater that supplied for Gaza people from the municipal wells in 2014 was ranging from 250 to more than 5000 mg/l. 19.8 % of that has chloride concentration of less than 250 (WHO allowable limit), while the remaining (80.2%) exceeds the WHO chloride level as shown Figure (4.2). By comparing this percentage with that of 2013 it is clear that, Cl in 2014 has degraded by about 5 % where water with acceptable Cl level was 24.6 % in 2013 compared to 19.8 % in 2014.





(Source: Palestinian Water Authority- PWA, Water Resources Directorate, 2015)

PWA (2015) also stated that Nitrate (NO3) concentration of the supplied groundwater in the municipal wells ranges from 50 to more than 300 mg/l. 14.1 % of that had Nitrate concentration of less than 50 mg/l (WHO allowable limit) while the remaining (85.9 %) exceeds the WHO nitrate level which is more or less close the year 2013 as shown in Figure (4.3).



Figure (4.3): NO3 in the supplied water.

(Source: Palestinian Water Authority- PWA, Water Resources Directorate, 2015)

Taking in consideration the combined concentrations of both chloride and nitrate ions, it is clear that 4% of the supplied domestic water in 2014 is only matching with WHO drinking limit (50 mg/l), while the remaining 96 % as shown in Figure (4.4) is out of limit and that is more or less similar the year 2013, which was

96.2%. This minor difference is mainly due to several new wells during 2014 with acceptable NO3 level.



Figure (4.4): Cl &NO3 in the supplied water.

(Source: Palestinian Water Authority- PWA, Water Resources Directorate, 2015)

In the absence of safe drinking water from the Coastal Aquifer, people who can afford it are turning to the private sector water treatment plants – neighborhood-level reverse osmosis vendors – or they are purchasing under-the-sink water filtration units. For those who don't have access to these alternatives, the risk of serious health problems is a growing concern (PWA, 2015).

4.2.3 Health

The health situation in Gaza Strip had deteriorated sharply especially in times of wars and conflicts. Where, after three wars and a severe siege lasting ten years, the health sector has been greatly depleted, and there were many calls for the need to accelerate the relief of this sensitive sector. Public health has been severely compromised in the Gaza Strip due to the long-term blockade, the deteriorating environmental conditions, and the military occupation (Qlalweh, Duraidi, & Hansen, 2012).

Before the 2014 war, the health sector in the Gaza Strip suffered from chronic problems, including a severe deterioration of medical equipment and the inability to maintain the equipment in the absence of spare parts; a reduced tertiary sector capacity - leading to costly referrals of patients outside of Gaza; serious staff

shortages/unpaid salaries; shortages of drugs, supplies, and training opportunities (United Nations Conference on Trade and Development, 2015).

In 2014, Gaza witnessed the highest civilian death toll since 1967 where 2,251 Palestinians were killed, including 1,462 Palestinian civilians, of whom 299 women and 551 children; and 11,231 Palestinians, including 3,540 women and 3,436 children, were injured, of whom 10% suffered permanent disability as a result, in addition, 15 hospitals and 45 primary health centers were damaged (United Nations Human Rights Council, 2015).

According to UNCTs (2012), doctors, nurses and hospital beds will be needed in the coming years to serve a growing population. Based on population projections, maintaining the current ratio of 1.3 hospital beds per 1,000 people in the Gaza Strip would require almost 800 additional beds by 2020, for a total of about 2,800. Similarly, to maintain the current ratios of doctors and nurses per 1,000 people, the number of doctors would have to increase by more than 1,000 to 4,900, and the number of nurses by more than 2,000 to 8,200.

UNSCO for the Middle East Peace Process (2012) cleared that Israeli authorities permit the access of medical supplies into Gaza, and there are frequent breakdowns of medical equipment resulting from power interruptions and water impurities, among other factors. For this and other reasons, many patients are forced to seek treatment outside Gaza for a wide range of medical problems, which is difficult due to the closure.

OCHA (2016) estimates that roughly 20% of Gaza's population (360,000 in 2015) need treatment for mental health conditions.

4.2.4 Education

The literacy rate in Gaza strip is a high rate 97.2% in 2016 (PCBS, 2016), and people are comparatively well-educated. According to the percentage of children above 5 years of age attending school at the time of the 2007 census, the percentage is marginally higher for boys (47%) compared to girls (46%). The regional average is low (46.5%), and school attendance is higher in urban areas than in rural. On the other hand, female illiteracy is more than twice as high as male illiteracy in Gaza. According to data from the 2007 census, 4.8% of the population above 10 years is

illiterate, and the percentage is higher in rural than in urban areas (Gaza Urban Profile, 2014).

The Gaza Strip had a severe shortage of schools where 85% of 677 schools run double shifts; In 2012, the U.N. noted that Gaza Strip needed 250 new schools to make up for the shortage, and an additional 190 schools would be needed by 2020 to keep up with the projected population growth, for a total of 440 schools (UNCTs, 2012). Through war 2014, 26 schools were destroyed and 122 were damaged (UNCTAD, 2015). UNDP estimated the cost of damage to buildings in the higher education sector exceeded \$7 million. More than a quarter of the civilian deaths in 2014 were students (27.4%) (UNESCO, 2015).

4.2.5 Energy

It is clear that there is a very big problem in the energy in the Gaza Strip, which is touched by all Gazans on their daily life and. The problem of is one of the most complex problems faced people of Gaza that reflected in its negative effects on various fields of life, in homes, hospitals, roads and the most vital facilities.

What increases the psychological pressure is the irregularity of the electricity time table that prepared by Gaza Electricity Distribution Co. GEDCo neither in terms of time nor in terms of geographical area. Nowadays Gazans have a sharp decrease in the availability of electricity, with 4 hours per day or less.

And some of them start to use and install the solar cell system, which is new alternative solution entered the energy market and many companies began to make investments with these techniques, but one of the disadvantages of this system that it's installation is high, so it is exclusively to people who are able financially, institutions and organizations. The rest of the people depend on the old traditional ways such as wax or kerosene lamps. Many of electricity networks had been destroyed by the Israeli air strikes during the last war on Gaza strip.

In his study, Ahmed (2014) explained that there are two high quality natural gas fields located off the coast of Gaza, one entirely within the waters of Gaza and the other on the border with Israel, but Israel does not allow the Palestinians to access this potential energy resource. The World Bank (2014) said that the energy

crisis is a primary constraint on economic development in Gaza. To understand the crisis by numbers, facts below summarized the situation:

Gaza Strip needs (450) megawatts of electricity to operate electricity for 24 hours.

- 1. (28) MW enter through the Egyptian side.
- 2. (120) megawatts Enter the Israeli lines.
- 3. (100) MW at best Enter by Gaza Power plant.
- 4. Total electricity to Gaza is (248) MW which is (55%)
- 5. The total deficit in the amount of electricity is (202) MW which is (45%).

The situation is volatile, even the above facts and rates are unstable, which alarm a great danger that is increasing day by day.

4.2.6 Food

Due to deteriorating economic conditions, high rates of unemployment and un sustainable income per capita, many household can not provide the minimum living standard for their families and the most essential need is food. As shown in figures (4.5) (4.6) The Palestinian Central Bureau of Statistics (PCBS) and Food Security Sector (FSS) (2016) classified food insecurity in Gaza Strip at high level around 47%. In a densely populated, largely urban territory, food self-sufficiency is not an option (UNCTAD, 2015). Eighty per cent of households receive some form of assistance (PCBS, FSS, UNRWA & WFP, 2012) and 39% of people live below the poverty line (PCBS, 2012).



Figure (4.5): Household food security levels in Gaza Strip, 2013-2014. (Source: Socio-Economic & Food Security Survey, 2014)

Year	Severely food insecure	Moderately food insecure	Marginally food secure	Food secure	Total
2013	600,438	311,283	272,471	578,925	1,763,118
2014	664,416	333,613	292,889	531,101	1,822,020

Figure (4.6): Population food security levels in Gaza Strip, 2013-2014.

(Source: Socio-Economic & Food Security Survey 2014)

In 2000, UNRWA reported that fewer than 80,000 refugees in Gaza relied on food assistance, while in 2015, that number had risen to 876,497 Palestinians (UNRWA, 2015). The war in 2014 damaged the agricultural sector by an estimated USD \$550 million (UNCTAD, 2015).

The Palestinian Food Industries Union estimates that the food industry suffered approximately USD \$150 million in damages because many large factories were damaged and remain in an inoperable condition (The World Bank, 2014). Furthermore, a lot of farmers have no access to their arable land east and north of Gaza Strip, because it lies within the buffer zone imposed by the Israeli occupation, wherefore farmers lost their jobs and this led to a sharp decline in agricultural production and increased food insecurity.

On the other hand, and since Dec. 2008, Israel has imposed a sea-border on Gaza of 3 nautical miles, reducing the fish catch from 15,000 tons/month in 2000 to 15-20 tons/month in 2010 (Mason, Zeitoun, & Mimi, 2012). More than 3,000 fishermen do not have access to 85% of the maritime areas agreed in the 1995 Oslo Accords (OCHA, 2010).

4.2.7 Income

According to PCBS (2017), preliminary estimates at constant prices showed an increase of 0.7% in GDP in Palestine during the 1st quarter 2017 compared to the 1st quarter 2016, (increase 0.8% in the West Bank and increase 0.4% in Gaza Strip compared to the 1st quarter 2016). And it showed a stability in Palestine compared to the 4th quarter 2016 at constant prices, with a slight increase of 0.1%, meanwhile the base year is 2004. GDP for the 1st quarter 2017 at constant prices was USD 1505.8 million for the West Bank and USD 493.4 million for Gaza Strip.

4.2.7.1 Gross Domestic Product Per Capita

GDP per Capita for Palestine at constant prices was USD 431.6 during the 1st quarter 2017, it showed a decrease of 2.1% compared to the 1st quarter 2016. As for the West Bank* it was USD 555.2 at constant prices during the 1st quarter 2017, it showed a decrease by 1.7% during the 1st quarter 2017 compared to the 1st quarter 2016, while for Gaza Strip it was USD 257.0 during the 1st quarter 2017, and it showed a decrease by 2.8% during the 1st quarter 2017 compared to the 1st quarter 2016 (PCBS, 2017) as shown in figure (4.7)



Figure (4.7): Quarterly GDP in Palestine at Constant Prices for the Years 2013-2017.

(Source: PCBS, Preliminary Estimates of Quarterly National Accounts, First Quarter 2017)

Based on 2009 PCBS Statistics the map in figure (4.8) shows that poverty is more prevailing in the middle and southern governorates (i.e Deir Al Balah, Khan Younis and Rafah, in addition to Southern Gaza (Johr Al Diek) and Umm an Naser in North Gaza. Poverty in these areas is extreme with rates that exceed 40% of families living below Gaza poverty line (Gaza Urban Profile,2014).



Figure (4.8): Poverty is more prevailing in the middle and southern governorates

(Source: Gaza Urban Profile,2014)

4.2.8 Jobs

The unemployment rate in the Gaza Strip has risen dramatically, which is 68%, one of the highest in the world, and this is due to the hard-economic conditions and as a result of the continued closure and political conflicts that negatively impact on attracting capital and investments as projects that may provide jobs for graduates and youth in general. The U.N. Conference on Trade and Development reports that the "socioeconomic conditions in the Gaza Strip are at their lowest point since 1967" (UNCTAD, 2015).

In addition, the growing number of graduates from all Palestinian universities and colleges does not match the available job opportunities, which raises the unemployment rate every year. In the same context - and as alternative solutionssome youth found in freelancing an opportunity to get out of the tunnel of scarce traditional jobs. Others found of entrepreneurship a chance to start their own business to take advantage of their time after graduation and hope to open small startups with support of business incubators. That successive wars on Gaza Strip, which targeted civilians and their agricultural, industrial business and other facilities, led to a lack of job opportunities, where 247 factories and 300 commercial establishments were either fully or partially destroyed during the last war only (UNCTAD, 2015).

4.2.9 Land Ownership and Shelter

According to the map in figure (4.9), the majority of land in Gaza Strip is privately owned (63%). Around 2% of the land is classified as Waqf (properties donated for religious or charitable purposes). The remaining 35 % are public lands.

In related context, and according to the map in Figure (4.10), 45% of Gaza Strip is covered by buildings and roads, while 42% is agricultural land. Bare land (12%) is found mainly in the access-restricted area along the border. Data discrepancies occur for the abandoned settlement area in Khan Yunis and Rafah.



Figure (4.9), (4.10): Land Ownership and Shelter in Gaza Strip (Source: Gaza Urban Profile, 2014)

On the other hand, the construction sector is an important economic sector due to its economic role of generating income and as providing various jobs where Labor Force Participation Rate of Persons Aged 15 Years and above in Gaza strip is 45.7% in the 1^{st} quarter 2017and 46.1% in the 2016, 6.3% of 46.1% work in the construction sector (PCBS, 2017).

In addition, construction sector provides the necessary buildings for housing, economic activities, infrastructure projects and different facilities etc. Also, the importance of the construction sector is high as a result of quality and quantity of goods as well as the services provided by this sector, which are considered an essential for society. Consequently, the construction sector is becoming increasingly important due to the continuous increase in housing demand, which stems from the increase in population growth rates where according to "Average of Head of Households Hypothesis method" – that recommended internationally - it is estimated that the number of housing units expected in the Palestinian Territory in 2017 will increase by 62.6% from 2007 to 1,124,063 units. This number is divided into 728,881 housing units in the West Bank, compared to 395,182 housing units in the Gaza Strip (PCBS, 2009).

In our case, the construction and shelters sector suffered severe damage resulting from the Israeli occupation, continued siege and three successive wars on Gaza Strip, shelter is a basic need that integrates with other important needs (eg. jobs, education, health).

The war in the summer of 2014 destroyed more than 11,000 homes and severely damaged another 6,800, in the same context and as of January 2016, more than 16,000 families (90,000 people) remain displaced because their homes were destroyed or severely damaged and only 15% of displaced families were able to return to repaired or reconstructed homes by the end of January 2016. As a result, many families are suffering from severe overcrowding, limited access to basic services, lack of privacy, tensions with host communities, risks due to unexploded ordnance, and exposure to adverse weather (OCHA, 2016).

4.3 Conclusion

The harsh conditions imposed on Gaza Strip that continue to this day, as well as the mysterious future and the unexpected events that may face, place the livelihoods at stake. According to this chapter, where facts about the social, environmental and economic situations derived from International and local reports and studies, and based on the indicators of livable communities, the large gap between the characteristics of these communities and the fact that Gaza currently has these characteristics, or at least the minimum of them, can be seen.

Plans, programs that aim to build a livable community in Gaza - if adopted by decision-makers - will not achieve the objectives in a short term of time because of the deterioration of Gaza Strip at all levels, but they will be the base point to get the theories and words into the realm of serious action that applies all the required policies on the ground.

Gaza Strip needs more cooperation and solidarity among its people and its decision-makers to serve their interests, without favoring one another, also in order to achieve real protection of the environment and ensure that it does not waste and pollute it, as well as not to waste the rights of future generations of their needs. In short, Gaza Strip has no reconstruction, no crossings, no water, no electricity, no work, no medicine, no life, no development. All indicators confirm that Gaza Strip has entered the stage of economic collapse.

CHAPTER 5 RESEARCH METHODOLOGY

CHAPTER 5 RESEARCH METHODOLOGY

5.1 Introduction

This chapter describes the methodology that was used in this research. The adopted methodology to accomplish this study uses the following techniques: the information about the research design, research population, questionnaire design, content validity and pilot study statistical data analysis.

5.2 Research Design

The first phase of the research thesis proposal includes identifying background and context, and defining the problems and Scope, Significance & Objectives of the study, Limitations, Approach and Method and development research plan.

The second phase of the research includes a historical background and definitions of livability and livable communities. In addition, this phase provides a summary of the relationship between sustainability, many related concepts and livability. On the other hand, a brief overview of the Gaza Strip was reviewed, as well as identifying the current situations in the Gaza Strip based on international reports.

The third phase of the research included a field survey which was conducted about assessment of livability indicators in the Gaza Strip and South Remal neighborhood as a study area.

The fourth phase of the research focused on preparing the questionnaire, then modify it based on the results of the pilot study, the purpose of the pilot study was to test and prove that the questionnaire questions are clear to be answered in a way that help to achieve the objective of the study. The questionnaire was modified.

The fifth phase of the research focused on distributing questionnaire. This questionnaire was used to collect the required data in order to achieve the research objective.

The sixth phase of the research was data analysis and discussion. Statistical Package for the Social Sciences, (SPSS 24) was used to perform the required analysis. The final phase includes the conclusions and recommendations.

300 questionnaires were distributed to the research population and 242 questionnaires are received. Figure (5.1) shows the methodology flowchart, which leads to achieve the research objective.



Figure (5.1): Methodology flowchart

(Source: the researcher)

5.3 Data Collection Methodology

In order to collect the needed data for this research, we use the secondary resources in collecting data such as books, journals, statistics and web pages, in addition to preliminary resources that not available in secondary resources through distribute questionnaires on study sample in order to get their opinions about the assessment of livability indicators in the Gaza Strip - Case Study: "Southern Remal" Neighborhood. Research methodology depends on the analysis of data on

the use of descriptive analysis, which depends on the poll and use the main program (SPSS).

5.4 Population and sample size

The population will include residents of Southern Remal neighborhood which has a population of 26000 people.

5.5 Profile of Southern Remal neighborhood

Al-Remal neighborhood, one of the most prestigious neighborhoods in Gaza City, the largest one, was built in the 1930s and 1940s. The municipal council relies Al-Remal neighborhood as two residential areas: Southern Remal neighborhood and Northern Remal neighborhood.

• Northern Remal neighborhood: extends from Sheikh Radwan neighborhood (first street) in north to Omar Al Mukhtar Street in south, with an area of 2373 dunums, and nearly population of 37000 people by the year 2015.

• Southern Remal neighborhood: It extends from Omar Al Mukhtar Street in north to the beginning of Tal al-Hawa neighborhood in south. Figures (5.2), (5.3) and (5.4) show the location of the neighborhood "case study" regarding to Palestine, Gaza Strip and Gaza City. It covers an area of 2765 dunums and has nearly a population of 26,000 people by the year 2015. Figures (5.5) and (5.6) show the location from google earth.

The neighborhood includes many commercial hubs, the most important one is Omar Al Mukhtar Street, which includes many shops and boutiques. So many residents work in commercial activities and sales sector. Also, neighborhood includes many educational facilities such as universities and this has attracted many workers at these universities to live next to their workplaces where they formed a specific percentage of the population.



Figures (5.2): Location of Palestine

(Source: Palestinian Central Bureau of Statistics)



Figures (5.3): Location of Gaza Strip

(Source: www.google.com /images)



Figures (5.4): Neighborhoods of Gaza City

(Source: www.alazhar.edu.ps - modified by Researcher)



Figures (5.5): Study Area "Southern Remal Neighborhood " regarding to Gaza City

(Source: Google earth 2017- modified by

Figures (5.6): Study Area ''Southern Remal Neighborhood location

(Source: Google earth 2017- modified by Researcher)

5.6 Questionnaire Procedures

The researcher used the following questionnaire procedures:

- 1. The questionnaire was designed by the researcher depending on reviews of many indicators lists, and was reviewed and modified by the research's supervisor.
- The modified copy was given to three experienced academic referees from different universities.
- 3. The questionnaire was then modified based on the referee's comments.
- 4. Next, a pilot study sample of 40 questionnaires was distributed to help test the validity and reliability of the questionnaire, this provides a trial for the questionnaire, which involves testing the wordings of questions, and identifying ambiguous questions.
- 5. Based on the pilot phase findings, it was concluded that the questionnaire is ready to be distributed as a final copy.

5.7 Data Measurement

In order to be able to select the appropriate method of analysis, the level of measurement must be understood. For each type of measurement, there is/are an

appropriate method/s that can be applied and not others. In this research, ordinal scales were used. Ordinal scale is a ranking or a rating data that normally uses integers in ascending or descending order. As shown in Table (5.1), The numbers assigned to the importance (1,2,3,4,5) do not indicate that the interval between scales are equal, nor do they indicate absolute quantities. They are merely numerical labels. Based on Likert scale we have the following:

Table	(5.1):	The	numbers	assigned	scale
	() .	-			

Item	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Scale	5	4	3	2	1

(Source: the researcher)

5.8 Content validity of the questionnaire

The content validity of the questionnaire was conducted through the review of three experienced academic referees, in order to assure that the content of the questionnaire is consistent with the research objectives, and evaluate whether the questions reflect the research problem or not. Also, three academics from the Islamic University of Gaza and Al-Azhar University reviewed the questionnaire and provided valuable notes to improve its validity that their comments were taken into consideration. Appendix A shows the questionnaire in its final shape.

5.9 Pilot Study

A pilot study of 40 respondents for the questionnaire was conducted before collecting the results of the sample. It provided a trial run for the questionnaire, which involves testing the wordings of question, identifying ambiguous questions, and measuring the effectiveness of responses.

5.10 Validity of Questionnaire

Validity refers to the degree to which an instrument measures what it is supposed to be measured. Validity has many different aspects and assessment approaches. Statistical validity is used to evaluate instrument validity, which include internal validity and structure validity. The questionnaire has been given to (3) referees to judge its validity according to its content, the clearness of its items meaning, appropriateness to avoid any misunderstanding and to assure its linkage with the main study aims.

5.10.1 Internal Validity

Internal validity of the questionnaire is the first statistical test that used to test the validity of the questionnaire. It is measured by a scouting sample, which consisted of 40 questionnaires through measuring the correlation coefficients between each item in one field and the whole field.

Table (5.2) clarifies the correlation coefficient for each item of the "Housing quality " and the total of the field. The p-values (Sig.) are less than 0.05, so the correlation coefficients of this field are significant at $\alpha = 0.05$, so it can be said that the items of this field are consistent and valid to be measure what it was set for.

Table (5.2): Correlation	coefficient of eac	ch item of "	Housing	quality "	and	the
total of this field						

No.	Item	Pearson	P-Value
		Correlation	
		Coefficient	
1.	My house area is suitable for me	.517*	0.000
2.	My house is crowded with people who live there	.506*	0.000
3.	I would like to keep living there	.608*	0.000
4.	My house has many flaws	.505*	0.000
5.	There are enough distances between around my houses that maintain privacy and ventilation	.550*	0.000
6.	There is enough parking space next to my house	.605*	0.000
7.	There are enough spaces for children to play near or attached to my house	.539*	0.000
8.	House maintenance is available if any part of it is required this	.622*	0.000
9.	Apartments for sale or rent are available in my neighborhood	.401*	0.002
10.	lands are available to build new apartments	.383*	0.003
11.	My house is suitable for me when I get older	.633*	0.000
12.	Houses rentals in my neighborhood are suitable for all population groups	.386*	0.003

No.	Item	Pearson Correlation Coefficient	P-Value
13.	Water supply provided to my house is adequate	.547*	0.000
14.	Electricity provided to my house has good level and adequate	.249*	0.041
15.	Communication service has an appropriate level	.601*	0.000

* Correlation is significant at the 0.05 level

Table (5.3) clarifies the correlation coefficient for each item of the "Safety " and the total of the field. The p-values (Sig.) are less than 0.05, so the correlation coefficients of this field are significant at $\alpha = 0.05$, so it can be said that the items of this field are consistent and valid to be measure what it was set for.

 Table (5.3): Correlation coefficient of each item of "Safety "and the total of this field

No.	Item	Pearson Correlation Coefficient	P-Value
1.	I feel safe walking in my area at night	.724*	0.000
2.	My neighborhood did not witness any crime or violence	.761*	0.000
3.	No one of my neighbors is implicated in the execution of crimes previously	.667*	0.000
4.	I trust the neighbors in my neighborhood	.648*	0.000
5.	No one of my neighborhood -including children- was assaulted and abducted	.638*	0.000
6.	Distance to the nearest police station within my neighborhood is suitable	.557*	0.000

* Correlation is significant at the 0.05 level

Table (5.4) clarifies the correlation coefficient for each item of the "Environment " and the total of the field. The p-values (Sig.) are less than 0.05, so the correlation coefficients of this field are significant at $\alpha = 0.05$, so it can be said that the items of this field are consistent and valid to be measure what it was set for.

 Table (5.4): Correlation coefficient of each item of "Environment" and the total
 of this field

No.	Item	Pearson	P-Value
		Correlation	
		Coefficient	
1.	My neighborhood has a clean environment	.773*	0.000
2.	The area of water bodies "natural or	677*	0.000
	artificial " is appropriate	.077	0.000
3.	My neighborhood contains different living	510*	0.000
	organisms like animals' pets	.510	0.000
4.	The area of trees or vegetation cover is an	777*	0.000
	appropriate	.///	0.000

* Correlation is significant at the 0.05 level

Table (5.5) clarifies the correlation coefficient for each item of the "Health " and the total of the field. The p-values (Sig.) are less than 0.05, so the correlation coefficients of this field are significant at $\alpha = 0.05$, so it can be said that the items of this field are consistent and valid to be measure what it was set for.

Table (5.5): Correlation coefficient of each item of "Health" and the total of this field

No.	Item	Pearson Correlation Coefficient	P-Value
1.	The air in my neighborhood is a clean and fresh	.630*	0.000
2.	I feel that there are a harmful gases and vapors in the air	.480*	0.000
3.	My neighborhood is regularly provided with water in the summer	.564*	0.000
4.	Provided water is safe to drink	.457*	0.000
5.	Number of health and family care centers in my neighborhood is sufficient	.557*	0.000
6.	Distance to the nearest health center or hospital is convenient to be arrived in suitable time	.628*	0.000
7.	Care centers for the elderly and the disabled people are available in my neighborhood	.476*	0.000
8.	Services provided at the nearest hospital are fine	.739*	0.000
9.	Number of pharmacies in my neighborhood is sufficient	.334*	0.009
10.	Number of sports centers in my neighborhood is sufficient	.759*	0.000

* Correlation is significant at the 0.05 level

Table (5.6) clarifies the correlation coefficient for each item of the "Facilities and Amenities " and the total of the field. The p-values (Sig.) are less than 0.05, so the correlation coefficients of this field are significant at $\alpha = 0.05$, so it can be said that the items of this field are consistent and valid to be measure what it was set for.

Table (5.6): Correlation coefficient of each item of "	Facilities and Amenities "
and the total of this field	

No.	Item	Pearson Correlation Coefficient	P-Value
1.	My neighborhood is close to primary schools "elementary and preparatory"	.608*	0.000
2.	My neighborhood is close to secondary schools	.677*	0.000
3.	My neighborhood is close to universities, colleges and educational institutions	.645*	0.000
4.	My neighborhood is close to public markets, malls and restaurants	.596*	0.000
5.	My neighborhood includes cultural centers such as public libraries	.663*	0.000
6.	My neighborhood is close to Entertainment and recreation centers such as chalets and resorts	.519*	0.000
7.	My neighborhood includes government buildings that serve the citizens	.530*	0.000
8.	My neighborhood includes sports spaces such as football playground and swimming pools	.611*	0.000
9.	My neighborhood has a high-quality communications network	.655*	0.000
10.	My neighborhood has a suitable internet services	.603*	0.000

* Correlation is significant at the 0.05 level

Table (5.7) clarifies the correlation coefficient for each item of the " Open spaces and green areas " and the total of the field. The p-values (Sig.) are less than 0.05, so the correlation coefficients of this field are significant at $\alpha = 0.05$, so it can be said that the items of this field are consistent and valid to be measure what it was set for.

 Table (5.7): Correlation coefficient of each item of " Open spaces and green areas " and the total of this field

No.	Item	Pearson	P-Value
		Correlation	
		Coefficient	
1.	My neighborhood is close to open green spaces	.667*	0.000
2.	Open spaces and green areas are attractive from	503*	0 000
	my point of view	.585	0.000
3.	Green areas and parks include seating areas and	603*	0 000
	children's games	.095	0.000
4.	Corridors to open and green areas are safe and	831*	0 000
	accessible	.051	0.000
5.	Corridors in open areas are separate to serve	830*	0 000
	pedestrians, bicycles and others	.050	0.000
6.	Public parking spaces are available and adequate	.722*	0.000

* Correlation is significant at the 0.05 level

Table (5.8) clarifies the correlation coefficient for each item of the "Infrastructure and built environment " and the total of the field. The p-values (Sig.) are less than 0.05, so the correlation coefficients of this field are significant at $\alpha = 0.05$, so it can be said that the items of this field are consistent and valid to be measure what it was set for.

 Table (5.8): Correlation coefficient of each item of " Infrastructure and built
 environment " and the total of this field

No.	Item	Pearson	P-Value
		Correlation	
		Coefficient	
1.	My neighborhood includes street network with adequate quality	.739*	0.000
2.	My neighborhood is close to main road lines	.437*	0.001
3.	My neighborhood has Wastewater network	.452*	0.001
4.	Rainwater collects in the streets during winter	.463*	0.000
5.	My neighborhood has a good electricity network with sufficient capacity	.455*	0.000
6.	I do not suffer from a continuous power cuts	.384*	0.003
7.	All different types of buildings have an attractive appearance	.557*	0.000

* Correlation is significant at the 0.05 level
Table (5.9) clarifies the correlation coefficient for each item of the "Transportation and street networks " and the total of the field. The p-values (Sig.) are less than 0.05, so the correlation coefficients of this field are significant at $\alpha = 0.05$, so it can be said that the items of this field are consistent and valid to be measure what it was set for.

No.	Item	Pearson Correlation Coefficient	P-Value
1.	Moving from a neighborhood to another is easy and not exhausting	.525*	0.000
2.	Classification of streets in my neighborhood is clear "main and local streets"	.512*	0.000
3.	Streets include traffic lights and traffic signs	.688*	0.000
4.	Streets include adequate pedestrian sidewalks	.601*	0.000
5.	Streets include separate bicycle paths	.579*	0.000
6.	Streets include green elements such as small shrubs	.731*	0.000
7.	Streets include seats and benches	.547*	0.000
8.	Streets include garbage baskets	.550*	0.000
9.	Streets network in my neighborhood is connected network	.648*	0.000
10.	My neighborhood includes different types of transportation "private and public"	.657*	0.000
11.	My neighborhood includes Bus and microbuses stops	.503*	0.000
12.	I feel disturbed by street noise in my neighborhood	.302*	0.016
13.	I notice traffic congestion in my neighborhoods' streets	.539*	0.000

Table (5.9): Correlation	coefficient of each item of	of "Transportation	and street
networks" and the total o	of this field		

* Correlation is significant at the 0.05 level

Table (5.10) clarifies the correlation coefficient for each item of the " Community cohesion and civic participation " and the total of the field. The p-values (Sig.) are less than 0.05, so the correlation coefficients of this field are significant at $\alpha = 0.05$, so it can be said that the items of this field are consistent and valid to be measure what it was set for.

 Table (5.10): Correlation coefficient of each item of " Community cohesion and

 civic participation " and the total of this field

No.	Item	Pearson Correlation	P-Value
		Coefficient	
1.	I feel belonging to my neighborhoods	.698*	0.000
2.	I was helped by the neighbor of my area when I needed help	.560*	0.000
3.	I consider my neighbors and residents as friends and I feel that they love me	.792*	0.000
4.	I have previously participated or volunteered in community activities in my neighborhood	.762*	0.000
5.	I think it's good to have people from different cultural backgrounds in my neighborhood	.368*	0.004
6.	I find it easy to meet and communicate my neighbors and residents	.844*	0.000
7.	I had no problems with anyone of my neighbors	.294*	0.020
8.	I see that harmony and cohesion are prevalent among neighbors	.765*	0.000
9.	I am involved in decision-making of my neighborhood development	.687*	0.000

* Correlation is significant at the 0.05 level

Table (5.11) clarifies the correlation coefficient for each item of the "Economy " and the total of the field. The p-values (Sig.) are less than 0.05, so the correlation coefficients of this field are significant at $\alpha = 0.05$, so it can be said that the items of this field are consistent and valid to be measure what it was set for.

Table (5.11):	Correlation	coefficient	of each i	tem of "	Economy	" and t	the total
of this field							

No.	Item	Pearson Correlation Coefficient	P-Value
1.	I feel satisfied about my economic situation	.784*	0.000
2.	I am satisfied with my monthly income	.831*	0.000
3.	I am satisfied with my monthly expenses	.836*	0.000
4.	Location of my neighborhood affects the increase of unemployment rates	.572*	0.000
5.	Location of my neighborhood offers sufficient diversity of employment opportunities	.383*	0.004

No.	Item	Pearson Correlation Coefficient	P-Value
6.	I spend a specific time for fun and hobbies weekly outside my house	.637*	0.000
7.	Resident in my neighborhood can pay for apartments rent	.756*	0.000
8.	Resident in my neighborhood can buy an apartment	.751*	0.000
9.	Resident can buy land to build a house	.638*	0.000

* Correlation is significant at the 0.05 level

5.10.2 Structure Validity of the Questionnaire

Structure validity is the second statistical test that used to test the validity of the questionnaire structure by testing the validity of each field and the validity of the whole questionnaire. It measures the correlation coefficient between one field and all the fields of the questionnaire that have the same level of likert scale.

Table (5.12) clarifies the correlation coefficient for each field and the whole questionnaire. The p-values (Sig.) are less than 0.05, so the correlation coefficients of all the fields are significant at $\alpha = 0.05$, so it can be said that the fields are valid to measure what it was set for to achieve the main aim of the study.

Table	(5.12):	Correlation	coefficient	of each	field an	d the	whole	of q	questionna	ire
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No.	Field	Pearson Correlation	P-Value
		Coefficient	
1.	Housing quality	.702*	0.000
2.	Safety	.547*	0.000
3.	Environment	.653*	0.000
4.	Health	.878*	0.000
5.	Facilities and Amenities	.793*	0.000
6.	Open spaces and green areas	.816*	0.000
7.	Infrastructure and built environment	.641*	0.000
8.	Transportation and street networks	.820*	0.000
9.	Community cohesion and civic participation	.665*	0.000
10.	Economy	.647*	0.000

* Correlation is significant at the 0.05 level

5.11 Reliability of the Research

The reliability of an instrument is the degree of consistency which measures the attribute; it is supposed to be measuring (George and Mallery, 2006). The less variation an instrument produces in repeated measurements of an attribute, the higher its reliability. Reliability can be equated with the stability, consistency, or dependability of a measuring tool. The test is repeated to the same sample of people on two occasions and then compares the scores obtained by computing a reliability coefficient (George and Mallery, 2006). To insure the reliability of the questionnaire, Cronbach's Coefficient Alpha should be applied.

5.11.1 Cronbach's Coefficient Alpha

Cronbach's alpha (George D. & Mallery P, 2006) is designed as a measure of internal consistency, that is, do all items within the instrument measure the same thing? The normal range of Cronbach's coefficient alpha value between 0.0 and + 1.0, and the higher values reflects a higher degree of internal consistency. The Cronbach's coefficient alpha was calculated for each field of the questionnaire.

Table (5.13) shows the values of Cronbach's Alpha for each field of the questionnaire and the entire questionnaire. For the fields, values of Cronbach's Alpha were in the range from 0.637 and 0.856. This range is considered high; the result ensures the reliability of each field of the questionnaire. Cronbach's Alpha equals 0.950 for the entire questionnaire which indicates an excellent reliability of the entire questionnaire.

No.	Field	Cronbach's Alpha
1.	Housing quality	0.776
2.	Safety	0.750
3.	Environment	0.637
4.	Health	0.774
5.	Facilities and Amenities	0.797
6.	Open spaces and green areas	0.812
7.	Infrastructure and built environment	0.856
8.	Transportation and street networks	0.794

 Table (5.13): Cronbach's Alpha for each field of the questionnaire

No.	Field	Cronbach's Alpha
9.	Community cohesion and civic participation	0.814
10.	Economy	0.821
	All items of the questionnaire	0.950

Thereby, it can be said that the researcher proved that the questionnaire was valid, reliable, and ready for distribution for the population sample.

5.11.2 Test of normality

Table (5.14) shows the results for Kolmogorov-Smirnov test of normality. From Table the p-value for each variable is greater than 0.05 level of significance, then the distributions for these variables are normally distributed. Consequently, parametric tests should be used to perform the statistical data analysis.

Table (5.14): Kolmogorov-Smirnov test

Field	Test value	P-value
Housing quality	0.424	0.994
Safety	0.633	0.818
Environment	0.637	0.812
Health	0.590	0.877
Facilities and Amenities	0.843	0.476
Open spaces and green areas	0.968	0.305
Infrastructure and built environment	0.750	0.626
Transportation and street networks	0.694	0.721
Community cohesion and civic participation	0.566	0.906
Economy	0.770	0.594
All items of the questionnaire	0.762	0.608

5.11.3 Statistical analysis Tools

The researcher used quantitative data analysis methods. The Data analysis made using (SPSS 24). The researcher used the following statistical tools:

- 1) Kolmogorov-Smirnov test.
- 2) Pearson correlation coefficient.
- 3) Cronbach's Alpha.
- 4) Frequency and Descriptive analysis.
- 5) One-sample T test.

CHAPTER 6 DATA ANALYSIS AND DISCUSSION

CHAPTER 6

DATA ANALYSIS AND DISCUSSION

6.1 Introduction

This chapter represents the research findings and the statistical analysis of the data collected as part of this study. The purpose of this chapter is to provide a comprehensive overview of the entire data set collected and the characteristics of the respondents. In addition, it serves to describe the statistical procedures applied to the data in order to interpret and apply the data to the research problem.

6.2 Analysis of personal information

The researcher calculated frequencies and percentage of the sample 242 according to the variable of the research as shown in the following tables.

Gender

Table (6.1) shows that the majority of the respondents are males and this represents 73.1% of the study sample and 26.9% are females. This is logical because the researcher contacts primarily with male residents who have been in their work as well as in the streets and shops, and they also represent the largest proportion in supporting their families than females do.

 Table (6.1): Gender of the respondents

Gender	Frequency	Percent %		
Male	177	73.1		
Female	65	26.9		
Total	242	100.0		

Age

Table (6.2) shows that 40% of the sample are "20 – less than 30 years", 31.0% of the sample are of "30 - less than 40 years", 13.2% of the sample are of "40 - less than 50 years", 6.6% of the sample are of "50 - 60 years" and 8.7% of the sample are more than 60 years. It is noted that the largest proportion of respondents are from young

people who settled in the area of study and formed their small families in the new buildings scattered in the area. Also, it reflects the size of the response of this group compared to other age groups.

It should be noted that young respondents between the age of 20 - less than 40 represent the largest proportion of the sample and this shows that the Palestinian society is known as youthful community.

Age	Frequency	Percent %
20 - less than 30 years	98	40.5
30 - less than 40 years	75	31.0
40 - less than 50 years	32	13.2
50 - 60 years	16	6.6
More than 60 years	21	8.7
Total	242	100.0

Table (6.2): Age of the respondents

The highest educational qualification

Table (6.3) shows that 2% of the respondents hold " Basic education or below ", 14.0% "Secondary education", 66.9% "Bachelor degree" and 16.9% of the sample hold "Graduate Studies ". This is a strong indicator that the residents of the neighborhood are well-educated as the rest of Gazans in general, this is in line with statistics about the literacy rate in Gaza strip which is a high rate 97.2% in 2016 (PCBS, 2016). On the other hand, it indicates that the answers were based on a real understanding of questionnaire.

 Table (6.3): The highest educational qualification

The highest educational qualification	Frequency	Percent %
Basic education or below	5	2.1
Secondary education	34	14.0
Bachelor	162	66.9
Graduate Studies	41	16.9
Total	242	100.0

Marital status

Table (6.4) shows that majority of respondents are married 68.6%, thus it reflects their families' views as well as their own views.

Table (6.4): Marital status

Marital status	Frequency	Percent%
Single	69	28.5
Married	166	68.6
Widow	4	1.7
Divorced	3	1.2
Total	242	100.0

The house you live in

Table (6.5) shows that majority of residents have their own houses, and thus they have the ability to diagnose their problems more than the renters do, and also assess livability indicators directly and deeply.

 Table (6.5): The house you live in

The house you live in	Frequency	Percent %
Yours	205	84.7
Rent	30	12.4
Other	7	2.9
Total	242	100.0

Occupation

The percentage 72.3% emphasizes that the area attracts the different sectors of the labor force, this is due to the fact that the area includes many important institutions such as universities and government facilities, where their employees prefer to live in places near their work for reasons of comfort and cost of transport. In addition, the area includes many commercial hubs and streets such as Omar Al Mukhtar as well as cafes, restaurants and recreational places, this is helpful when assessing the economic domain.

 Table (6.6): Occupation of the respondents

Occupation	Frequency	Percent %		
I have a job	175	72.3		
I have no job	67	27.7		
Total	242	100.0		

Monthly income

After analysis, the percentages were so close as shown in the table, this demonstrates that the neighborhood includes residents from different economic classes and this results a good range of diversity that is reflected on the perceptions about other fields.

Monthly income	Frequency	Percent %
< 200	53	21.9
200 - less than 400	57	23.6
400 - less than 800	45	18.6
800 - 1000	31	12.8
> 1000	56	23.1
Total	242	100.0

Table (6.7): Monthly income of the respondents

Number of family members

It is noted that the largest percentage of number of family members 36% is consistent with the average size of the Palestinian family in Gaza Strip, which reached 5.7 persons in 2016. This without a doubt is related to which extent the house crowded with people who live there and housing quality in general, which will be discussed later in the first field when assessing livability indicators.

Table (6.8): Number of family members

Number of family members	Frequency	Percent %
No one	25	10.3
1-2	53	21.9
3-5	77	31.8
6 and more	87	36.0
Total	242	100.0

Years of residence in your current area

The answers show that the largest percentage of residence years in the neighborhood is for more than 20 years, so the residents there have witnessed the development of the area over years, making their experiences rich and important to use in assessing livability indicators.

 Table (6.9): Years of residence in your current area

Years of residence in your current area	Frequency	Percent %
< 1 year	19	7.9
1 - less than 5 years	43	17.8
5 - less than 10 years	42	17.4
10 - 20 years	49	20.2
> 20 years	89	36.8
Total	242	100.0

6.3 Analysis for each field

1. Housing quality

Table (6.10) shows the following results:

• The mean of item #2 "My house is crowded with people who live there" equals 3.85 (76.90%) which is the highest mean, Test-value = 11.39, and P-value = 0.000 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is positive, so the mean of this item is significantly greater than the hypothesized value 3. We conclude that the respondents agreed to this item.

• The mean of item #14 "Electricity provided to my house has good level and adequate" equals 1.97 (39.34%) which is the lowest mean, Test-value = -13.56, and P-value = 0.000 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is negative, so the mean of this item is significantly smaller than the hypothesized value 3. We conclude that the respondents disagreed to this item.

• The mean of the field "Housing quality" equals 3.07 (61.31%), Test-value = 1.71, and P-value= 0.054 which is greater than the level of significance $\alpha = 0.05$. The mean of this field is insignificantly different from the hypothesized value 3. We conclude that the respondents (Do not know, neutral) to field of "Housing quality".

	Item	Mean	S.D	Proportional mean (%)	Test value	P-value (Sig.)	Rank
1.	My house area is suitable for me	3.80	1.15	75.95	10.82*	0.000	2
2.	My house is not crowded with people who live there	3.85	1.15	76.90	11.39*	0.000	1
3.	I would like to keep living there	3.55	1.20	71.05	7.09*	0.000	3
4.	My house has many flaws	3.49	1.09	69.83	6.93*	0.000	5
5.	There are enough distances between around my houses that maintain privacy and ventilation	3.15	1.26	63.10	1.90*	0.030	8
6.	There is enough parking space next to my house	2.74	1.28	54.79	-3.16*	0.001	12

Table (6.10) Means and Test values for "Housing quality"

	Item	Mean	S.D	Proportional mean (%)	Test value	P-value (Sig.)	Rank
7.	There are enough spaces for children to play near or attached to my house	2.45	1.23	49.05	-6.91*	0.000	13
8.	House maintenance is available if any part of it is required this	3.30	1.08	65.92	4.25*	0.000	7
9.	Apartments for sale or rent are available in my neighborhood	3.53	1.09	70.50	7.46*	0.000	4
10.	lands are available to build new apartments	2.92	1.21	58.31	-1.07	0.142	10
11.	My house is suitable for me when I get older	2.95	1.29	59.06	-0.56	0.289	9
12.	Houses rentals in my neighborhood are suitable for all population groups	2.09	0.98	41.75	- 14.44*	0.000	14
13.	Water supply provided to my house is adequate	2.79	1.35	55.70	-2.48*	0.007	11
14.	Electricity provided to my house has good level and adequate	1.97	1.18	39.34	- 13.56*	0.000	15
15.	Communication service has an appropriate level	3.47	1.08	69.42	6.77*	0.000	6
	All items of the field	3.07	0.60	61.31	1.71	0.054	

* The mean is significantly different from 3

Interpretation

From the above analysis of the housing quality, we conclude that the residents of the neighborhood suffer from many problems, such as the house overcrowding by occupants in the house. On the other hand, many of the respondents believe that their houses will not be suitable for their use if they get older. Lack of adequate parking around the houses, as well as the safe spaces for children to play. Neighborhoods' residents also believe that the land to build new units is unavailable. The high prices of apartments in the area are not suitable for all classes of residents by comparing with their monthly income. While the respondents show their satisfaction with the communications service, they expressed dissatisfaction with the quantities of water supplied to their homes, this is due to the most important deteriorated indicators from their point of view, which is the electricity crisis that affect negatively all aspects of their life as the rest Gazans.

2. Safety

Table (6.11) shows the following results:

• The mean of item #5 "No one of my neighborhood -including children- was assaulted and abducted" equals 4.11 (82.15%), which is the highest mean, Test-value = 17.59 and P-value = 0.000 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is positive, so the mean of this item is significantly greater than the hypothesized value 3. We conclude that the respondents agreed to this item.

The mean of item #4 "I trust the neighbors in my neighborhood" equals 3.42 (68.49%), which is the lowest mean, Test-value = 5.90, and P-value = 0.000 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is positive, so the mean of this item is significantly greater than the hypothesized value 3. We conclude that the respondents agreed to this item.

• The mean of the field "Safety" equals 3.70 (74.06%), Test-value = 15.52, and P-value= 0.000 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is positive, so the mean of this field is significantly greater than the hypothesized value 3. We conclude that the respondents agreed to field of "Safety".

Ta	ble	(6.11)):	Means	and	Test va	alues	for	"Safety"
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	Item	Mean	S.D	Proportional mean (%)	Test value	P-value (Sig.)	Rank
1.	I feel safe walking in my area at night	3.50	1.18	70.08	6.64*	0.000	5
2.	My neighborhood did not witness any crime or violence	3.74	1.06	74.71	10.79*	0.000	3
3.	No one of my neighbors is implicated in the execution of crimes previously	3.81	1.08	76.17	11.59*	0.000	2
4.	I trust the neighbors in my neighborhood	3.42	1.11	68.49	5.90*	0.000	6
5.	No one of my neighborhood - including children- was assaulted and abducted	4.11	0.98	82.15	17.59*	0.000	1
6.	Distance to the nearest police station within my neighborhood is suitable	3.65	1.09	72.92	9.20*	0.000	4
	All items of the field	3.70	0.70	74.06	15.52*	0.000	

* The mean is significantly different from 3

Interpretation

From analysis of safety, the residents feel safe in their neighborhood, where they can walk and feel safe at night, rates of violence or crime almost non-existent according to their views, in the same context, residents think that the distance between their residence and the nearest police station is a suitable distance. Feeling of safety is consistent with the characteristics of our Palestinian society, whose areas are characterized by safety and security. On one hand, Gaza Strip is limited in area and has populated areas and there are vast areas that maybe enable criminals or thieves to assault others. On the other hand, the lack of safety is often linked to an Israeli aggression, military incursions and air attacks.

3. Environment

Table (6.12) shows the following results:

• The mean of item #1 "My neighborhood has a clean environment" equals 2.99 (59.75%), which is the highest mean, Test-value = -0.16, and P-value = 0.438 which is greater than the level of significance $\alpha = 0.05$. Then the mean of this item is insignificantly different from the hypothesized value 3. We conclude that the respondents (Do not know, neutral) to this item.

• The mean of item #2 "The area of water bodies "natural or artificial " is appropriate" equals 2.45 (49.08%), which is the lowest mean, Test-value = -7.05, and P-value = 0.000 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is negative, so the mean of this item is significantly smaller than the hypothesized value 3. We conclude that the respondents disagreed to this item.

• The mean of the field "Environment" equals 2.71 (54.28%), Test-value = -5.26, and P-value= 0.000 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is negative, so the mean of this field is significantly smaller than the hypothesized value 3. We conclude that the respondents disagreed to field of "Environment".

Table (6.12): Means and Test values for "Environment"

	Item	Mean	S.D	Proportional mean (%)	Test value	P-value (Sig.)	Rank
1.	My neighborhood has a clean environment	2.99	1.24	59.75	-0.16	0.43 8	1
2.	The area of water bodies "natural or artificial " is appropriate	2.45	1.20	49.08	-7.05*	0.00 0	4
3.	My neighborhood contains different living organisms like animal's pets	2.76	1.18	55.21	-3.16*	0.00 1	2
4.	The area of trees or vegetation cover is an appropriate	2.66	1.26	53.14	-4.25*	$\begin{array}{c} 0.00\\ 0\end{array}$	3
	All items of the field	2.71	0.85	54.28	-5.26*	0.00 0	

* The mean is significantly different from 3

Interpretation

From the analysis of the environment conditions, it was clear that the respondents were neutral towards if they have clean environment or not, at the same time, they explained that there is lack of any internal water bodies, natural or artificial, where residents like other Gazans depend mainly on the sea beach for recreation and other purposes, while they begin to find other alternatives to the polluted sea in the recent days by driving to far areas from the inhabited neighborhoods where they enjoy their times in resorts and chalets with swimming pools. On the one hand, the residents stated that the area of green cover and trees is insufficient which necessarily leads to the lack of biodiversity in the neighborhood.

Regarding to biodiversity within the neighborhood, residents see that their surrounding environment does not include different types of pets, and this is closely related to lack of green spaces that are the biological area of these organisms, where the largest proportion of the area is built by the buildings and commercial facilities.

Therefore, and after the previous analysis, it is necessary to draw short and long-term policies that ensure conservation and development of trees and green cover as well as create and encourage opportunities for biodiversity which has a great importance to the quality of environment.

4. Health

Table (6.13) shows the following results:

• The mean of item #9 "Number of pharmacies in my neighborhood is sufficient" equals 4.13 (82.56%), which is the highest mean, Test-value = 18.49, and P-value = 0.000 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is positive, so the mean of this item is significantly greater than the hypothesized value 3. We conclude that the respondents agreed to this item.

• The mean of item #4 "Provided water is safe to drink" equals 1.98 (39.66%), which is the lowest mean, Test-value = -14.12, and P-value = 0.000 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is negative, so the mean of this item is significantly smaller than the hypothesized value 3. We conclude that the respondents disagreed to this item.

• The mean of the field "Health" equals 2.87 (57.39%), Test-value = -3.19, and P-value=0.001 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is negative, so the mean of this field is significantly smaller than the hypothesized value 3. We conclude that the respondents disagreed to field of "Health"

	Item	Mean	G. S	Proportional mean (%)	Test value	P-value (Sig.)	Rank
1.	The air in my neighborhood is a clean and fresh	3.01	1.17	60.25	0.16	0.435	5
2.	I feel that there are a harmful gases and vapors in the air	3.13	1.18	62.56	1.69*	0.047	4
3.	My neighborhood is regularly provided with water in the summer	2.54	1.20	50.87	-5.89*	0.000	7
4.	Provided water is safe to drink	1.98	1.11	39.66	-14.12*	0.000	10
5.	Number of health and family care centers in my neighborhood is sufficient	2.63	1.18	52.50	-4.93*	0.000	6
6.	Distance to the nearest health center or hospital is convenient to be arrived in suitable time	3.45	1.08	69.08	6.53*	0.000	2

Table (6.13): Means and Test values for "Health"

	Item	Mean	S.D	Proportional mean (%)	Test value	P-value (Sig.)	Rank
7.	Care centers for the elderly and the disabled people are available in my neighborhood	2.02	1.06	40.41	-14.36*	0.000	9
8.	Services provided at the nearest hospital are fine	2.54	1.15	50.87	-6.18*	0.000	7
9.	Number of pharmacies in my neighborhood is sufficient	4.13	0.95	82.56	18.49*	0.000	1
10.	Number of sports centers in my neighborhood is sufficient	3.24	1.30	64.71	2.82*	0.003	3
	All items of the field	2.87	0.64	57.39	-3.19*	0.001	

* The mean is significantly different from 3

Interpretation

Based on the results of analysis and in general, the residents are not satisfied with the levels of public health in their neighborhood. Despite the distances to hospitals or pharmacies are appropriate according to their views, many essential public health indicators are deteriorated or unavailable and need to be developed, for example, residents complain of a lack of regular supply of water in summer, a season in which the need of adequate water increased sharply. In the same context, water that supplied to homes is unclean and unsafe for human use such as drinking, so people used to buy water from desalination plants from water vehicles, and some use filters to get safe water for drinking and other house uses.

On one hand, the residents suffer from air pollution with vapors and exhausts, perhaps the most important reason for this, the vehicles' penetration through the most areas of the neighborhood, resulting in the widespread of fuel exhaust between houses. Huge generators that provide shops and malls with electricity -as an alternative to the absence of public electricity network- pollute the atmosphere with toxic vapors and gases when they are turned on for long periods, as well as causing noise.

Residents also state that family & elderly care centers, disabled persons as well as public health are not available in the neighborhood, and if available in some parts,

they are insufficient. Residents suffer significantly of poor service in near hospitals, so attention and efforts should be paid to enhance the quantity and quality of health services at a decent level in hospitals and public care centers.

On the other hand, policy makers must find solutions that limit and reduce the suffering of people to access clean and safe water by launching new and continued desalination projects and providing houses with enough water quantities that in line with the increasing of population growth rates every year.

Regarding to the crisis of the large generators that pollute the atmosphere, decision-makers must work to resolve this crisis drastically or at least reduce it by finding clean, environmentally, friendly and applicable alternatives.

Policymakers should mobilize the necessary efforts to fund the establishment of health centers, family & elderly care as well as disabled persons centers.

5. Facilities and Amenities

Table (6.14) shows the following results:

- The mean of item #3 "My neighborhood is close to universities, colleges and educational institutions" equals 4.00 (80.00%), which is the highest mean, Test-value = 15.86, and P-value = 0.000 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is positive, so the mean of this item is significantly greater than the hypothesized value 3. We conclude that the respondents agreed to this item.
- The mean of item #8 "My neighborhood includes sports spaces such as football playground and swimming pools" equals 2.62 (52.31%), which is the lowest mean, Test-value = -5.11, and P-value = 0.000 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is negative, so the mean of this item is significantly smaller than the hypothesized value 3. We conclude that the respondents disagreed to this item.
- The mean of the field "Facilities and Amenities" equals 3.34 (66.90%), Test-value = 7.28, and P-value=0.000 which is smaller than the level of significance α = 0.05. The sign of the test is positive, so the mean of this field is significantly greater than the hypothesized value 3. We conclude that the respondents agreed to field of "Facilities and Amenities ".

	Item	Mean	S.D	Proportional mean	Test value	P-value (Sig.)	Rank
1.	My neighborhood is close to primary schools "elementary and preparatory"	3.83	1.09	76.61	11.82*	0.000	2
2.	My neighborhood is close to secondary schools	3.65	1.09	72.95	9.19*	0.000	4
3.	My neighborhood is close to universities, colleges and educational institutions	4.00	0.98	80.00	15.86*	0.000	1
4.	My neighborhood is close to public markets, malls and restaurants	3.70	0.99	73.94	10.94*	0.000	3
5.	My neighborhood includes cultural centers such as public libraries	2.85	1.21	57.02	-1.92*	0.028	9
6.	My neighborhood is close to Entertainment and recreation centers such as chalets and resorts	2.98	1.28	59.50	-0.30	0.382	8
7.	My neighborhood includes government buildings that serve the citizens	3.04	1.16	60.75	0.50	0.309	7
8.	My neighborhood includes sports spaces such as football playground and swimming pools	2.62	1.17	52.31	-5.11*	0.000	10
9.	My neighborhood has a high-quality communications network	3.48	1.05	69.54	7.06*	0.000	5
10.	My neighborhood has a suitable internet services	3.33	1.13	66.69	4.61*	0.000	6
	All items of the field	3.34	0.74	66.90	7.28*	0.000	

Table (6.14): Means and Test values for "Facilities and Amenities"

* The mean is significantly different from 3

Interpretation

An analysis of the existing situation regarding to the facilities and available amenities within the neighborhood shows that the overall trend of the respondents' satisfaction is positive. The analysis also shows the strong degree of approval about availability of educational facilities, and this is because the neighborhood contains big educational facilities such as universities and institutes, most notably Al-Azhar University and the Islamic University of Gaza, the two largest universities in Gaza Strip in terms of area and number of students, beside the primary schools such as Alzaitoun and Alremal, as well as secondary schools as Ahmed Shawqi. In contrast, it was found that public libraries and cultural and sports centers, which include playgrounds and swimming pools are very few. On the other hand, the opinions of the respondents showed that there is a good level in the service of telecommunications and internet. While the residents are neutral about the nearness of leisure and recreation resorts as well as neutral towards the existence of government facilities that serving the residents.

6. Open spaces and green areas

Table (6.15) shows the following results:

- The mean of item #2 "Open spaces and green areas are attractive from my point of view" equals 3.32 (66.36%), which is the highest mean, Test-value = 3.61, and P-value = 0.000 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is positive, so the mean of this item is significantly greater than the hypothesized value 3. We conclude that the respondents agreed to this item.
- The mean of item #5 "Corridors in open areas are separate to serve pedestrians, bicycles and others" equals 2.52 (50.37%), which is the lowest mean, Test-value = -6.17, and P-value = 0.000 which is smaller than the level of significance α = 0.05. The sign of the test is negative, so the mean of this item is significantly smaller than the hypothesized value 3. We conclude that the respondents disagreed to this item.
- The mean of the field "Open spaces and green areas" equals 2.95 (59.08%), Test-value = -0.78, and P-value= 0.217 which is greater than the level of significance α = 0.05. The mean of this field is insignificantly different from the hypothesized value 3. We conclude that the respondents (Do not know, neutral) to field of "Open spaces and green areas ".

	Item	Mean	S.D	Proportional mean (%)	Test value	P-value (Sig.)	Rank
1.	My neighborhood is close to open green spaces	2.95	1.26	58.93	-0.67	0.253	4
2.	Open spaces and green areas in my neighborhood are attractive from my point of view	3.32	1.37	66.36	3.61*	0.000	1
3.	Green areas and parks include seating areas and children's games	2.85	1.17	57.01	-1.99*	0.024	5
4.	Corridors to open and green areas are safe and accessible	2.95	1.22	59.01	-0.63	0.265	3
5.	Corridors in open areas are separate to serve pedestrians, bicycles and others	2.52	1.21	50.37	-6.17*	0.000	6
6.	Public parking spaces are available and adequate	3.13	1.22	62.67	1.70*	0.045	2
	All items of the field	2.95	0.91	59.08	-0.78	0.217	

Table (6.15): Means and Test values for "Open spaces and green areas"

* The mean is significantly different from 3

Interpretation

While the analysis shows that the residents consider the open spaces and green areas attractive but also shows their dissatisfaction from the lack of places to sit or areas for children to play. They also feel confusion and unsafety because of the overlapping of pedestrian, bicycles and others, that maybe leads to accidents.

In another context, the residents were neutral in terms of distance to available open areas and do not know whether the roads leading to them safe and easy access or not. In general, the responses have been neutral in this regard.

7. Infrastructure and built environment

Table (6.16) shows the following results:

• The mean of item #2 "My neighborhood is close to main road lines" equals 3.67 (73.47%), which is the highest mean, Test-value = 10.26, and P-value = 0.000 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is

positive, so the mean of this item is significantly greater than the hypothesized value 3. We conclude that the respondents agreed to this item.

- The mean of item #6 "I do not suffer from a continuous power cuts" equals 1.96 (39.17%), which is the lowest mean, Test-value = -10.95, and P-value = 0.000 which is smaller than the level of significance α = 0.05. The sign of the test is negative, so the mean of this item is significantly smaller than the hypothesized value 3. We conclude that the respondents disagreed to this item.
- The mean of the field "Infrastructure and built environment" equals 2.93 (58.52%), Test-value = -1.95, and P-value=0.026 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is negative, so the mean of this field is significantly smaller than the hypothesized value 3. We conclude that the respondents disagreed to field of "Infrastructure and built environment".

	Item	Mean	S.D	Proportional mean (%)	Test value	P-value (Sig.)	Rank
1.	My neighborhood includes street network with adequate quality	2.90	1.20	58.10	-1.24	0.109	5
2.	My neighborhood is close to main road lines	3.67	1.02	73.47	10.26*	0.000	1
3.	My neighborhood includes Wastewater network	3.40	1.07	68.08	5.85*	0.000	2
4.	Rainwater collects in the streets during winter	2.93	1.21	58.67	-0.85	0.197	4
5.	My neighborhood has a good electricity network with sufficient capacity	2.40	1.25	47.92	-7.47*	0.000	6
6.	I do not suffer from a continuous power cuts	1.96	1.48	39.17	-10.95*	0.000	7
7.	All different types of buildings have an attractive appearance	3.21	1.17	64.15	2.75*	0.003	3
	All items of the field	2.93	0.59	58.52	-1.95*	0.026	

Table (6.16): Means and Test values for "Infrastructure and built environmer	d built environment"
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* The mean is significantly different from 3

Interpretation

The quality of infrastructure and the built environment is very important for a quality life of residents. The analysis shows that residents agree that the main traffic lines are close to their neighborhood, that is surrounded from all directions.

But they are neutral about the availability of streets network with sufficient quality, which gives an indication of the need to develop the internal streets by paving many streets and re-paving of the old one, which has deteriorated over time. Regarding to the sewage networks, response show that they are available.

In the winter, although many areas suffer from collecting of rainwater as ponds in the streets, residents were neutral on this matter.

By evaluation of energy conditions, residents suffer like other Gazans from the deterioration of electricity networks and the low operational capacity, this leads to increases the rate of power cuts compared to the hours of connection and cause a lot of suffering of the residents every day.

On the other hand, the residents see that the different buildings are attractive and this may be due to the general orientation of the residents, especially in the high-income areas where they care about the external view of their buildings and use attractive materials, as well as the neighborhood includes many of entertainment and shopping centers that built in a modern and attractive methods that achieve aesthetic aspects. In conclusion, the overall orientation of residents about this area is negative and

needs to be developed.

8. Transportation and street networks

Table (6.17) shows the following results:

- The mean of item #2 "Classification of streets in my neighborhood is clear "main and local streets" equals 3.67 (73.39%), which is the highest mean, Test-value = 10.58, and P-value = 0.000 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is positive, so the mean of this item is significantly greater than the hypothesized value 3. We conclude that the respondents agreed to this item.
- The mean of item #7 "Streets include seats and benches" equals 1.88 (37.58%), which is the lowest mean, Test-value = -17.42, and P-value = 0.000 which is

smaller than the level of significance $\alpha = 0.05$. The sign of the test is negative, so the mean of this item is significantly smaller than the hypothesized value 3. We conclude that the respondents disagreed to this item.

• The mean of the field "Transportation and street networks" equals 2.88 (57.57%), Test-value = -3.23, and P-value=0.001which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is negative, so the mean of this field is significantly smaller than the hypothesized value 3. We conclude that the respondents disagreed to field of "Transportation and street networks ".

	Item	Mean	S.D	Proportional mean (%)	Test value	P-value (Sig.)	Rank
1.	Moving from a neighborhood to another is easy and not exhausting	3.46	1.17	69.17	6.10*	0.000	3
2.	Classification of streets in my neighborhood is clear "main and local streets"	3.67	0.98	73.39	10.58*	0.000	1
3.	Streets include traffic lights and traffic signs	2.94	1.13	58.84	-0.80	0.213	7
4.	Streets include adequate pedestrian sidewalks	3.13	1.19	62.61	1.69*	0.046	6
5.	Streets include separate bicycle paths	1.98	1.11	39.59	-14.30*	0.000	12
6.	Streets include green elements such as small shrubs	3.14	1.20	62.74	1.77*	0.039	5
7.	Streets include seats and benches	1.88	1.00	37.58	-17.42*	0.000	13
8.	Streets include garbage baskets	2.27	1.10	45.33	-10.33*	0.000	11
9.	Streets network in my neighborhood is connected network	3.37	1.09	67.31	5.20*	0.000	4
10.	My neighborhood includes different types of transportation "private and public"	3.47	1.06	69.50	6.92*	0.000	2
11.	My neighborhood includes bus and microbuses stops	2.47	1.28	49.46	-6.39*	0.000	10

Table (6.17): Means and Test values for "Transportation and street networks"

	Item	Mean	S.D	Proportional mean (%)	Test value	P-value (Sig.)	Rank
12.	I do not feel disturbed by street noise in my neighborhood	2.74	1.25	54.88	-3.19*	0.001	9
13.	I notice traffic congestion in my neighborhoods' streets	2.88	1.27	57.60	-1.47	0.071	8
	All items of the field	2.88	0.59	57.57	-3.23*	0.001	

* The mean is significantly different from 3

Interpretation

The streets and transport network are the main linkage through any process of neighborhood planning and the artery that transmits life between its parts, so it is evaluate this indicator from residents' view.

After the analysis, the overview of transportation and the street network was negative. Despite the clear classification of streets between main and local, but the negative orientation may be formed because the lack of seats as well as baskets and garbage collectors, which are necessary to avoid the accumulation of garbage on street' sides, causing very bad visual views.

The lack of bus and microbus stations is also negative issue from the residents' point of view, which is causing high noise produced by large buses which are supposed to be determined by specific locations.

9. Community cohesion and civic participation

Table (6.18) shows the following results:

- The mean of item #5 "I think it's good to have people from different cultural backgrounds in my neighborhood" equals 3.76 (75.10%), which is the highest mean, Test-value =11.17, and P-value = 0.000 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is positive, so the mean of this item is significantly greater than the hypothesized value 3. We conclude that the respondents agreed to this item.
- The mean of item #7 "I had problems with one of my neighbors" equals 2.46 (49.12%), which is the lowest mean, Test-value = -7.15, and P-value = 0.000 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is

negative, so the mean of this item is significantly smaller than the hypothesized value 3. We conclude that the respondents disagreed to this item.

The mean of the field "Community cohesion and civic participation" equals 3.22 (64.40%), Test-value = 4.97, and P-value= 0.000 which is smaller than the level of significance α = 0.05. The sign of the test is positive, so the mean of this field is significantly greater than the hypothesized value 3. We conclude that the respondents agreed to field of "Community cohesion and civic participation ".

Table (6.18): Means and Test values for "Community cohesion and civic participation"

	Item	Mean	S.D	Proportional mean %	Test value	P-value (Sig.)	Rank
1.	I feel belonging to my neighborhoods	3.73	1.16	74.55	9.73*	0.000	2
2.	I was helped by the neighbor of my area when I needed help	3.42	1.04	68.35	6.22*	0.000	4
3.	I consider my neighbors and residents as friends and I feel that they love me	3.59	1.00	71.87	9.21*	0.000	3
4.	I have previously participated or volunteered in community activities in my neighborhood	2.83	1.16	56.57	-2.29*	0.011	7
5.	I think it's good to have people from different cultural backgrounds in my neighborhood	3.76	1.05	75.10	11.17*	0.000	1
6.	I find it easy to meet and communicate my neighbors and residents	3.33	1.06	66.61	4.83*	0.000	5
7.	I had problems with one of my neighbors	2.46	1.18	49.12	-7.15*	0.000	9
8.	I see that harmony and cohesion are prevalent among neighbors	3.28	1.09	65.58	3.95*	0.000	6
9.	I am involved in decision- making of my neighborhood development	2.58	1.18	51.57	-5.58*	0.000	8
	All items of the field	3.22	0.69	64.40	4.97*	0.000	

* The mean is significantly different from 3

Interpretation

Community cohesion is one of the most important factors for the development and prosperity of societies because it simply creates an area of shared efforts and exchange of ideas for the development of all.

The aim of civic participation is to achieve the same result, where community participation achieves a sense of the individuals' importance as well as their opinion within the community, which leads them to give more useful opinions and leads to real involvement in making the right decisions.

In the study area, the analysis shows that there is agreement of achieving this indicator, where residents state that they belong to their neighborhood where they find help when needed, and feel that their neighbors are friends and they can communicate easily.

As a result, the residents welcome people from different cultural backgrounds within their homogenous and cohesive neighborhood.

On the other hand, the residents have not been practically involved in volunteering or contributing in community activities, nor have they had the opportunity to participate in decision-making related to the development of their neighborhood.

Therefore, it is necessary to give the residents the chance to participate in community and decision-making to ensure the continuous feeling of belonging to neighborhood, and this is one of the most important duties and responsibilities of government agencies and decision-makers in the state.

10. Economy

Table (6.19) shows the following results:

• The mean of item #6 "I spend a specific time for fun and hobbies weekly outside my house" equals 2.88 (57.52%), which is the highest mean, Test-value = -1.67, and P-value = 0.048 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is negative, so the mean of this item is significantly smaller than the hypothesized value 3. We conclude that the respondents disagreed to this item.

• The mean of item #9 "Resident can buy land to build a house" equals 1.99 (39.75%), which is the lowest mean, Test-value = -16.60, and P-value = 0.000 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is negative, so

the mean of this item is significantly smaller than the hypothesized value 3. We conclude that the respondents disagreed to this item.

• The mean of the field "Economy" equals 2.57 (51.50%), Test-value = -9.49, and P-value= 0.000 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is negative, so the mean of this field is significantly smaller than the hypothesized value 3. We conclude that the respondents disagreed to field of "Economy".

	Item	Mean	S.D	Proportional mean (%)	Test value	P-value (Sig.)	Rank
1.	I feel satisfied about my economic situation	2.68	1.30	53.64	-3.80*	0.000	3
2.	I am satisfied with my monthly income	2.71	1.24	54.20	-3.61*	0.000	2
3.	I am satisfied with my monthly expenses	2.59	1.18	51.78	-5.40*	0.000	7
4.	Location of my neighborhood affects the increase of unemployment rates	2.61	1.01	52.22	-5.98*	0.000	6
5.	Location of my neighborhood offers sufficient diversity of employment opportunities	2.61	1.05	52.29	-5.65*	0.000	5
6.	I spend a specific time for fun and hobbies weekly outside my house	2.88	1.15	57.52	-1.67*	0.048	1
7.	Resident in my neighborhood can pay for apartments rent	2.65	1.04	52.98	-5.25*	0.000	4
8.	Resident in my neighborhood can buy an apartment	2.45	1.07	49.09	-7.93*	0.000	8
9.	Resident can buy land to build a house	1.99	0.95	39.75	-16.60*	0.000	9
	All items of the field	2.57	0.70	51.50	-9.49*	0.000	

Table (6.19): Means	and Test valu	es for "Economy"
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* The mean is significantly different from 3

Interpretation

Gaza Strip suffers from deteriorating economic conditions at individuals and companies' levels, for several reasons, the most important is the continuous siege on Gaza Strip since more 10 years ago, which led to accumulated problems, the most negative impact on the lives of people, is the low monthly income of the individual, where many of them lost their jobs and businesses, also unemployment rates among young people and graduates have increased, in light of steady growth of population and the steady increase in graduates number. According to records of local and international organizations, 39% of people live below the poverty line, and the responses' analysis confirms this deteriorating reality.

The general opinion of respondents is negative about the economic field. They are not satisfied with the monthly income or their expenses, so the residents can not spend the weekend outside their homes for recreation due to the deteriorating economic situation.

In another context, residents find it is difficult to pay rents because they are high compared to their economic situations, and most of them can not buy apartments there, as well as buying land and build a house.

6.4 Rank for all Indicators

In conclusion, the overall assessment of the indicators of livability in the study area by the residents was summarized by responses to the items of the questionnaire as shown in the table below, where the sense of safety was highest, due to the stability of internal security conditions in the Gaza Strip except Periods of wars waged by Israel from time to time.

The availability of the various facilities comes in second place, where the population has shown their consent. This is in line with the fact that the neighborhood contains government and academic facilities and schools for all stages. The neighborhood also includes important commercial hubs that are the destination of many residents of the Gaza Strip.

On the other hand, the economic situation is at the top of the indicators of deterioration in the opinion of the neighboring population, a reality in which the majority of the population of the Gaza Strip, where poverty and unemployment

among hundreds of Palestinian families, and a large proportion of the population of the Gaza Strip depends heavily on foreign aid, International or local organizations.

The surrounding environment is in a state of deterioration, as is seen by the neighboring population, where there is insufficient green space for hiking, clean air, and lack of water for recreation. The built blocks cover the larger area of the neighborhood. On different types of pets and does not guarantee future biodiversity opportunities.

In the same context, respondents believe that the health sector suffers from many crises and needs urgent development. They are not satisfied with the levels of public health in the neighborhood. For example, the water that reaches the houses is unclean and not completely safe for human use such as drinking and causing many diseases. On the other hand, the population suffers from the pollution of the atmosphere with the vapors of the vehicles and their exhausts. This may be due to the fact that the neighborhood has government and study facilities and is therefore the destination of many segments and large numbers of people who travel daily to and from their destinations which fall within the vicinity

As such, policymakers must work to resolve these crises in a radical manner or at least reduce them by formulating policies that enhance the quality of life in all neighborhoods and cities in the Gaza Strip that undoubtedly support the steadfastness of its besieged people for years

	Field	Proportional mean (%)	Rank
1.	Housing quality	61.31	4
2.	Safety	74.06	1
3.	Environment	54.28	9
4.	Health	57.39	8
5.	Facilities and Amenities	66.90	2
6.	Open spaces and green areas	59.08	5
7.	Infrastructure and built environment	58.52	6
8.	Transportation and street networks	57.57	7
9.	Community cohesion and civic participation	64.40	3
10.	Economy	51.50	10

Table (6.20): Proportional mean and rank for "All field"



Figure (6.1): Proportional mean and rank for "All field"

(Source: the researcher)

CHAPTER 7 MAIN FINDINGS AND RECOMMENDATIONS

CHAPTER 7

MAIN FINDINGS AND RECOMMENDATIONS

This chapter is devoted to the main findings of the study as well as reviewing recommendations derived from them, which were drawn from reviewing the literature review that includes many scientific studies and international cases that applies the concept of livability, in addition to the analysis of the questionnaire that targeted the study area. Therefore, the sixth chapter discusses two things; main findings and recommendations.

7.1 Main Findings

7.1.1 The Theoretical study of this research reached the following results

- 1. The Gaza Strip is a narrow territory having limited resources and suffers from many complex problems bearing in mind the population density increasing, the continued depletion of environmental resources, and the absence of legislations aimed at preserving them through the application of livability concepts and sustainability methodologies. Therefore, there is an urgent need to develop programs and strategies that rebalance and ensure the continuity of environment renewal around us and its ability to always adapt to developments.
- The concepts of livability, having guaranteed the achievement of its indicators, are considered one of the most important methodologies and international methods that can be followed to maintain quality of life in communities and Gaza Strip.
- 3. Many communities and cities around the world followed livability methodologies and were able to achieve prosperity and development. After studying in depth many of these experiences, the study focused on a set of indicators that were measured within the study area and was able to assess the overall quality of life: Quality of housing, feeling safety, environment, health, facilities and amenities, transportation and streets network, community engagement, community participation and economic conditions.

- Livable communities are created through effective planning and policy-making by formal and governmental bodies, developers and with the participation of society members.
- 5. Gaza Strip faces great difficulties to have livable communities during the current period or for future generations, where many areas lack green areas as well as clean water and healthy food. In addition, the rapid and continuous consumption of natural resources caused many environmental problems.
- 6. Working together under one unified framework enables us to create livable communities in which people can live in peace, dignity and development where citizens have the opportunity to live near their workplaces, reducing transportation costs, reducing pollution and overcrowding. Also, a good use of available lands contributes to support walking and cycling. The same thing is for transportation; when it is easily accessed, more money would be saved by individuals, groups and the community as a whole. It also helps in reducing energy consumption, which contributes to reducing the greenhouse gas emissions and reduces their negative impact on our lifestyle and our environmental and economic aspects.
- 7. Living conditions in Gaza Strip areas are very similar; they are characterized by generality. Therefore, results of the study do not only represent the quality of life or livability assessment within the study area, but also provide a general view of quality of life in many neighborhoods and areas of Gaza Strip.

7.1.2 The practical study findings

The study, in the practical aspect, also aims to evaluate indicators of livability in the southern Remal neighborhood in Gaza City as a case study, coming up with the following results:

- Feeling of safety indicator positively got the highest percentage in its assessment. The population feels the existence of this indicator, as its proportional mean is 74.06%, where rates of violence or crime are almost non-existent according to their views, and the presence of a police station nearby contributes to the existence this indicator.
- 2. The availability of various facilities comes second with a proportional mean of 66.9%. This is actually clear as the neighborhood has multi-services facilities. It includes a large number of universities, educational institutes and schools. On the

other hand, the neighborhood lacks public libraries and cultural and sports centers, that usually include playgrounds and swimming pools. In terms of communication and the Internet, respondents' opinions showed that there is a good level of service.

- 3. On the other hand, in terms of livability indicators, which is deteriorating according to the opinion of respondents, the economic situation is at the top of these indicators as it reached a proportional mean of 51.5%; the reality in which most of the population of Gaza Strip share. The main reasons for this deterioration are low monthly income rate and the increase in unemployment rates. High rents have also caused discontent among the population, most of whom are unable to pay these sums. The purchase of apartments or the construction of new apartments is also very expensive.
- 4. The surrounding environment is considered to be in a deteriorated, as the residents see. This indicator comes second in terms of negative evaluation by 54.28% for the proportional mean, where they believe that the neighborhood is completely lacking the existence of any internal water bodies, whether natural or industrial. In addition, the area of green cover and trees are inadequate; the thing that led to the lack of biodiversity in the neighborhood as seen by respondents.
- 5. In the same context, respondents believe that health sector suffers from many crises and needs urgent development. They are not satisfied with public health levels in the neighborhood. For example, residents complain that they are not regularly provided with water in summer. Also, water that reaches homes is unclean for human use such as drinking. It has caused many diseases. On the other hand, the population suffers from air pollution from vehicles exhausts. The most important reason for that is that vehicles have penetrated most of the neighboring streets, resulting in a wide spread of vehicle fuel exhausts between homes in addition to the operation of large generators that increase the rate of toxic gases in the atmosphere. Residents also see that family and elderly care centers as well as persons with disabilities centers, and public health in general, are not available in the neighborhood, according to their opinions, they significantly suffer from the poor service provided in nearby hospitals.

* The importance of community participation in evaluating quality of life within neighborhoods and populated areas, which enhance citizens' awareness of the importance of their community role and encourage them to integrate in the development of their neighborhood by opinion, work and assisting researchers and decision-makers.

* According to the previous results of the assessment of livability indicators, it is important for decision-makers to mobilize efforts to solve existing crises, or at least to reduce them through formulating policies that enhance quality of life in all neighborhoods and cities in Gaza Strip and undoubtedly support the steadfastness of its besieged people for years.

7.2 Recommendations

First: From the academic and research aspect:

- 1- Adopting livability methodologies and strategies and comprising them in the academic courses and curriculum for universities' students and specialized institutes in fields of architecture, urban and spatial planning, community development and others.
- 2- The necessity to benefit from international experiences that have applied and benefited from livability methodologies and get their experiences in this area.
- 3- Holding scientific workshops aimed at introducing and raising awareness of livability concepts and trends and knowing feasibility of adopting its strategies, indicators, and the implications.

Second: From practical and governmental aspect: Urban Planning Dimension

1-Government bodies and local and private institutions concerned with urban planning and development should adopt livability concepts and its indicators to

unify efforts to adopt these concepts and strategies as a very important way to develop society through formation of a competent and joint body that brings together all parties and enjoys supreme binding authority.
- 2-Obliging urban planning entities to verify the quality of indicators of livability in any future construction projects in the Gaza Strip, taking these indicators into consideration while designing various neighborhoods.
- 3-Using scientific tools and technological techniques to monitor quality of life and indicators of livability in different areas of Gaza Strip, and one of these techniques: Geographic Information System (GIS).

Environmental Dimension

- 1- Protecting and strengthening various environmental systems, including preserving the marine environment from pollution with untreated sewage.
- 2- Preserving the atmosphere from pollution factors with fumes, toxic gases, car exhausts and generators.
- 3-Preserving and developing tree cover and taking care of it in open spaces as well as populated areas.

Water and Wastewater Networks Dimension

- 1- Enhancing alternative water sources, taking into account conservation of the aquifer.
- 2- Setting strict legislations to extract ground water according to specific levels to ensure its sustainability and ability to provide future needs of Gaza Strip.
- 3- Renewing available wastewater treatment systems and establishing new networks to ensure high-quality treatment that contributes to the use of the resulting water for a variety of purposes such as crops irrigation; the thing that will provide substantial savings in aquifer and ensure continuity of water supply.

Quality of Housing Dimension:

- 1- Adopting building systems and standards to become more flexible, including wider options in fields of housing, construction and finishing materials.
- 2- Supporting and promoting establishment of a residential model that takes great care of environmental and health aspects in terms of benefiting from the sun, wind, green elements and others, and promoting it at the academic and commercial level, to be adopted or using its advantages in all future designs.

Health Dimension

Improving health services provided in Gaza Strip through:

- Rehabilitation and reconstruction of health centers and hospitals that were destroyed during the last war, and working on funding for new health units' construction.

- Launching training programs for health staff to provide guidance on the dealing with patients and their families, working under pressure skills and others.

- Activating and developing monitoring and evaluation systems in all departments and facilities of the Ministry of Health.

Open and Green Areas Dimension

- 1- Working on connecting the population with open and green areas through municipalities' assigning for a central area that serves as a central park for each neighborhood or several small neighborhoods.
- 2- Protecting and beautifying public parks and creating new green areas, particularly in neighborhoods that suffer from a great lack of green and open areas.
- 3- Enacting laws that criminalize attacks on green and open areas, whether by buildings and slums or destroying tree cover or dumping garbage and others.

Infrastructure, Transportation and Built Environment Dimensions

- 1-The necessity of developing internal streets sector through paving dirt roads and re-paving the paved ones that have deteriorated over time.
- 2-Developing infrastructure systems, especially the transport sector.
- 3-Paying attention to planning aspects that grant all vital facilities a share in cities and residential neighborhoods' urban composition, so that they could form an integrated system to achieve comfort, functionality and beauty for all inhabitants.
- 4-Encouraging investors who are interested in green and sustainable construction in terms of eco-friendly materials and building standards.

Energy Sources Dimension

- 1- Resorting to alternative energy using solar cell projects that became the current culture among citizens to compensate the deficit resulted from power cuts.
- 2- Promoting scientific and practical research aimed at finding applicable and costeffective solutions for citizens.

Community Coherence and Civic Participation Dimension

- 1- Enhancing the principle of community participation of the population and their integration into decision-making to ensure their continued sense of belonging to the homeland and the mutual importance between the individual and his society.
- 2- Encouraging community coherence among all society strata through organizing evenings and culture meeting to exchange life, scientific and practical experiences in various fields.

Education and Culture Dimension

- 1- Strengthening educational facilities and rebuilding what was destroyed during occupation wars that targeted education in Gaza Strip with the aim of making people in Gaza ignorant violating their rights.
- 2- Establishing cultural centers and educational clubs that are interested in thought development and improvement of cultural aspects, especially among youth and young adults.
- 3- Using new technological techniques to support and enhance levels of public culture, including the widespread social media platforms.

Economy and Employment Opportunities Dimension

- 1. Working for the lifting of the blockade and allowing free movement of goods and individuals.
- 2. Exploiting the atmosphere of national reconciliation to lift the punitive measures taken against Gaza Strip as salaries' reduction and others that caused a major economic crisis for people in Gaza Strip, and spare economy from political tensions.

- 3. Mobilizing political, moral and financial support to launch strategic projects to support the national economy in Gaza Strip and working on facilitating all procedures for the implementation of these projects.
- 4. Strengthening the relationship between the three sectors, the private sector, the public sector and universities, in order to work in an integrated manner to promote growth and improve the Palestinian economy.
- 5. Giving opportunities for the development of small and medium enterprises.

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APPENDICES

APPENDIX A

Questionnaire

Section I: Personal information

1.	Gender	□Male	Female
2.	Age	 20 – less than 30 30 - less than 40 40 - less than 50 	50 - 60 > 60
3.	The highest educational qualification	Basic education or belowSecondary education	BachelorGraduate Studies
4.	Marital status	singleMarried	widowDivorced
5.	The house you live in	YoursRent	☐Other
6.	Occupation	🗖 I have a job	I have no job
7.	Monthly income (In dollars \$)	 < 200 200 - less than 400 400 - less than 800 	□ 800 - 1000 □ > 1000
8.	Number of family members	 No one 1 - 2 	 3 - 5 6 and more
9.	Years of residence in your current area	 < 1 1 - less than 5 5 - less than 10 	$\Box 10 - 20$ $\Box > 20$

Section 2: Measuring livability indicators

1- Housing quality

#	Questions	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
10.	My house area is suitable for me					
11.	My house is not crowded with people who live there					
12.	I would like to keep living there					
13.	My house has many flaws					
14.	There are enough distances between around my houses that maintain privacy and ventilation					
15.	There is enough parking space next to my house					
16.	There are enough spaces for children to play near or attached to my house					
17.	House maintenance is available if any part of it is required this					
18.	Apartments for sale or rent are available in my neighborhood					
19.	lands are available to build new apartments					
20.	My house is suitable for me when I get older					
21.	Houses rentals in my neighborhood are suitable for all population groups					
22.	Water supply provided to my house is adequate					
23.	Electricity provided to my house has good level and adequate					
24.	Communication service has an appropriate level					

2- Safety

#	Questions	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
25.	I feel safe walking in my area at night					
26.	My neighborhood did not witness any crime or violence					
27.	No one of my neighbors is implicated in the execution of crimes previously					
28.	I trust the neighbors in my neighborhood					
29.	No one of my neighborhood -including children- was assaulted and abducted					
30.	Distance to the nearest police station within my neighborhood is suitable					

3- Environment

#	Questions	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
31.	My neighborhood has a					
	clean environment					
32.	The area of water bodies					
	"natural or artificial " is					
	appropriate					
33.	My neighborhood					
	contains different living					
	organisms like animals'					
	pets					
34.	The area of trees or					
	vegetation cover is an					
	appropriate					

4- Health

#	Questions	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
35.	The air in my neighborhood is a clean and fresh					
36.	I feel that there are a harmful gases and vapors in the air					
37.	My neighborhood is regularly provided with water in the summer					
38.	Provided water is safe to drink					
39.	Number of health and family care centers in my neighborhood is sufficient					
40.	Distance to the nearest health center or hospital is convenient to be arrived in suitable time					
41.	Care centers for the elderly and the disabled people are available in my neighborhood					
42.	Services provided at the nearest hospital are fine					
43.	Number of pharmacies in my neighborhood is sufficient					
44.	Number of sports centers in my neighborhood is sufficient					

5- Facilities and Amenities

#	Questions	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
45.	My neighborhood is close					
	to primary schools					
	"elementary and					
	preparatory"					
46.	My neighborhood is close					
	to secondary schools					
47.	My neighborhood is close					
	to universities, colleges					

	and educational	
	institutions	
48.	My neighborhood is close	
	to public markets, malls	
	and restaurants	
49.	My neighborhood includes	
	cultural centers such as	
	public libraries	
50.	My neighborhood is close	
	to Entertainment and	
	recreation centers such as	
	chalets and resorts	
51.	My neighborhood includes	
	government buildings that	
	serve the citizens	
52.	My neighborhood includes	
	sports spaces such as	
	football playground and	
	swimming pools	
53.	My neighborhood has a	
	high-quality	
	communications network	
54.	My neighborhood has a	
	suitable internet services	

6- Open spaces and green areas

#	Questions	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
55.	My neighborhood is close					
56.	Open spaces and green areas in my neighborhood are attractive from my point of view					
57.	Green areas and parks include seating areas and children's games					
58.	Corridors to open and green areas are safe and accessible					
59.	Corridors in open areas are separate to serve pedestrians, bicycles and others					
60.	Public parking spaces are available and adequate					

7- Infrastructure and built environment

#	Questions	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
61.	My neighborhood includes					
	street network with					
	adequate quality					
62.	My neighborhood is close					
	to main road lines					
63.	My neighborhood includes					
	Wastewater network					
64.	Rainwater collects in the					
	streets during winter					
65.	My neighborhood has a					
	good electricity network					
	with sufficient capacity					
66.	I do not suffer from a					
	continuous power cuts					
67.	All different types of					
	buildings have an attractive					
	appearance					

8- Transportation and street networks

#	Questions	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
68.	Moving from a					
	neighborhood to another is					
	easy and not exhausting					
69.	Classification of streets in					
	my neighborhood is clear					
	"main and local streets"					
70.	Streets include traffic					
	lights and traffic signs					
71.	Streets include adequate					
	pedestrian sidewalks					
72.	Streets include separate					
	bicycle paths					
73.	Streets include green					
	elements such as small					
	shrubs					
74.	Streets include seats and					
	benches					
75.	Streets include garbage					
	baskets					
76.	Streets network in my					
	neighborhood is connected					

	network			
77.	My neighborhood includes different types of transportation "private and public"			
78.	My neighborhood includes bus and microbuses stops			
79.	I do not feel disturbed by street noise in my neighborhood			
80.	I notice traffic congestion in my neighborhoods' streets			

9- Community cohesion and civic participation

#	Questions	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
81.	I feel belonging to my neighborhoods					
82.	I was helped by the neighbor of my area when I needed help					
83.	I consider my neighbors and residents as friends and I feel that they love me					
84.	I have previously participated or volunteered in community activities in my neighborhood					
85.	I think it's good to have people from different cultural backgrounds in my neighborhood					
86.	I find it easy to meet and communicate my neighbors and residents					
87.	I had no problems with anyone of my neighbors					
88.	I see that harmony and cohesion are prevalent among neighbors					
89.	I am involved in decision- making of my neighborhood development					

10- Economy

#	Questions	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
90.	I feel satisfied about my					
	economic situation					
91.	I am satisfied with my monthly income					
92.	I am satisfied with my monthly expenses					
93.	Location of my neighborhood affects the increase of unemployment rates					
94.	Location of my neighborhood offers sufficient diversity of employment opportunities					
95.	I spend a specific time for fun and hobbies weekly outside my house					
96.	Resident in my neighborhood can pay for apartments rent					
97.	Resident in my neighborhood can buy an apartment					
98.	Resident can buy land to build a house					