ASSESSING THE QUALITY OF LIFE OF URBAN RESIDENTS IN GREATER KUALA LUMPUR

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FACULTY OF BUSINESS AND ECONOMICS
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ASSESSING THE QUALITY OF LIFE OF URBAN RESIDENTS IN GREATER KUALA LUMPUR

ABSTRACT

Quality of life in urban areas has become an important factor for sustaining urban living. A wide range of factors contribute to quality of life, and neighbourhood satisfaction is one such factor that has been highlighted by many researchers. Households located in urban areas can benefit from a variety of urban infrastructure and services provided by the public sector to achieve a better standard of living. However, an increase in the number of urban population has resulted in higher rates of unemployment, poor residential and environment quality, climate change, and poor provisions for shelter, and amenities in urban areas. The high rate of migration will also generate a demand for more affordable housing, development of new residential areas, acceptable cost of living, employment and job opportunities, good environment, and physical features. This gap, addressed in the study, proposes pertinent environment and housing attributes relevant to improving urban quality of life. This study aims to explore the level of neighbourhood satisfaction and the quality of life perceived by urban residents, assess the influence of neighbourhood attributes and housing attributes in elucidating neigbourhood satisfaction, and examine the role of neighbourhood satisfaction to facilitate the relationship between neighbourhood attributes and urban quality of life. Primary data, collected through a survey involving 530 respondents, were utilised in this study and SEM–AMOS was used for data analysis. This study covers seven local authorities in the Greater Kuala Lumpur namely Kuala Lumpur City Hall, Petaling Jaya City Council, Shah Alam City Council, Klang Municipal Council, Sepang Municipal Council, Subang Jaya Municipal Council and Selayang Municipal Council. The study revealed three significant findings: (1) quality of life is influenced by the satisfaction towards the neighbourhood which, in turn, is dependent on the gratification obtained from the socio/physical attributes, economics attributes, environment attributes, and housing attributes, (2) neighbourhood attributes and housing attributes considerably affect neighbourhood satisfaction, and (3) neighbourhood satisfaction partially mediates the relationship between neighbourhood attributes and quality of life. These findings are beneficial to the government and authorities for future urban planning. It can also be concluded that the local authorities and government should introduce improvements to the neighbourhood environment as this will greatly benefit the society by enhancing their quality of life.

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MENILAI KUALITI HIDUP PENDUDUK BANDAR DI GREATER KUALA LUMPUR

ABSTRAK

Kualiti hidup di kawasan bandar telah menjadi faktor penting untuk mengekalkan mana-mana kehidupan bandar. Pelbagai faktor menyumbang kepada kualiti hidup dan kepuasan kejiranan yang telah diketengahkan oleh ramai penyelidik. Isi rumah yang terletak di kawasan bandar boleh mendapat manfaat daripada pelbagai infrastruktur dan perkhidmatan bandar yang disediakan oleh sektor awam dan mencapai taraf hidup yang lebih baik. Walau bagaimanapun, pertambahan bilangan penduduk bandar telah menyebabkan krisis pengangguran yang lebih tinggi, kediaman miskin, kualiti alam sekitar, perubahan iklim, tempat tinggal dan peruntukan kemudahan di kawasan bandar. Kadar penghijrahan yang tinggi mencetuskan permintaan untuk harga perumahan yang lebih berpatutan, pembangunan kawasan kediaman baru, kos sara hidup yang berpatutan, peluang pekerjaan, persekitaran yang baik, dan ciri-ciri fizikal. Jurang kajian ini mencadangkan persekitaran kejiranan dan ciri-ciri perumahan sebagai ciri-ciri baru untuk mengkaji kualiti hidup bandar. Objektif kajian ini adalah pertama, untuk meneroka tahap kepuasan kejiranan dan kualiti hidup yang dilihat oleh penduduk bandar, kedua, untuk menilai pengaruh sifat kejiranan dan ciri-ciri perumahan dalam menjelaskan kepuasan kejiranan. dan ketiga adalah untuk mengkaji peranan kepuasan kejiranan sebagai pengantara untuk mengantara hubungan antara ciri-ciri kejiranan dan kualiti hidup bandar. Data utama yang dikumpul melalui kaji selidik yang melibatkan 530 responden telah digunakan dalam kajian ini dan SEM –AMOS telah digunakan untuk menganalisis data. Kajian ini meliputi tujuh pihak berkuasa tempatan di 'Greater Kuala Lumpur' iaitu Dewan Bandaraya Kuala Lumpur, Majlis Bandaraya Petaling Jaya, Majlis Bandaraya Shah Alam, Majlis Perbandaran Klang, Majlis Perbandaran Sepang, Majlis Perbandaran Subang Jaya dan Majlis Perbandaran Selayang. Kajian ini mendedahkan tiga penemuan penting: (1) kualiti hidup bergantung kepada kepuasan dengan kejiranan dimana ianya bergantung kepada kepuasan ciri-ciri sosio/fizikal, ciri-ciri ekonomi, ciri-ciri persekitaran kejiranan dan ciri-ciri perumahan, (2) ciri-ciri kejiranan dan ciri-ciri perumahan sangat menjejaskan kepuasan kejiranan dan (3) kepuasan kejiranan sebahagiannya mengantara hubungan antara ciri-ciri kejiranan dan kualiti hidup. Penemuan ini berguna untuk kerajaan dan pihak berkuasa pada masa akan datang untuk perancangan bandar dan dapat disimpulkan bahawa pihak berkuasa tempatan dan kerajaan harus mengambil beberapa

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LIST OF ABBREVIATIONS

AGFI	: Adjusted Goodness Fit Index
AVE	: Average Variance Extracted
CFA	: Confirmatory Factor Analysis
CR	: Composite Reliabity
CFI	: Comparative Fit Index
DRN	: Dasar Perumahan Negara
EPU	: Economic Planning Unit
FELDA	: Felda Land Development Authority
FELCRA	: Federal Land Consolidation and Rehabilitation
GKL	: Greater Kuala Lumpur
GDP	: Growth Domestic Product
JMB	: Joint Management Body
KETENGAH	: Lembaga Kemajuan Terengganu Tengah
KEJORA	: Lembaga Kemajuan Johor Tenggara
MC	: Management Committee
MyWI	: Malaysia Wellbeing Index
MQLI	: Malaysian Quality of Life Indicator
NFI	: Normed Fit Index
NEP	: New Economic Policy
NHP	: National Housing Policy
NUP2	: Second National Urban Policy
PRIMA	: Perumahan Rakyat 1Malaysia
PPR	: Program Perumahan Rakyat
PCFA	: Pooled Confirmatory Factor Analysis

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QoL : Quality of Life

RM : Ringgit Malaysia

RMR1M : Rumah Mesra Rakyat

RMM : Program Rumah Mampu Milik

RMSEA : Root Mean Square Error of Approximation

SDG : Sustainable Development Goals

SWB : Subjective Well-Being

SPSS : Statistic Package for Social Science

SEM : Structural Equation Model

TLI : Tucker Lewis Index

TP1M : Program Penyelenggaraan 1Malaysia

UNDP : United Nation Development Plan

UTC : Urban Transformation Centre

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CHAPTER 1:

BACKGROUND OF THE STUDY

1.1 Introduction

An urban area is characterised by a place with high concentration of people. To date, half of the world's population live in urban areas. It is estimated that by 2050, 65% of the world's population will live in urban areas (United Nations, 2014). There is a strong association between nations' average per capita income and their level of urbanisation as economic development has influence on urbanisation rates (Grant, 2012). The World Migration Report (2015) also supported this by stating that migration will be one of the main drivers of urban growth, whereby more people will decide to migrate to other countries or migrate from rural to urban areas. It is expected that by 2050, urban population will reach up to 66% and the number of cities with a million inhabitants is also expected to increase from 80 to 533. Furthermore, Asia and Africa are expected to reach 90% of urban growth (Aerni, 2016).

In the global context of external migration, most people choose to migrate to other countries, generally because they want to improve their quality of life. Normally, they will choose a country that has a higher quality of life. Nevertheless, migration does not guarantee happiness, whereby some of the people who migrate experienced deterioration in their economic status (Bartram, 2015). As supported by Benson and O'Reilly (2009), the increase in economic privilege could not be explained by the migration. The people chose to migrate for a better place that could provide a better life. A study by Tsegay and Litchfield (2019) explained that migration is a strategy of 'migrating out of poverty' in Ethiopia. Even though their economic growth is sustained, the country remains poor, has

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high youth unemployment, job insecurity, and is over-dependent on the agriculture sector. This situation will push the people to migrate as they believe it can alleviate unemployment and reduce poverty that indirectly increase the household welfare, their consumption, and investment.

Internal migration also occurs in most developed and developing countries. The economic change from agricultural industry to manufacturing and industrial industries is the reason why people have migrated to the urban sector (Turok and McGranahan, 2013). The other reasons of migration from rural to urban areas are due to the search for safer locations, business trades, sustainable livelihood, and capacity building. This migration has allowed rural households to diversify their income sources, and to resolve the negative impact of social, economic, and institutional constraints on ecologically vulnerable regions (Mukhtar, Zhong, Tian, RazzaqTian, Razzaq, & Hina, 2018). In China, urban amenities are the reasons why the residents move from rural to urban cities. The study indicated that high and low-skilled rural-urban migrant workers concentrated on transport facilities, while young and middle-aged migrants were more drawn to urban education facilities offered in urban areas. It can be concluded that most of the rural-urban migration is due to people's desire to increase their living standard that can be provided in urban areas.

The World Economic Forum report (2017) stated that the some of the cases of immigration are due to economic factors such as income, job opportunities, and wealth creation. The next factor is the sociopolitical factor, which consists of family conflict, religious, ethnic, and racial and cultural parameters, affordable and accessible urban services, and safety and security factors. The rise in urbanisation rates in Malaysia, however, had contributed to an increase in the number of migrants in Greater Kuala Lumpur. The high rate of migrants to Greater Kuala Lumpur is linked to affordable

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housing, growth of new residential areas, acceptable living costs, employment and work prospects, and good location and physical characteristics (Rashid, 2019). Migrants prefer to migrate to urban areas to experience a high degree of well-being and quality of life for their families. Quality of life in an urban area has been reported to be linked with the existing infrastructures and the environmental aspects of the city (Azahan, Jamaluddin, Lukman, Kadaruddin, & Kadir, 2009).

It can be concluded that the migration of people is to enable them to have better access to a variety of urban amenities, increase their living standard, and have a better quality of life. Quality of life (QoL) evaluates people's life satisfaction on physical health, family, education, employment, wealth, religion, belief, finance, and the environment. QoL can be translated as the notions of 'well-being', where it focuses on individuals and societies' expectation of a good place or city to reside in, based on the location that they choose to stay (Dissart & Deller, 2000; Hassan et al., 2013).

There has been an increasing interest in the assessment of QoL in various aspects. Some of the research focused on health and QOL (Geetha, Sairah, & Marium, 2017; Ab Rahman and Nurain, 2019; Dutta, Diba, & Das, 2019), while other researchers focused on neighbourhood satisfaction and QoL. As the population increases in urban areas, neighbourhood satisfaction is found to be an important determinant of QoL. A study was conducted in Famagusta to examine neighbourhood satisfaction and QoL. The study showed that safety, noise level, and maintenance of streets were the features of the urban neighbourhood environment that could affect QoL (Saeidi and Oktay, 2012). Furthermore, Bardhan, Kurisu, and Hanaki (2015) proved that compact urban forms could have higher quality of life due to the policy that encouraged the development of high-density cities like Kolkata. This is supported by Mohit and Ali (2016) who stated that the rapid growth of urban population in Malaysia had led to a significant pressure on local

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and state governments on providing urban infrastructures and public amenities in the urban neighbourhood areas to increase urban QoL.

As the urban population rate rises steadily, more and more people are projected to migrate to urban areas, and more than three quarters of the total population are expected to reside in urban Malaysia by 2030 (Zainal et al., 2012). The quality of the neighbourhood is therefore significant, as it will affect the people's QoL. A number of researchers (Mohit, 2016; Salleh, 2012; Choguil, 2007; Sirgy et al., 2002) believed that neighbourhood satisfaction was a starting point in understanding the urban QoL. In their research, Sirgy et al. (2000) claimed that several studies had shown that satisfaction with neighbourhood attributesaffected the QoL in urban areas. Physical and social features are the factors that can relate to neighbourhood environment that contribute towards the residents' neighbourhood satisfaction.

Neighbourhood satisfaction can be defined as how the occupants feel towards their residential area and the emotional response to a person's dwelling (Oktay, Rüstemli, and Marans,2009). It can also be described as a sense of contentment when a person has or accomplishes what they need or want in a house (Galster, 1981). To maintain urban living, QoL is more than just providing places of work and residence. It must also include facilities and amenities for individual fulfilment and community life such as cultural, recreation, social interaction, and other activities. Neighbourhood satisfaction on facilities include schools, clinics, shops, and community halls. Dwelling units, facilities, and services in a neighbourhood are known as the three mains variables in evaluating residents' nighbourhood satisfaction (Adriaanse, 2007; Mohit, Ibrahim and Rashid, 2010 ; Paris & Kangari, 2005). Based on the study of Baum, Arthurson, and Rickson(2010), the contemporary literature on neighbourhood satisfaction is looking towards the improvement of understanding the satisfaction/dissatisfaction and the various socio-

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economic, housing, and neighbourhood attributes that influence neighbourhood satisfaction.

Neighbourhood attributes are classified into three categories, namely social, physical, and economic (Mohit, 2016; Salleh, 2012; Choguil, 2007; Sirgy et al., 2002). These neighbourhood characteristics are important for maintaining a quality, inhabitable, safe, and prosperous neighbourhood. It is also implied in the well-being, wellness, safety, and health of communities. The standard of the community also relates to social capital, security, and adequacy of facilities. On the other hand, neighbourhood satisfaction comes from the evaluation of housing attributes. It is also a component of the evaluation approach to assess the quality of housing units in a residential area. Neighbourhood satisfaction indicates how the households judge their housing conditions based on the actual housing situation and housing norms. The household will receive high satisfaction with housing if the current housing situation meets their norms (Ibem and Aduwo, 2013). Housing dissatisfaction results from incongruence between housing situation and housing norms (Morris and Winter, 1976). It is important for the relevant housing developers and stakeholders to provide necessary information to improve the development of the facilities and amenities of future housing projects.

The location of the housing to the public facilities and the affordability of the housing are important in measuring housing attributes as it is found that they can contribute towards neighbourhood satisfaction and urban quality of life. It can be concluded that neighbourhood attributes, such as social and physical, economic, and environment attributes are important and can affect neighbourhood satisfaction and indirectly affect people's QoL. Housing attributes are found to be significant in this new era as there are more people who are moving to urban areas. Additionally, housing attributes are vital in measuring neighbourhood satisfaction as there are various issues relating to housing location and affordability. As displayed in Figure 1.1, the components

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of urban QoL consider the elements of urban environment, urban dwellers' readiness, and urban accessibility.

Figure 1.1: Urban Quality of Life Components

Source: Azahan et al. (2009)

1.2 Background of Greater Kuala Lumpur (GKL)

This study chooses Greater Kuala Lumpur (GKL) to assess neighbourhood satisfaction and QoL due to the fact that the migration rate in GKL is higher as compared to Kuala Lumpur (KL). The fact that KL is enclosed within Selangor and has a relatively high population density of around 6,890/km^2 can account for especially high outflows from Kuala Lumpur and inflows into Selangor (DOSM, 2011). Driven by factors, such as rising house prices and high housing costs, and attracted by the accessibility of new residential areas outside Kuala Lumpur, migrants are moving from Kuala Lumpur to the nearby GKL, one of the world's fastest-developing conurbations.

Greater Kuala Lumpur (GKL) is classified as a metropolitan region that encompasses Kuala Lumpur (KL), the capital city of Malaysia. The population size is projected to rise from 7 million in 2012 to 10 million in 2020, with an area of approximately 2,793.27 km^2 in total for this metropolitan area. In line with the government's goal of achieving a high-income nation status by 2020 with per capita

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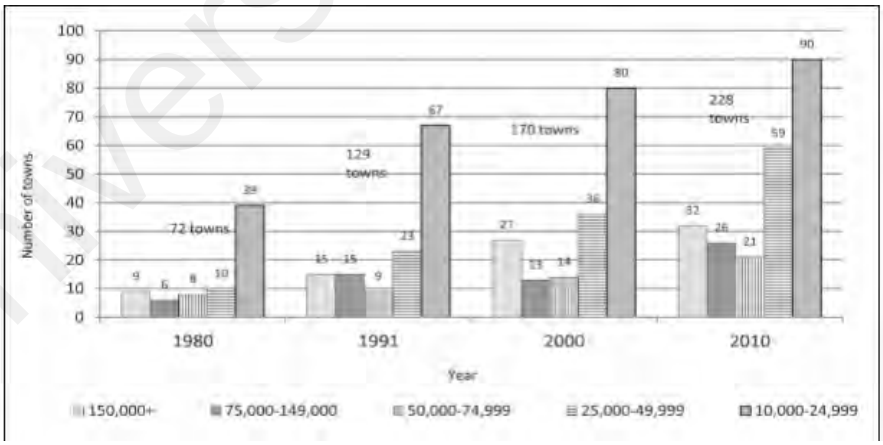
income greater than RM48,000, the government of Malaysia aims to make GKL one of the top 20 most liveable cities in the world (Yau et al., 2016).

Malaysia has undergone significant economic and social changes over the past three decades that have triggered major and rapid urbanisation, whereby 75% of the population live in urban areas (Teriman, 2009; Shokoohi & Nikitas, 2017). KL has undergone a phase of reorientation from being a federal capital to being one of the most influential, modern, and sophisticated cities in Southeast Asia since the early 1900s. Its current identity is determined not only by economic development and significant social and physical changes, but also by some of the highest urbanisation and motorisation rates. These changes have resulted in KL's population spreading to the southern part of KL, leaving most parts of the city centre to become business-oriented, even though there is an unprecedented reduction in its population due to the migration of its residents out of the city to look for more affordable districts (Shokoohi and Nikitas, 2017).

Figure 1.2: Number of towns by size class, 1980, 1991, 2000, and 2010



Source: Hassan (2017)

The number of towns has increased rapidly as a result of Malaysia's economic transformation and globalisation in the last few decades. Figure 1.2 shows that there were 72 urban towns in 1980, which later increased to 228 in 2010. The population also shows

an increasing number where most of the towns moved up the urban hierarchy. From Table 1.1, in 2000, KL, Selangor, and Putrajaya recorded 100%, 91%, and 100% of urban population, respectively.

Table 1.1: Level of urbanisation by state, Malaysia 1970, 1980, 1991, 2000, and 2010

State	Percentage of urban population				
	1970	1980	1991	2000	2010
Johor	26.3	35.2	47.8	63.7	72.0
Kedah	12.6	22.5	32.5	38.8	64.3
Kelantan	15.1	28.1	33.5	33.5	41.5
Melaka	25.1	23.8	38.7	67.4	86.5
Negeri Sembilan	21.6	32.6	42.0	55.0	65.9
Pahang	19.0	26.1	30.4	42.1	51.0
Perak	27.5	33.8	53.6	59.0	69.2
Perlis	0.0	8.9	26.6	33.8	51.8
Penang	51.0	47.5	75.0	79.5	90.6
Sabah	16.9	19.9	33.2	48.1	53.3
Sarawak	15.5	18.0	37.5	48.0	53.2
Selangor	45.6	40.9	75.2	88.1	91.4
Terengganu	27.0	42.9	44.5	49.4	59.1
Federal Territory of					
- Kuala Lumpur	-	100.0	100.0	100.0	100.0
- Labuan	:	46.3	48.4	72.26	81.8
- Putrajaya	:	:	:	62.8	100.0

Source: Hassan (2017, p. 91, Table 2)

From the above Figure 1.2 and Table 1.1, it proves that globalisation has increased the nation's economic performance, with Selangor being the most urbanised state since 1980. This phenomenon is also caused by modern infrastructure and high employment opportunities that led to high population in urban centres (Hassan, 2017). The growth of many industrial estates in primary cities, such as KL, has also resulted in the existence of new towns on the outskirts of KL and has attracted most job seekers to move from rural communities to find employment in the manufacturing sector provided in urban cities. With these employment and job opportunities, workers search for housing and urban services. This leads to the growth of new urban land developments outside of the boundary of the city, whereby there will be more growth or new suburbs that create more communities, such as Subang Jaya, Shah Alam, Bangi, and Klang (Abdullah, 2012). Table 1.2 below shows the rapid growth in urban areas outside KL between 1980 and 2000. This growth showed that rapid development was found in suburban districts farther away from KL (Abdullah, 2012).

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Table 1.2: Population and average annual growth rate, Selangor and Kuala Lumpur, 1980–2000.

State and District	Population			Average Growth	Annual Rate
	1980	1991	2000	1980-1991	1991-2000
SELANGOR	1,426,250	2,297,159	3,947,527	4.33	6.02
Gombak	166,059	352,649	553,410	6.85	5.01
Kelang	279,349	406,994	648,918	3.42	5.18
Kuala Langat	101,578	130,090	189,985	2.25	4.21
Kuala Selangor	110,366	123,052	157,288	0.99	2.73
Petaling	360,056	633,165	1,181,034	5.13	6.93
Sabak Bernam	103,261	99,824	110,713	-0.31	1.15
Sepang	46,025	54,671	97,896	1.56	6.47
Ulu Langat	177,877	413,900	865,514	7.68	8.20
Ulu Selangor	81,679	82,814	142,771	0.13	6.05
W.P. KUALA LUMPUR	919,610	1,145,342	1,297,526	2.00	1.39
MALAYSIA	13,136,109	17,563,420	22,202,614	2.64	2.60

Source: Abdullah (2012, p. 24, Table 1)

GKL can be defined as the area covering ten municipalities that are governed by local authorities and comprises KL, Putrajaya, and Selangor with the exception of Kuala Langat, Kuala Selangor, Sabak Bernam, and Hulu Selangor . These ten municipalities in Greater KL are namely Kuala Lumpur City Hall, Petaling Jaya City Council, Shah Alam City Council, Klang Municipal Council, Sepang Municipal Council, Subang Jaya Municipal Council, Selayang Municipal Council, Ampang Jaya Municipal Council, Kajang Municipal Council, and Putrajaya Corporation (Pemandu, 2010).

The level of urban development by cities bring about urban migration where rapid urban development will stimulate economic and physical development. As the national level of urbanisation increases rapidly, rural to urban migration shows less important contribution to urban development (Abdullah, 2012; Rashid, 2017). Demographic change, migration, and urban transition are found to have a direct relationship (Tacoli and Mcgranaham, 2015). Urban transition takes place due to job demands, family formation, homeownership, education purposes, social class, and searching for housing (Filandri and Bertolini, 2016; Yaacob, 2018). Numerous previous studies (Yaacob, 2018; Hassan, 2018; Shokoohi and Nikitas, 2017) have proven that most people, especially young

people, choose to live in urban cities to have the most benefit and satisfaction in their QoL. In order to improve QoL, the government needs to invest in the infrastructures and basic services in urban cities and urban development. Urban city planning, and efficient policy making are needed to sustain QoL and urban development.

1.3 Problem Statement

There is a problem with regard to the population of urban people as more people will move to urban areas especially in GKL due to the rapid urbanisation in Malaysia. The increased number of urban population has increased the issues of employment, shelter provision, and urban services in urban areas (Tacoli and Mcgranahan, 2015). Socio-economic, demographic, and cultural factors as well as looking for high employment rate and pleasure housing are some of the factors that contribute towards people moving to urban areas (Ishtiaque and Ullah, 2013). People choose to stay in urban areas to improve their own and their families' lives (Baykara, 2016). In 2025, the Malaysian population in urban areas is targeted to increase by 79.8% (Malaysia National Report, 2016;). Local and state governments must take an initiative to provide urban infrastructure to improve the quality of life of urban people as the population increases (Mohit, 2016).

Urban QoL is important and becomes a matter of concern as to maintaining people's life satisfaction. Satisfaction on neighbourhood attributes are also known as the factors that can affect urban QoL. Social life, better conditions for children, safety, greenery and tranquility, transport, community facilities and services, travelling distance to school, place of employment, medical centres, and geographic location of housing will affect residence satisfaction and well-being of urban population (Mohit, 2016; Sedaghatnia, 2013).

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Malaysian Well-Being Index (MyWI) showed an increasing trend from 2017 to 2018, whereby MyWI increased from 0.8% in 2017 to 122.4% in 2018 (DOSM. 2019). Even though MyWI had increased, Baqutayan (2015) interestingly found that housing issues are known as the main problems to affect the QoL and well-being of urban households. One of the issues faced by Malaysians is regarding the housing price that has become too expensive and less affordable, and it continues to increase with the increasing living cost, especially in urban areas. It is important for the government to put some concern related to this issue because housing issues can have an adverse effect on a family's psychological well-being (Baqutayan, 2015).

Environmental deterioration is also one of the effects caused by the increase in urbanisation in Malaysia (Siwar, 2016). This is supported by Almusaed et al. (2019) who stated that cities play an important role in economic growth. However, cities struggle for social cohesion and environmental sustainability since there are a few problems such as social inequality, environmental degradation, crime and many others that are related to urban life.

Previous research (Mohit, 2016; Rahman et al., 2012; Sirgy and Cornwell, 2012; Salleh, 2012; Campbel, Converse, & Rodgers, 1976; Sedaghatnia, 2013; Aiello, 2010; Permentier and Van Ham, 2011) focused on evaluating satisfaction towards physical, social, and economics attributes in measuring neighbourhood satisfaction. Instead of providing and focusing on the physical, social, and economic aspects, environmental and housing attributes are also important to be focused on as environmental and housing issues are gaining more attention, especially in urban areas (Salfarina, 2011).

Therefore, this study will fill the above gap by proposing to add environmental and housing attributes in the previous framework to examine the importance of neighbourhood attributes (socio/physical, economic, and environmental) and housing

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attributes towards neighbourhood satisfaction. Satisfaction on housing attributes concerns on how the residents evaluate housing choice, affordability, location, and accessibility to public facilities. In addition, communities are more than just housing, and thus, it is important to provide other communal needs such as social, economic, and environmental attributes. The manner in which the societies grow, economically, socially, and environmentally, must respect the needs of future generations. This is the way to build societies and strategies that can stand on their own feet and respond to the changing requirements of modern life.

1.4 Research Aim

Generally, this research aims to evaluate the neighbourhood and housing attributes that can contribute towards the urban residents' neighbourhood satisfaction and QoL.

1.5 Research Question

There are three questions to achieve the research aim, which are as follows:

1. What are the levels of neighbourhood satisfaction and quality of life perceived by urban residents in Greater Kuala Lumpur?
2. What are the roles of neighbourhood and housing attributes in explaining neigbourhood satisfaction?
3. How does neighbourhood satisfaction mediate the relation between neighbourhood attributes and urban quality of life?

There are three pillars of urban community and urban sustainable development, namely economic, social, and environment. The concept of sustainable cities and communities is related to the sustainability concept of economic development and constitutes a community. Sustainable communities have been regarded as tools that can

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be used to address detrimental or deleterious environmental and social impacts of adherence to conventional economic development approaches. As the quality of urban life and neighbourhood satisfaction are important, this study focuses on assessing two dimensions of urban QoL, which are urban well-being and neighbourhood satisfaction. More people are moving to urban areas to obtain a higher QoL. Thus, neighbourhood satisfaction is a part of urban well-being and QoL.

1.6 Research Objective

Based on the above problem statement and research questions, this research seeks to address the following research objectives:

1. To explore the levels of neighbourhood satisfaction and the quality of life perceived by urban residents.
2. To assess the influence of neighbourhood and housing attributes in explaining neigbourhood satisfaction.
3. To examine the role of neighbourhood satisfaction as a mediator to mediate the relation between neighbourhood attributes and urban quality of life.

1.7 Scope of Research

This research intends to assess the relationship between neighbourhood attributes (socio/physical, environmental, and economic), housing attributes, neighbourhood satisfaction, and QoL, and the policies in Malaysia that are related to housing and urban development. Urban household will be the scope for this research as the representative for the respondents. GKL is selected as the location of study for this research. Questionnaires were distributed to the housing areas, where the respondents are mostly the house owner

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or tenants who lived in landed housing and vertical high-rise apartments so as to observe the different experiences between the two groups.

This research will also discuss the Housing Policy, National Community Policy, and Urbanisation Policy that are related to neighbourhood satisfaction and QoL. The housing policy touches on housing affordability to address issues faced by most of the urban households, especially those who live in GKL. The Urbanisation Policy and National Community Policy discuss on the policies that relate to urban development to increase people's well-being. This study is based on the Housing Demand Theory and Housing Needs Theory. The result of this research is generated from the analysis of primary data collected from the respondents. However, there are two limitations identified throughout this research. The results from this study cannot be generalised to the overall picture for quality of life as this study focuses on urban GKL only. Furthermore, the data collected for this research are primary data where the questionnaires were distributed to households without any face-to-face interview; this method might not represent the respondents' own view their understanding on QoL.

1.8 Research Framework

Based on the problem stated in Section 1.2, the aim of the study is to evaluate neighbourhood and housing attributes that can contribute towards the urban residents' QoL through neighbourhood satisfaction.

For the preliminary phase, relevant literature on the conceptual framework and previous studies on the topic are reviewed and presented in Chapter 2. This preliminary phase is to identify the factors that can affect QoL and to understand the issues that are related to the research study. For the literature review, the study comes out with the definitions of all variables discussed in this study, such as the definition of QoL,

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neighbourhood attributes, housing attributes, and neighbourhood satisfaction. This is continued with a discussion on the relationship between all the variables.

For the preliminary design framework, two topics will be discussed in this research study, i.e. relevant theories and conceptual model. A section on relevant theories will emphasise on the theories adopted in the study that provide the basis of understanding the concepts of QoL and neighbourhood satisfaction.

From the theories and the previous research results, this study presents the hypothesis development to support the objectives of the study. From the hypothesis development, this study develops a questionnaire based on the variables and items discussed by previous studies. All the variables and items are checked and verified by subject experts before conducting a pre-testing study. After the pre-testing study, based on all the feedback and comments from the pre-testing result, some of the questions from the questionnaire are amended and revised. After the amendment of the questionnaire, actual data collection will be conducted.

The QoL in urban GKL is measured by using a questionnaire survey that has been distributed to the households. This study focuses on subjective evaluation of the dependent variables, independent variables and mediating variables . Statistical Package for the Social Sciences (SPSS) and Structural Equation Model (SEM) are the analyses used for this research study. SPSS is used for descriptive analysis while SEM is employed to test the variables' relationship. At the end of the research findings, this research comes out with the contribution and recommendations of the study and discussed policy that can enhance urban QoL.

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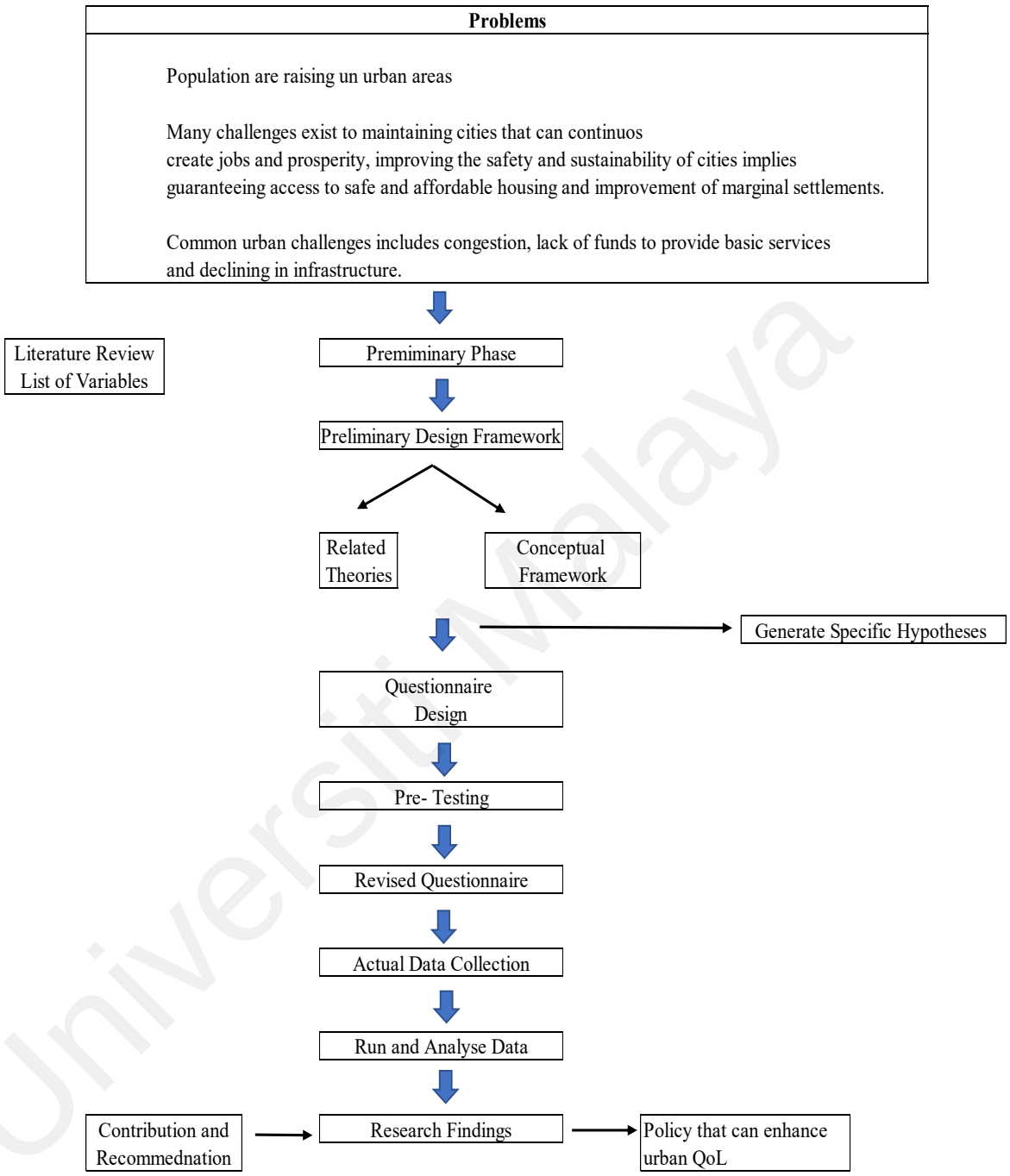
Figure 1.3 : Research framework



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1.9 Significance of the Study

This study highlights the impact of residents' satisfaction on the housing and neighbourhood attributes towards QoL in urban areas. This research is significant not only to the government, developers, and policy makers, but also benefits the neighbourhood and society based on the fact that;

a. It provides feedback on the assessment regarding the satisfaction of the society on their neighbourhood area in which new planning and development could be designed by the developer and planner.
b. It emphasises on the need for more affordable housing that can be afforded by all levels of income and the society's necessities on the facilities and services that need to be provided by the developer and planner.
c. Findings of this study can help the government, developers, and urban planners to formulate strategic urban development policies that can meet the demands of the society.
d. It engenders increasing awareness of important social issues impacting neighbourhood satisfaction and the well-being of the Malaysian population.

   It provides guidance for future research in the study of neighbourhood satisfaction and quality of life.

1.10 Organisation of Thesis

Chapter 1 explains the outline of the research. This chapter includes a brief explanation on the background of the study, research problem statement, research aim, research question, research objective, scope of research, research framework, significance of study, and research structure.

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Chapter 2 discusses the related literature review of previous research studies, which involves the studies of the models and theoretical framework recently applied in this field of research. This chapter includes definitions of the concepts and points of view of other researchers in relation to the research field in general. Besides, this chapter addresses the research issue in particular in a rational way. Conceptual framework development and a review of relevant theories are also discussed in Chapter 2.

Chapter 3 presents the current policies that are related to this study. The policies consist of Housing Policy, Urbanisation Policy, and National Community Policy. The methodology of the study appears in Chapter 4. The chapter discusses the study's process and provides an overview of the nature of the research and the choice and implementation of methods for data collection. This chapter also contains the sampling aspect of the analysis. Descriptive data analysis and results are presented in Chapter 5. This chapter contains a presentation of primary data collected through questionnaires. Descriptive analysis on the level of satisfaction on socio-physical, economic, environmental, housing, and neighbourhood attributes are discussed under this chapter. Chapter 6 introduces SEM, which is used to evaluate the effects of neighbourhood and housing attributes with QoL.

A description of the research is given in Chapter 7. This chapter plays a vital role in achieving the aims and objectives of the research. The findings of the literature review are compared in this chapter with the primary data findings. Additionally, in-depth discussions are given with respect to each individual research objective.

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CHAPTER 2:

LITERATURE REVIEW

2.1 Introduction

In developing countries such as Malaysia, the rapid urbanisation process has worsened the employment, shelter, and urban services crises. Increased urban population numbers and lack of institutional capacity are contributing towards urban poverty, which has a two-way cause-effect relationship with poor housing, availability of services, and jobs. This study is important to examine the relationship of satisfaction on neighbourhood attributes, housing attributes, neighbourhood satisfaction, and urban QoL.

This chapter begins with the definition of QoL, neighbourhood satisfaction, neighbourhood attributes, and housing attributes. This is followed by a discussion on the housing attributes and housing affordability issues in neighbourhood satisfaction. The next section touches on the relevant theories related to neighbourhood satisfaction and QoL. At the end of this chapter, hypothesis development and conceptual framework are discussed.

2.2 Definition of Concept

2.2.1 Quality of Life

Quality of life (QoL) is the overall concept of people and population, detailing the negative and positive aspects of life. Life satisfaction is observed, including everything from physical health, family, education, employment, income, protection, equality, religious beliefs, and the environment. Since the concept is diverse, this study has chosen to look at the notion of neighbourhood satisfaction as one of the significant factors affecting the urban QoL.

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In a different context, the World Health Organisation (WHOQOL,1997) defines QoL as an individual's perception of their position in life in the context of culture and value systems in which they live and in relation to their objectives, expectations, standards, and concerns. It is a broad concept that is complexly affected by a person's physical health, psychological state, personal beliefs, social relations, and their relationship to the salient features of their environment. To calculate QoL, there are several general instruments available. WHO has developed a QoL method, i.e. WHOQOL, which covers a wide variety of subjective domains of QoL.

WHOQOL-BREF is one of the best known instruments built for cross-cultural comparisons of QoL. WHOQOL-BREF is a 26-item tool composed of four domains: physical health (seven items), psychological health (six items), social relations (three items), and environmental health (eight items); it also includes QoL and general health objects. The area of physical health includes things related to mobility, daily activities, functional ability, energy, pain, and sleep. Psychological domain tests include self-image, suicidal thinking, positive behaviour, self-esteem, mentality, cognitive capacity, focus of memory, religion, and mental status. Issues relating to personal relationships, social support, and sex life are part of the social relationship area. Environmental health challenges include issues related to financial capital, security, health and social services, the physical environment, opportunities for learning new skills and knowledge, entertainment, the general environment (noise, air pollution, etc.), and transport (Vahedi, 2010). Nevertheless, in the scope of this study, the urban context is referred, which focuses on the assessment of urban neighbourhood life satisfaction.

Traditionally, QoL is linked with monetary factors such as gross domestic product (GDP), price levels, and cost of living. The success or failure of a country depends on the rate of economic development. High growth rates show that there are improvements in the state of economy in terms of growth in industrial production, import, and export, as

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well as foreign investment (Rokicka, 2014). In another definition of well-being from the economic perspective, a higher level of well-being is associated with higher income. When income increases, consumption will also increase, greater numbers of needs are satisfied, and a higher standard of well-being can be attained. The microeconomic theory also stated that increasing income will lead to an increase in human well-being. This is the reason why economic growth is an important objective in any country (Fuentes & Rojas, 2001).

However, new economic thinking has moved out from the traditional thinking and the concept of QoL towards more complex definitions and concepts (Biagi, Lambiri, and Royuela, 2006). This is because the society does not always benefit from the increase in GDP growth to improve the society's living standard and human security. Among the disadvantages from the prosperity period where economic growth increases, social inequalities might grow, and poverty remains at the same level or even increases. Increased traffic, noise, congestion in urban areas, crime, environmental damage, and increased stress are the side effects of economic growth and can also affect people's QoL (Rokicka, 2014).

In mainstream economies, QoL is associated with the concept of social well-being (Lambiri, Biagi, and Royuela, 2007). The main objective of this social well-being is to show the degree of needs satisfaction by calculating quantitative indicators (Rokicka, 2014). In measuring social welfare, Drewnowski (1972) employed the Geneva method. The degree of satisfaction of the aggregates is divided into seven classes, which are food, housing, health, education, recreation, social security and material standard. They are considered in the United Nations Research Institute for Social Development analysis and studies.

QoL in the urban context can be described as the well-being of individuals and the quality of the community in which they live (Mohit, 2016). In other words, the

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concepts of environmental quality, liveability and quality of place, residential satisfaction, community satisfaction, and sustainability concern with the QoL in urban areas (Dissart and Deller, 2000). All aspects of urban environments, including environmental, built designed, social, physical and economic aspects can also be taken into account in the definition of QoL in urban areas (Mohit, 2016; Mohit and Ali, 2016; Azahan et al., 2009; Beck and Stave, 2011). In order to achieve all the basic needs and services offered by each country in each city and metropolitan area and to improve their family's QoL, most people are likely to migrate and live in cities (Maran, 2012). Numerous environmental qualities in various locations and communities have an impact on their lives and overall QoL (Marans and Kweon, 2011). In economic views, QoL can be considered as an economic good due to its embedded characteristics. Wingo (1973) stated that urban economists gave three reasons why QoL was considered as an economic good. Firstly, people were prepared to trade off other things to obtain QoL as it is scarce and to make them equally happy. Secondly, households and businesses made decisions on where to stay and locate based on QoL consideration. Thirdly, community resources need to be allocated to QoL as it is a public good. The results of the consumption of market goods, leisure, public goods, and other physical and social characteristics of the environment are due to the satisfaction achieved by the individual.

QoL explains the multiscale concept that touches on individuals and society conditions. It is also defined by the positive or negative well-being of future expectations of the people (Glatzer, 2015). Veehoven (1991; 2012) proposed an integrated concept of QoL by using four different categories, which were liveable environment and utility of life as the outer quality and liveability of a person and life satisfaction as the inner quality.

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Table 2.1: The four qualities of life

	Outer Quality	Inner Quality
Life-chances	Livability of environment	Life-ability of the person
Life-results	Utility of life	Life-satisfaction

Source: Rojas (2009, p.14, Table 1)

Outer QoL Chances

In general outer QoL chances refers to the ability of a person to live in the environment where it refers to external conditions or environmental opportunities that are relevant to a good QoL. Acting with assumed conditions is more normal than with corroborated conditions. As stated in Table 2.1, liveability environment is the criterion of outer QoL chances. Liveability environment is described as pollution, global warming, and degradation of nature. In another perspective, city planner describes liveability environment as the built environment and related to sewer system and traffic flow system. In a sociological perspective, liveability is defined as a crucial aspect of society that is linked to the society's quality. Liveability is a requirement for happiness, and not all environmental situations are equally conducive to happiness.

A place shaping framework was established to produce a liveable community, based to Aulia (2016)'s study on residential environment. According to Nordwall and Olofsson (2013), the spatial components required in a residential environment are properties, environmental factors, and building usage flexibility. The treatment and utilisation of available space, as well as the diversity of housing rooms, are factors for environmental and building flexibility. Identity, neighbourliness, safety, and recreation are the four examples that fall under the category of surroundings.

According to Farahani and Lozanovska (2014), there are three types of public community space criteria in the residential environment which are design strategies, planning strategies, and public places and activity generators. Meanwhile, Sapawi and

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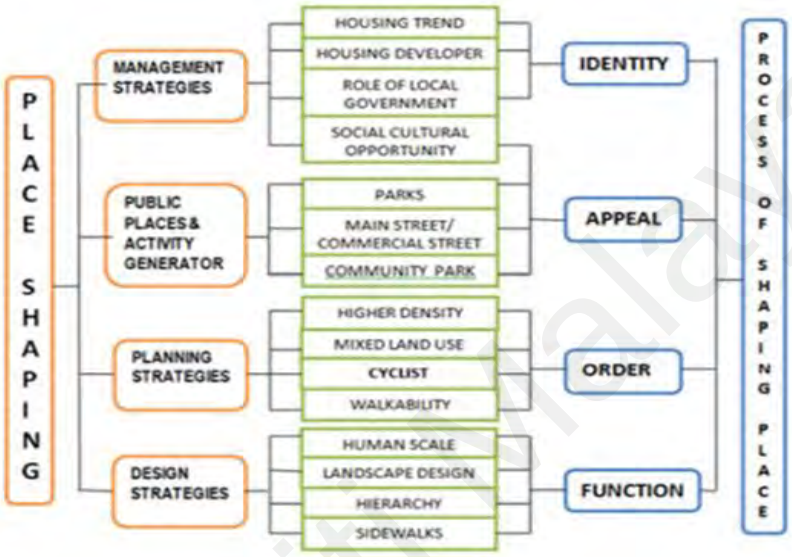
Said (2013) identified physical characteristics including feasibility, accessibility, safety, comfort, and pleasurably as a model of a walkable urban neighbourhood. Figure 2.1 shows the framework of place shaping as the foundation of a livable environment for the community, based on the previous discussion from many writers.

Figure 2.1: Framework of place shaping (liveability environment)



Source: Aulia (2016, p. 339, Figure 2)

The Outer of QoL result

In contrast, the outer QoL result refers to the usefulness of a person to life; in other words, it refers to the goodness of a person to life from the viewpoint of the benefit of an external agent (e.g. society). Life is only of benefit if it contributes to other people in society. The question is: how can an individual contribute to the well-being of others in society? There are a variety of ways suggested by Rojas (2009).

First of all, through one's efforts to produce products and services that enable others to meet their material needs. This commitment is specifically based on a need-satisfactory approach. A person is worthy of life if it leads to the fulfilment of the needs of others. Second, individuals should contribute to fulfilling other people's psychological needs in society. The literature recognises three basic psychological needs, which are

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sense of competence, autonomy and relatedness. Deci, Ryan, and Vansteenkiste (2008) stated that the fulfilment of these psychological needs enhances well-being. The value is such that, in his Principles of Psychology, William James concluded that the greatest punishment for anyone is not physical pain, but that life is absolutely ignored by all. Kasser (2002) showed that income (economic goods) was not a reasonable tool for the psychological needs. Such needs were fulfilled by relational goods such as communication of feelings, encouragement, moral support, connectedness, and affection.

Third, by volunteering and philanthropy, people can contribute to the well-being of others. This kind of contribution to the well-being of others is not reflected in market prices. It is not that their contribution is not of value, but that market prices do not show value for a number of reasons; for instance, people who value it cannot afford to pay a positive price. Fourth, to be pro-social. There is value in the lives of those who act pro-socially. This can be best explained by antisocial behaviour. For example, from the viewpoint of the outer QoL outcomes, the QoL of robbers and kidnappers is considered poor because they contribute negatively to the lives of others. Last but not least is modelling the role models. Philosophers also argued that people who are good role models and serve as social heroes have better QoL. The life of saints, for example, is of great quality because they have fitting models for the lives of others. Saints and heroes may never be rich; in fact, some of their heroism are focused on doing something "out-of duty".

It is this QoL that has been emphasised in the literature on the economic value of a person's life. Throughout this literature, permanent income is a reasonable proxy for the contribution an individual makes to society, and therefore, for its importance to society. There are two different ideas based on economists, moralists, and philosophers. Economists emphasised the importance of income as a proxy for a person's QoL, while

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philosophers and moralists argued that a person's value can be based on a person's role as a good model for society, a life of virtue, or a meaningful life.

The Inner QoL Chances

It refers to a QoL associated with a person's ability to live. In other words, it refers to a person's inner characteristics which are important for a successful life. Furthermore, it refers to the skills and capabilities that require opportunities to be taken advantage of in order to lead a good life. Aspects such as the fitness, education, diet, and intellectual and mental capacities of an individual are correlated with this QoL. These factors are believed to be important to a good life. The United Nations Development Plan (UNDP) has promoted the study of this inner QoL chances, in particular by constructing its indices of human development and poverty. It can be presumed that the skills or capabilities related to a successful life depend on the environment in which a person lives. It can be concluded that income is not considered a life-ability. This investigation approaches income as a consequence rather than as a tool, because people may prefer to use their skills to achieve QoL that is not closely linked to the production and purchase of economic goods; thus, income is regarded as a potential result of the use of life-ability.

The Inner QoL Result

It refers to the QOL as a person experiences it; therefore, it is measured by an individual's assessment of how satisfied he is with life and by his judgment as to whether his life is a good one. This inner-quality-of-life-results are based on a person's life opinion of the subjects, as such, it is a subjective measure of well-being and is known as subjective well-being (SWB).

There are five conditions under SWB; first is individual subjective experience, whereby the individual has to be aware of their own well-being. Second, the individual

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will be the authority of his/her life and experience their own well-being and others are not allowed to judge their own life. In other words, the approach accepts a person's judgment as a valid assessment of the satisfaction of his or her life. Third is the assessment declared by the person concerned. There is no better way to know a person's well-being than to ask them, and as alternative methods, e.g. asking someone else or observing someone else's behaviour, may have serious flaws. No one else is in a better position to judge the well-being of a person; a third-party judgment. Fourth is about the people's judgement rather than academic agents, and directly asking and studying the person on their well-being. The SWB method deals with people as they are, in their situations, and not as anyone else feels they should be.

Fifth is about a judgement rather than a perception of the goodness of their life. The definition of well-being perception is referring to the real experience of the people's objective well-being, which can be evaluated by third parties and it could be correctly or wrongly judged. Sixth is about the inferential approach to find the relevant explanatory factor. It is stated that SWB is the assessment of people's evaluation on their well-being, and to find the determinants, it will follow an inferential approach. In other words, SWB uses an econometric technique to answer the explanatory factors. Lastly is the transdisciplinary approach. This approach may require understanding a person's appreciation of their life and the assessment made by a person of flesh and blood from a particular discipline, whereby the disciplines are developed to explain a particular aspect of SWB.

As a conclusion to the above discussion, the SWB approach works with the overall assessment of happiness and life satisfaction and it is also related to the satisfaction on specific domains of satisfaction that are related to aspects of life (Diener, Lucas, and Oishi, 2002 ; Rojas, 2009). Therefore, the definition of QoL in the urban context of this study is life satisfaction of urban population that focuses more on their education and

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employment, income, and health. Furthermore, education level will determine their employment and income, which could overall affect their health (Assari, 2018 ; Abdullah, Doucouliagos, and Manning, 2015 ; Qazi et., 2018). In measuring the other factors that can affect urban QoL, neighbourhood attributes, namely as physical/social, environment, economic, and housing, and neighbourhood satisfaction are found to be important in urban environment and neighbourhood.

QoL is supported by sustainable development, whereby the formulation of Sustainable Development Goals (SDGs) is a way to focus global efforts to accelerate global progress towards sustainable development. Sustainable development can be defined as production that satisfies the needs of the present without compromising the capacity of future generations to fulfil their own needs. This definition of sustainable growth, while somewhat vague, aims to maintain economic progress while protecting the long-term value of the environment, whereby it provides a framework for the integration of environmental policies and strategies for development (United Nations General Assembly, 1987, p. 43). The central concept behind all other sustainable development is integrating environmental, social, and economic issues into all areas of decision-making.

Due to this, SDGs) have set up 17 goals to be achieved by 2030, whereby these goals are the world's best plan to build a better world for the people and the planet. SDGs' aim is to transform the world by ensuring, simultaneously, human well-being, economic prosperity, and environmental protection, and it is also aimed to tackling multiple and complex challenges faced by the humankind (Pradhan and Costa et al., 2017). Leal Filho and Tripathi et al. (2018) also reported that the UN General Assembly had agreed and supported the 2030 Framework for Sustainable Development document, which includes a collection of strategies aimed at balancing economic growth and protecting the environment.

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Generally, SDGs target multiple areas for action that covers poverty and sanitation, and building up local economies while addressing people's social needs. There are seventeen goals focusing under the SDGs that are aimed at improving the planet and the quality of human life around the world by the year 2030.

Figure 2.2: Sustainable Development Goals

Source: UNDP (2019)

There is a challenge faced by the government to implement the goals specially for SDG 11, as more than 1 billion people continue to live in slums. Substantial progress has been made to reduce such problems and SDG 11 has been generated to focus on making the city and human settlements inclusive, safe, resilient, and sustainable (United Nations, 2016). SDG 11 also seeks to rebuild and develop cities and other human settlements in a way that provides opportunities for everyone, with access to basic services, electricity, housing, transportation, and green public spaces, while reducing the use of resources and the effects on the environment.

A large number of urban residents are breathing poor air and having restricted access to transportation and open spaces exacerbated by urgent action. There is a need to address the current situation of both developed and developing countries as cities expand faster than their populations, and there is a profound effect on sustainability. Improving

access to good quality and healthy housing for all with sustainable transportation and other support services available is also part of the sustainable urbanisation requirement. SDG 11 also seeks to mind the urbanisation of shanty towns, guarantee sustainable public transportation, reduce deaths that are caused by water or air pollution, and to ensure access to sustainable green areas. By providing safe and affordable housing and upgrading slums, this will help to increase people's QoL (Leal Filho and Tripathi et al., 2018). Thus, neighbourhood satisfaction is important to increase people's QoL in urban areas.

2.2.2 Neighbourhood Satisfaction

Neighbourhood known as places within an area with physical boundaries where people identify their homes and where they live out and organise their private life (Rahman et al., 2012). It is also a place where a group of people live together and interact with each other. Neighbourhood is also an integrated unit, planned urban area related to larger community which involve residential district, schools, shopping facilities, religious building, open spaces and degree of service industry (Whittick, 1974; Salleh, 2012). Neighbourhood is associated with the group of residences in relation to other land users and amenities and includes both geographic and social components. Sociodemographic characteristics will affect people's attitude on their place of residence (Salleh, 2012). Balestra et al. (2013) defined neighbourhood as the localities in which people live, and analyse of how local conditions affect people's life. This statement also supported by Jones (2001) and Leby and Hashim (2010) whereby they defined neighbourhood as a sense of community and QoL. Neigbourhood also concerns urban quality environment and human well-being, in which it is specific on the life concerns and determination of the reaction of people's sense of overall QoL (Pacione, 2003).

Neighbourhood satisfaction is conceptualised in many ways. Some of the studies analysed satisfaction by assessing with the dwelling design, satisfaction on the

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neighbourhood and satisfaction with neighbours. Lu (1999) claimed that the household makes its decisions on living conditions on the basis of their needs and aspirations. The absence of issues from residents with a high degree of congruence between real and desired circumstances is called satisfaction. Dissatisfaction may occur when there is a differential in their actual housing or neighbourhood. The study concluded that housing satisfaction is one of the major factors to neighbourhood satisfaction. Housing satisfaction can also be influenced by the internal and external environment and living conditions, where it can serve as a stressor and become a factor that can impact people's well-being (Philip et al., 2005). Building features such as number of rooms, size and location of kitchens and quality of housing units are strongly linked to neighbourhood satisfaction (Salleh, 2012 ; Mohit, 2016).

Neighbourhood satisfaction is also conceptualised by residential environments consisting the housing unit, the neighbourhood and the community in which they are located. This can be concluded that the housing environments are representing with the dwelling unit being contained within the neighbourhood and community. The geographical location is also part of the important aspect in explaining the quality of the dwelling unit (Campbell, Converse, and Rodgers, 1976; Varady and Carroza, 2000). Galster and Hesser (1981) stated that neighbourhood satisfaction measures the differences between actual housing and desired housing and neighbourhood conditions. Neighbourhood satisfaction studies the housing quality that involves housing features, services, and facilities provided in the housing area and the environment to measure residents' satisfaction with the current housing unit (Amerigo and Aragones, 1990). Prementier et al. (2011) stated that neighbourhood satisfaction deals with the resident's assessment on their neighbourhood environment whether they are happy or disappointed with the surrounding of their housing units. Neighbourhood satisfaction also included satisfaction on environment quality, noise, shop and green space, and community

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involvement (Prementier et al., 2010; Lu, 1999; Mohan and Twigg, 2007; Howley et al., 2009). Lovejoy et al. (2010) viewed the concept of neighbourhood satisfaction as the assessment of the extent to which neighbourhood environment meets the needs, expectations, and aspirations of residents and people are happy with their neighbourhood environment.

There are different definitions in explaining neighbourhood satisfaction. Some of the researchers used 'residential satisfaction' to explain the satisfaction on the neighbourhood. Residential neighbourhood satisfaction can be defined as the feeling of contentment when one has or achieves what one needs or desires in a house (Galster, 1981; Mohit, 2010). In another definition by Onibokun (1974), residential satisfaction can be defined as satisfaction with dwelling unit and satisfaction with the neighbourhood area. Ogu (2002) stated that, residential satisfaction is an evaluation resident's perception of their feeling for their housing units and the environment. Residential satisfaction also can be seen as a social aspect (Galster, 1981) and involved with psychological aspect where a person's psychological well-being is determined by how they value their living environments.(Philips, 2005).

Based on Galster (198)1, residential satisfaction can be utilised in four different ways. First, residential satisfaction is used as a key predictor of an individual's perception of general, which is more to QoL. Second, it is used as an ad hoc evaluation tool to assess the progress of private sector and public sector housing projects. Third, it is used as a measure of residential mobility and thus shifts in the demand for housing and changes in the neighbourhood. Fourth, it is used to measure residents' perceptions of inadequacies in their current housing community in order to guide private or public efforts to improve the status quo. Sirgy and Cornwell's (2002) study highlighted the neighbourhood attributes that could affect residential satisfaction, which were social, physical, and environmental. Noise, crime rate, accidents, security, and community relations were the

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determinants for residential satisfaction. Mohit's (2010) study provided an assessment on residential satisfaction that involved five components, i.e. dwelling unit, features, dwelling unit support services, public facilities, social environment and neighbourhood facilities. The assessment was conducted with the newly designed public low-cost dwellers in Kuala Lumpur.

Mohit (2014) developed a framework of residential satisfaction (Figure 2.3) that was based on community. It provided the architecture of residential purpose and evaluated the importance of community issues. This framework focused on residential satisfaction that emphasised the importance of socio demographic characteristics, physical features of the house, housing support services, public facilities, neighbourhood facilities, and social environment.

This framework explained the residential measurement, namely cognitive process, affective process, and behavioural process. Cognitive process refers to negative or positive perception attitudes of occupants and the feeling towards their housing environment and physical environment (Mohit, 2014; Potter and Cantarero, 2006). The affective process refers to the occupants' positive or negative feelings about their living places and if they are satisfied or dissatisfied with their socio-physical housing environment. The behavioural cycle applies to all adaptive or non-adaptive actions displayed by the inhabitants to make the physical environment sufficient to mitigate a reduction in needs or values (Mohit, 2014). It actually measures behavioural intentions, such as the desire to stay or move and recommendations to friends (Mohit, 2014; Potter and Cantarero, 2006).

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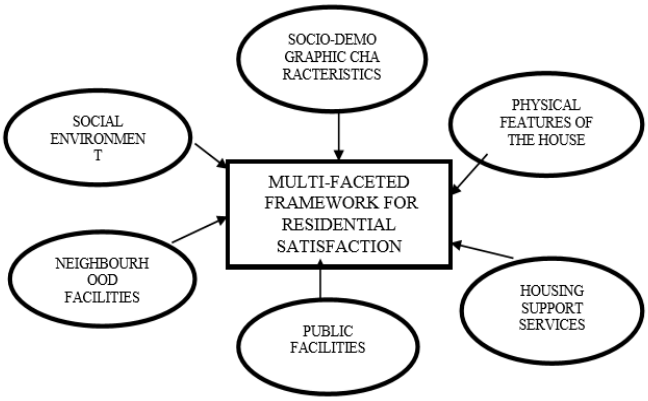
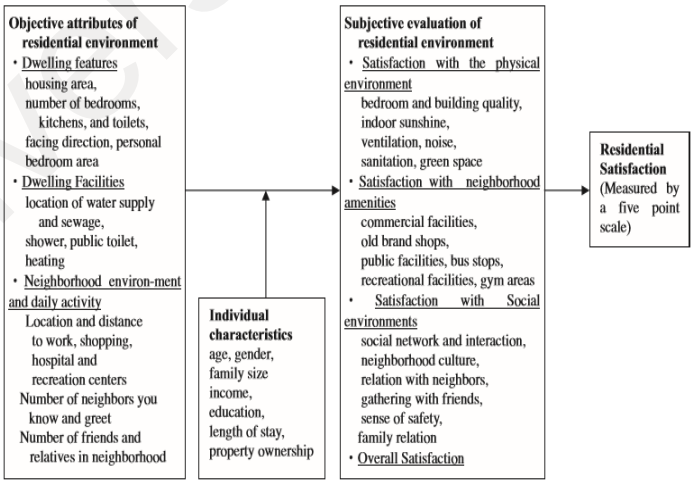
Figure 2.3: Multi-faceted for Residential Satisfaction Framework



Source: Mohit (2014, p. 60, Figure 1)

A study by Zhang (2016) proposed a similar residential satisfaction framework as Mohit (2014). The study focused on objective and subjective evaluations of residential environment where the objective attributes are dwelling features, dwelling facilities, and neighbourhood environment and daily activity, while subjective evaluation are the satisfaction with physical environment, satisfaction with neighbourhood amenities and satisfaction with social environments.

Figure 2.4 : Residential Satisfaction Framework



Source: Zhang (2015, p. 7, Figure 3)

Based on the previous definition by the researchers in defining neighbourhood satisfaction, as an overall, neighbourhood satisfaction in urban context can be define as

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an assessment of the residents on their current living and quality of environment that included the assessment on the facilities and services provided in the urban neighbourhood, trust and confidence in the community, the landscape of the neighbourhood and the neighbourhood is known as a good place to raise children. It is important to have a better quality of neighbourhood environment as more and more people will move to urban areas due to job and employment requirements and to have a better QoL. At the same time, people want their children to grow up in the good places that provide adequate facilities to obtain better education and social activities.

2.2.3 Neighbourhood Attributes

Attributes can be defined as a 'quality proper to a characteristic of a person or thing (Zinas and Jusan, 2010) and can be defined as a features or aspects of products or services (Valette-Florence and Rapacchi, 1991). Botschen et al. (1999) defined attributes as characteristics of product or services or behaviour that are preferred or sought for by consumers. Attributes are often known to have a reasonably concrete value that reflects physical or perceptible characteristics in a commodity (Gengler et al., 1999). Valette-Florence and Rapacchi (1991) see attributes as characteristics or aspects of goods or services. Although agreeing with all of these conclusive views, attributes can be seen as the inherent and physical characteristics, properties or characteristics that characterise a product or individual.

As the neighbourhood is also known as an integrated unit in a planned urban area that is related to a larger community, neighbourhood attributes are found to be important in urban life satisfaction. Neighbourhood attributes can affect people's QoL especially in urban areas where the involvement of the community in urban neighbourhood is an essential ingredient of sustainable housing (Choguill, 2017). People's well-being and health quality can also be affected by the conditions in the neighbourhood along with the

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condition of the housing. Balestra et al. (2013) claimed that neighbourhood can influence people's QoL in a variety of ways. First, because of the physical attributes, poor air and water quality will adversely affect people's well-being. Giving adult places to exercise and places for children to play in a playground that is free from litter, crime, abuse and pollution will reward better health. Second, in the social context, social ties between people living in the community can also influence people's well-being through mutual confidence and a sense of harmony between neighbours. The strong relationship between the neighbours would make it easier for them to work together to achieve their goals, such as a cleaner and safer public space in their neighbourhood. Access to travel, access to job opportunities and public services may also have an effect on people's well-being instead of the physical and social environment.

Neighbourhood attributes can be presented by social, physical, economic and environment. Sirgy et al. (2002) develop a conceptual model by proposed three neighbourhood attributes that can affect to resident's satisfaction. The attributes are social, physical and economic features. The domains of social features are integration with neighbours, outdoor play space, people living in the neighbourhood, crime level and interracial relationship in neighbourhood (Prementier, 2011; Basolo and Strong, 2002; Parkes et al., 2002). For economics features, the domains are home value in the neighbourhood, cost of living, socioeconomic status, and neighbourhood improvement (Sirgy, 2002; Salleh, 2012; Wakekoro, 2015). These studies are supported by Salleh (2012), who examined the neighbourhood features that can contribute towards overall satisfaction by neighbourhood satisfaction.

In a study by Cao (2016), Campbell's model (Figure 2.5) was used to connect neighbourhood attributes and life satisfaction through perception and residential satisfaction. Previous studies on QoL were found to be lacking as they were generally based on conceptual and most of the studies focused more on environmental amenities,

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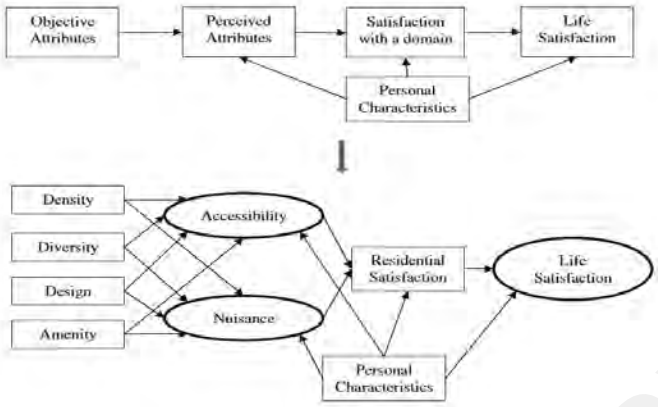
which caused limitations. Campbell's model explained the effect of neighbourhood attributes and life satisfaction.

Figure 2.5: Campbell's model



Source: Cao (2016, p. 2, Figure 1)

From the Campbell's model, personal characteristics found important elements of perceptions, satisfaction with domains and life satisfaction and there are two mediating process between objective environmental attributes and life satisfaction. The mediator are perceived environmental attributes and satisfaction with residential environment. In the USA Minneapolis-St. Paul metropolitan area, the study also used Campbell model to measure the affect of neighbourhood characteristic and life satisfaction. The study focuses on density, diversity and design of the built environment and environmental amenities such as open space and residents' positive and negative perceptions on accessibility and nuisance that categorize as objectives attributes. As a conclusion neighbourhood attributes can be defined as a feature in the urban neighbourhood area where each of the features are categorized into few groups or category such as physical attributes, social attributes, economic attributes and environment attributes.

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2.2.4 Housing Attributes.

Most housing studies have concentrated on housing design, which focuses solely on the physical, structural, and functional aspects of housing. There is also a need for research into how people perceive their housing and how it impacts their lives. Measuring the housing satisfaction has become important in order to ensure peoples are satisfied with their housing and services provided in their living area. (Hayward, 1977; Lawrence, 1987; Varady and Carrozza, 2000 ; Mohit, 2010). Housing is the most important component of urban economy development. The Maslow's Theory Hierarchy of Needs highlighted that housing forms the most important needs as compared to security, food, and love. Housing is an asset that has a great impact on societal well-being. Housing aspiration and affordability also play important roles in neighbourhood satisfaction (Loo, 1986; Varady and Preiser, 1998).

Economic literature draws special attention to the concept of housing but there is no specific definition on defining housing. There are different concept by different researchers. Housing defines by Smith (1988) as commodity, Ricardo (1817) defines housing as tangible asset with potential return and Marshal (1890) defines housing as capital that similar to machine, if it operated by worker, but as a commodity if it is not operated. Henilane (2016) in his study stated that the concept of housing has changed depends in the politics, economics, and other field. Housing can be defined as dwellings provided for people and housing also can be define as building or building structure complying with requirements of laws and regulations and where the individuals with their families may live. Housing also can be described as specific and relatively limited, physically, biologically socially close place where people and groups of people can live their biosocial life by receiving services, performing house chores and other biosocial activity. Housing nowadays focus more on benefits and cost of the housing. The benefit that highlighted such as comfortable of the housing, convenient and appropriate, but at

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the same time also energy-efficient, the affordability of buying the housing and construction and maintenance should be proportionate to the benefits that can be obtained from this housing (Melnikas, 1998).

Attributes are classified into two levels by Olson & Reynolds (1983), which are basic attributes and abstract attributes. Abstract attributes are characterised as clearly perceptible physical characteristics of a product, e.g. price, colour and weight (Vriens and Hofstede, 2000), relatively intangible characteristics, such as style and brand (Lin, 2002), or perceived value or value (Botschen et al., 1999). As it relates to housing, Mahmud (2007) classifies concrete attributes into two classes, namely, aspect and relationship. He sees abstract attributes as the housing consumer's perceived "meanings."

Many researchers have shown that housing attributes are divided into intrinsic housing attributes and extrinsic attributes. Intrinsic attributes are interior living space (Cupchik, Ritterfeld, and Levin, 2003) and extrinsic attributes are exterior design and exterior space (Bhatti and Church, 2004) to neighbourhood and locational indicators such as environmental qualities. Housing features are divided into two types known as dwelling and environmental features (Boumeester, 2011). Housing attributes are integral to shaping perception about housing quality which is correlated with feelings about neighbourhoods. Housing considered as a basic need and most valuable good to consume. Inhabitant QoL is determined by the state of a housing and good quality housing attributes plays an important role in improving public health, QoL, and strengthening social cohesion (Kahlmeier et al., 2001; Aliu and Adebayo, 2010).

Rashid et al. (2013) in their study proved that housing attributes are important in determining neighbourhood choice that can affect neighbourhood satisfaction. The study focuses on the environment of the housing and neighbourhood area. Safety, provision of facilities/services and social environment identified as a housing attributes in measuring the neighbourhood satisfaction. From the definitions of housing and

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attributes from the past literature, housing attributes can be defined as housing features that can satisfied the residents in the neighbourhood area. As this study focusing on urban neighbourhood, satisfaction on housing attributes considered as how the urban residents evaluate on choices of the housing types, the affordability to own a house, the location of the house, the physical and safety of the housing area. These attributes are considered as an important features as there are more people move to urban areas to enjoy a better QoL and they are expecting that they are able to reside in the area that can give a better places that affordable within their financial capability and live in a safer housing environment.

2.3 Malaysia Experience in the context of neighbourhood and housing culture

Several disciplines, including cultural anthropology, cultural geography, architecture, and housing studies, have suggested obvious links between culture and the physical environment (Pandey, 1990). Culture manifests itself in both physical objects and subjective reactions to the environment (Fan Ng, 1998, p. 57). Thus, the concept of culture and its manifestations appear not only in people's perceptions, beliefs, values, norms, customs, and behaviours, but also in the design of objects and the physical environment, including houses and neighbourhoods. Malaysia's development has accelerated year after year, allowing the country to keep pace with other developing and developed countries. As the term "development" is challenged, it includes not only the presence of various skyscrapers, but also the efficiency of public transportation, housing development, and the reduction of community problems such as poverty. These developments in Malaysia may have an impact on the residents' quality of life (QOL), whether the impact is positive or negative (Rosli et al., 2018). Quality of life is considered one of the most important dimensions for sustaining any urban development (El Din, 2013).

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In today's housing market, the developer offers various types of houses for sale to the buyer. In Malaysia, residential development is carried out either by the government through relevant agencies or by the private sector. Housing is a basic need for people from all walks of life. Landed residential (buildings on land) and stratified residential (buildings on land) are the two main types of housing in Malaysia (multi levelled buildings). Detached houses, semi-detached houses, linked-houses, clustered houses, townhouses, and shop houses are all the other types of houses in the landed residential area. While flats and apartments consist of the stratum type (Samsudin, N. A., & Idid, S. Z. A., 2016).

There have been a few research in Malaysia who have focused on neighbourhood and housing satisfaction, with the study being closely related to quality of life. Study by Mohit (2010) assesses residential satisfaction of newly designed public low-cost housing dwellers in Kuala Lumpur, Malaysia, using 45 variables divided into five categories: dwelling unit features, dwelling unit support services, public facilities, social environment, and neighbourhood facilities. The study's finding shows that residents are moderately satisfied with dwelling unit support services, followed by public and neighbourhood facilities, but not with dwelling unit features or the social environment, which have a higher percentage of respondents who are dissatisfied. The residential satisfaction index has a high positive correlation with dwelling unit features, the social environment, support services, and public facilities, but a low positive correlation with neighbourhood amenities.

Salleh (2008) using a case study of a fast-growing state of Penang and a less-developed state of Terengganu, this study looks at how factors like dwelling units, housing services, and neighbourhood facilities and environment affect people's satisfaction in private low-cost housing in Malaysia. From the findings, it shows that the

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satisfaction levels with dwelling units and services provided by developers are generally higher than with neighbourhood facilities and the environment. Poor public transportation and a lack of children's playgrounds, community halls, car parks, security, and disability facilities are factors that contribute to low levels of satisfaction with neighbourhood facilities and environment.

Tan (2016) conducted another study to determine the residents' level of satisfaction with their neighbourhood and which dominant attributes can predict the residents' level of neighbourhood satisfaction in the green-accredited township. According to the research findings, integrated connectivity and accessibility, as well as environmental quality, have a significant influence on neighbourhood satisfaction. Residents in the green-accredited neighbourhood, on the other hand, were dissatisfied with the level of security and community participation. There has been an increase in media attention in Malaysia on issues relating to sustainability in the built environment, as many housing developers begin to build environmentally friendly buildings and develop sustainable neighbourhoods. According to Tan (2013), Malaysian consumers are becoming more concerned about environmental issues and are increasingly going green. It may seem to that Malaysian home buyers are conscious of where they live, as there are house buyers who may not only live in a typical home but also in a neighbourhood that does not adversely impact the environment.

Mohit and Ali (2016) to investigate the relationship between residents' neighbourhood satisfaction and their quality of urban life in a middle-income housing area of Kuala Lumpur, Malaysia. The study's findings indicate that residents are satisfied with their current QOUL, but that if no action is taken, it will deteriorate. As a result, several recommendations are made to improve residents' QOUL. This study focusing on

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social, physical and economics attributes in measuring the neighbourhood satisfaction and quality of life.

Zainal et al. (2012) explored the relation between housing conditions and the quality of life of Malaysia's urban poor. Housing conditions include the physical state of dwellings, the type of dwellings, the tenure of the dwelling, the surrounding environment, and the availability of amenities. 50 items on self-reported health, safety, and social support are used to assess quality of life. The findings revealed a small but statistically significant positive relationship between housing conditions, health, safety, and social support, providing empirical evidence of the relationship between housing conditions and quality of life.

Bakar et al. (2016) focused on spaces within a housing area to assess residents' satisfaction with the Taman Melati Mastika (TMM) in Kuala Lumpur and to understand how they viewed their quality of life based on the housing environment and availability of green open space. In TMM, Kuala Lumpur, this study examines the types of outdoor spaces (front yard-front lane and backyard-back lane) and their aspects and utilisation, as well as the quality of housing spaces in relation to users' quality of life. The assessment of the quality of life in green open space is based on three factors: the safety level of the neighbourhood and park, health issues related to the housing environment and park, and satisfaction with the housing amenities and park facilities. According to the findings of this study, residents are satisfied with the existing spaces within their compound and nearby to it, which contributes to their overall satisfaction with living in the area. It has been established that the quality of space and efficient use of housing areas can lead to a higher quality of life in the Terrace housing area.

Many countries, including Malaysia, have adopted Clarence Perry's recommendation in designing housing layouts. Previous research (Qureshi and Siong,

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2011) revealed that all residential areas in Putrajaya are based on Clarence Perry's 'neighbourhood' concept. Based on Azmi et al. (2018), Clarence Perry's adaptation of the neighbourhood concept in equatorial countries such as Malaysia fails to encourage the community to walk even within their neighbourhood. The majority of respondents believe that the lack of willingness to walk in Malaysia is due to poor neighbourhood design in terms of community facilities planning. They also believe that Malaysians dislike walking and engaging in other healthful activities. As a result, communities today continue to rely on automobiles as the primary mode of transportation to travel from their homes to basic community facilities such as schools, local shops, and playgrounds. In the study also stated that reveal that In Putrajaya and Shah Alam, several community services that are available in urban neighbourhoods are not available in strategic places. The sustainable approach can be applied to neighbourhood planning to increase people's capacity to walk around in urban areas.

In this decade, sustainable development has emerged as a critical tool in the planning and design of building structures and infrastructure. Land use development for neighbourhood construction should be protected from overuse and damage. Land use development for the neighbourhood should be protected and saved for future generations to use. Rapid urbanisation has exacerbated the degradation of environmental quality, particularly the quality of water, air, and noise. Unsustainable urban development has had a significant impact on urban neighbourhood infrastructures, resulting in a negative impact on the environment and urban quality of life. Malaysia should have long-term planning and design for its neighbourhoods so that future generations can benefit from this type of growth. However, less attention is paid to this form of development, which requires specific attention, particularly in small-scale green areas (Zakaria et al., 2012).

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2.4 Housing Attributes and Housing Affordability Issue in Neigbourhood Satisfaction

Housing is the most important components of urban economy. The Maslow's Theory Hierarchy of Needs highlighted that housing forms most important needs compared to security, foods and love. Housing be a valuable asset that has a great impact on society well-being. Housing aspiration and affordability also play an important roles in neighbourhood satisfaction (Mohit et al., 2010; Riazi and Emami, 2018). Nowadays, housing issues seems important especially in urban areas as the population increase as urbanisation is increased. However limited financial can be a problem to the resident in achieving their desired in buying a house (Zainon, 2017 ; Hassan et al., 2019). The housing demand also depends on the variety choice of the housing, the housing affordability that provided in the neighbourhood area, housing areas near with facilities and services, the physical condition and safety in the housing area (Mohit et al., 2010 ; Riazi & andEmami, 2018 ; Osumanu, 2016). House is a home and are intrinsically valuable to people as house is not only provides a shelter from extreme weather conditions and place where to sleep and rest but a house also is a centre of family life where there is a place where the children are born and raised and socialisation takes place (Kiel and Mieszkowski, 1990; Balestra, 2013).

Affordable housing become more important issues and become greater focus by most of the researchers and it happens in the developed countries and developing countries. Managing the increase of housing price and reducing the effect of housing issue is a great potential benefit to every society. The study by Nwuba, Kalu and Umeh (2015), in the context of Nigeria demonstrated that there is a positive impact on affordability and the determinants are household income, household savings, educational and building construction period. There are also negative impacts on accessing home ownership which is household size, current rental housing expenditures and non-housing expenditures of

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the household, cost of land, building cost inflation and building cost relative to income. In his study also concluded that higher levels of urban homeownership are likely to be achieved if residential land is available at relative low costs, if there are efficient measures to enhance incomes and savings and curtail increases in building costs and urban house rent.

Hu (2013) in his study examined the effect of homeownership status on individual subjective well-being indicators in urban China. The result showed that homeownership have a strong positive effect on both housing satisfaction and overall happiness in urban China and homeownership status might also contribute to other possible aspects of life satisfaction except for housing satisfaction. The result indicated that females have much value in housing satisfaction on owning a house than males. People in large cities have to face much heavier financial burden than in small cities and affordable houses in China are usually located far away from city centres and equipped with poor infrastructure.

In Malaysia, young people who live in urban area such Greater Kuala Lumpur are currently having major issue in owning a house because the housing price in Greater Kuala Lumpur rise rapidly and they are not afford to own a house (Zyed et al., 2016). This young adult represents age group between 20 -35 years old and most of them are active population in migration . Based on their results, over 70% of young people choose to live in urban area and the main reason they choose to stay in urban area is probably near to their working place and availability of facilities in urban location (Leh et al., 2017). Supported a study conducted by Baqutayan (2015), high salary, QoL and cultural events are the reasons why a majority of the Malays prefer to live in the cities. Nevertheless, the living cost is high in the city and the lowest housing/rent price in Kuala Lumpur is almost more than 30% of the majority of householders' income.

According to Bujang and Jiram (2015), gen-Y (born in 1979–1994) chose to own a house with a price of below RM200,000 and they were having difficulties to buy a

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house. Based on their study, it showed that the high housing deposit and high monthly commitment were the reasons for their difficulties to own a house. However, the result from the study by Baqutayan and Ariffin (2016) indicated that the middle-income group in Malaysia was the biggest group to have main issues related to house affordability, where the issue were related to housing price. The result from the study showed that the exact issues faced by the respondents were constant increase in housing price, stricter housing loan conditions, and less choice for the middle-income group to find and own a house at the location they preferred. According to Deputy Finance Minister, Datuk Donald Lim Siang Chai, the property price is expected to rise from 10% to 20% in the coming years.

The Malaysian government has introduced MyHome, *Perumahan Rakyat 1Malaysia (PR1MA), Rumah Mesra Rakyat (RMR1M), Program Rumah Mampu Milik (RMM), Program Penyelenggaraan 1Malaysia (TP1M),* MyDeposit Scheme, Housing Loan Scheme, People's Housing Programme/ *Program Rumah Transit*, and My Beautiful New Home (MyBNHome). Subsidies and tax relief also been provided by the government to homebuyers and developer and contractors. Malaysia has developed and implemented housing policy to ensure that all level of income have access to adequate affordable housing based on their income. This affordable housing project are managed by private and public housing developers where most of the housing project has giving priority to the low-cost housing programme (Teck-Hong, 2012).

Based on the above studies by previous researchers (Bujang & Jiram, 2015; Baqutayan and Ariffin, 2016; Teck-Hong, 2012), most of the housing problems faced by young people are from Greater Kuala Lumpur. As a conclusion, housing affordability should be evaluated as a part of satisfaction on housing attributes as it can affect the overall neighbourhood satisfaction. This is to support the current issues that faced by the

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urban population. It is important to include housing attributes as the factors that contribute towards neighbourhood satisfaction as it has not been covered by previous researchers.

2.5 Understanding the Concept of Neighbourhood Satisfaction

There are mixed reviews from researchers on the study of neighbourhood satisfaction that can affect QoL. This section of this chapter emphasises the theories adopted in the study that provide the relevant theories and basis of understanding the concept of neighbourhood satisfaction. Well-being is the most natural aspect of subjective QoL. In terms of assessing one's own QoL, the QoL is seen here. The problem of well-being is accompanied by an explanation: if we are told that things don't go well, what has already been said can generally be simplified as follows: "Things don't go so well at work (home)"; "My well-being isn't what it used to be". It means well-being is directly related to how things work in an objective environment and to the external factors of existence.

Satisfaction of life is also one of the parts of the integrative theory in QoL. When people are asked whether they are happy with life, they always say something is good or something else is wrong. People are generally less satisfied with life than their welfare state would indicate. People tend to feel good, but they are not very satisfied, they are just satisfied. In retrospect, there is always something to be dissatisfied or disgruntled with (Ventegodt et al., 2003). This section specifically describes the theories that influence neighbourhood satisfaction

2.5.1 Theory of Utility Maximisation

The Theory of Utility Maximisation explains how individuals are able to express their preferences over commodity bundles. The individuals can rank the bundles as the higher ranking showed it is the more preferred by the individual. Rational individual will

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pursue maximisation of their utility within their constraints as the budget constrain being the most important factor (Fuentes and Rojas, 2001). The utility maximisation theory has become most important over the last three decades in modelling residential location choice. It is show that the individual make a rational decision making that can maximise their utility choice (Schirmer et al., 2014; Straszhem, 1987). Based in utility theory, it can be concluded that individuals will do their best, despite their specific housing situation, to maximise their utility. Of this reason, the degree of satisfaction resulting from a given housing situation will eventually be a significant determinant of individual well-being (Straszhem, 1987).

There are two theories that are related to the utility maximisation theory that reflect neighbourhood choice, which are housing demands theory and housing needs theory.

2.5.2 Housing Demand Theory and Housing Needs Theory

There are two theories that reflects to neighbourhood choice which are housing demands theory and housing needs theory. Housing is a key element that reflects the choice of neighbourhood and need more consideration. It is important to know what are the key determinants of individuals' neighbourhood selection as the individual chooses to reside in particular neighbourhood are correlated with the socioeconomic characteristics of neighbours. Overall, housing satisfaction theories are all centred around the notion that housing satisfaction measures the difference between the real and desired (or desired) housing and neighbourhood situations of households (Galster 2001; Galster and Hesser 1981; Lu 1999; Toscano and Amesto, 2008). Neighbourhood satisfaction is thought to come out of a combination of three main factors: (1) socio-demographic attributes, (2) subjective neighbourhood assessments, and (3) objective neighbourhood characteristics. Neighbourhood satisfaction theories share a common notion that the

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degree of satisfaction of a person with his or her neighbourhood is essentially the product of, or lack of, the congruence between the real and desired situation of a person (Grogan et al., 2006).

Therefore, individual make judgments about their living conditions on the basis of their needs and aspirations. Satisfaction with one's residential situation indicates a lack of complaints and a high degree of agreement between actual and desired situations. On the other hand, the incongruity between their actual housing and the conditions needed may lead to dissatisfaction. Housing demands theory stated that household rents or purchase a housing unit because of spatial fixity, a neighbourhood that provide a set of public services and tax obligations. Housing demands is depending on the income and the demographic characteristics and it depends on the housing price. Housing price is very important as it is part of household consumption and the preferred location of the unit of the housing strongly influenced by the household members' job location (Arnott, 1987). Zheng, Xia, Hui, and Zheng (2018) in their study stated that the sensitivity of housing demand to income changes had important implications for the evolution of housing affordability and the behaviour of urban households. Housing demand and income are inter-related, where if there are changes in housing consumption, it would result in the individual consumption on non-housing goods, participation in local amenities, and investment in social capital (Zheng, Xia, Hui, and Zheng, 2018; Teck-Hong, 2012).

As mentioned by Housing Demand Theory household will do their best to fulfil their needs and maximise their satisfaction as they used their income to invest and purchase a house that can meet their desired housing that provide with a set of public services and amenities in their neighbourhood area. Lu (1999) noted that neighbourhood satisfaction theories share the common notion that an individual's level of satisfaction

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with their neighbourhood is largely a product of, or lack of, congruence between an individual's actual and desired situation.

The Housing Needs Theory (Rossi, 1955) introduced the notion of housing needs to conceptualise residential satisfaction / dissatisfaction. The difference between their current and desired housing needs creates dissatisfaction or stress to the households. When the household feel stress and dissatisfaction from current residents, they will migrate and looking for adjustment to better housing needs. The original hypothesis by Rossi (1955) that residential mobility is the primary means of changing housing use remained the normative starting point for all subsequent research (Short, 1978). However, Rossi 's theory stated that housing needs or frustration emerge largely from changes in the life cycle of the household has not avoided challenges. Brown and Moore (1970) argued that housing needs could also be unmet due to environmental and household shifts. McCarthy (1976) noted that housing needs also need to be balanced by higher income to facilitate relocation.

As a conclusion, neighbourhood satisfaction is important as the characteristics of all the neighbourhood attributes could affect neighbourhood satisfaction and QoL. These two theories explained about individuals' housing investments and housing costs. Furthermore, the people expected to receive a high level of satisfaction of their choice of neighbourhood, whereby the purchase or rental of their house was based on their eligibility of income and affordability. Their satisfaction level is a comparison based on their expectations of the neighbourhood surroundings with the current situation they received in the neighbourhood.

2.6 Hypotheses Development

QoL can be described as subjective well-being, happiness, life satisfaction, and good life (Oleson, 1990; Shin & Johnson, 1978; Veenhoven, 1996; Diener and Suh, 1997;

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Evans, 1994). QoL can be measured through citizen satisfaction by understanding their needs and implementing the desired outcomes in the future (Sedaghatnia, 2013). Recently, most of the researchers paid attention on QoL that involves education, medical, social sciences, and families. Discussion on the liveability of cities is also part of the important topic in discussing people's QoL, especially in urban areas (Howley et al., 2009 ; Kurdoglu, 2016; Sedaghatnia, 2013), which can be defined as urban QoL. Urban QoL has no clear definition and there is no agreed definition to define it as it is a complex concept that might be defined differently by various disciplines. The term of urban QoL describes all the relationship, dynamics, and reticular relationship that exist between physical features (El Din et al., 2013).

El Din et al. (2013)suggested that subjective well-being (SWB) and objective well-being will assess the QoL. Objective well-being indicates an objective human condition in society. Their characteristics are based on quantitative figures, including infant mortality, crime rates, literacy rates and economic performance indexes, doctors per capita and any other data that can be obtained without explicitly analysing the perceptions of individuals (Diener and Suh, 1998).

Subjective well-being can be obtained through self-report on how they evaluate their lives as a whole. Elements under subjective well-being are life satisfaction, pleasant, and unpleasant affects (Sedaghatnia, 2013; El Din et al., 2012). Hu et al. (2016) studied on job salary as a measurement to subjective well-being. Luo and Wang (2010) also examined teacher's salary as an external satisfaction to measure well-being. A similar study was also conducted by Li (2015) who stated that low income could not be ignored as it would affect people's subjective well-being. Kahneman and Deaton (2010) in their study used income as a life evaluator on well-being and concluded that high-income earners used income to buy life satisfaction and not happiness.

A study by Yahya and Selvaratnam (2015) highlighted that health is a part of QoL,

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where health is an important factor to improve QoL. Health and well-being are related to each other; meaning that, a lack of concern on health will lead to death as poor health can diminish people's QoL (Bowling et al., 2003). Rezvani et al. (2012) used health condition and health facilities as a subjective approach to measure and evaluate urban QoL. A similar study was also conducted by Karimi & Brazier (2014) who used health as a measurement to urban QoL.

Education is also known as an important aspect of QoL and contributes significantly towards the reduction in poverty and inequality in society. Education is the main tool to transform better life by using the transformation of the knowledge by providing new technology that needed to establish and improve QoL (Yahya & Selvaratnam, 2015). To measure the impact of education domain as a measurement to QoL, the assessment will be on whether the respondents agree that the level of education can give an impact towards employment, how level of education is associated with better job opportunity, and how academic knowledge/ university degree is associated with better job opportunities (Hayward, Pannozzo, and Colman, 2005)

2.6.1 Neighbourhood Attributes (Socio/Physical attributes, Economic attributes and Environmental attributes) and Neighbourhood Satisfaction

Sirgy (2002) developed three conceptual models by proposed three neighbourhood attributes that could affect resident satisfaction, namely social features, physical features, and economic features. The domains of social features are integration with neighbours, outdoor play space, people living in the neighbourhood, crime level in the neighbourhood, and race relation in the neighbourhood (Prementier, 2011; Basolo and Strong, 2002; Parkes et al., 2002).

Physical features consist of home and yards, landscape, street lighting, nearness to neighbourhood facilities, and crowding and noise level in the neighbourhood. For

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economics features, the domains are home value in the neighbourhood, cost of living, socioeconomic status, and neighbourhood improvement (Sirgy, 2002; Salleh, 2012; Wakekoro, 2015). This was supported by Salleh (2012) who examined neighbourhood features that could contribute towards overall satisfaction by neighbourhood satisfaction. A different study by Permentier et al. (2011) evaluated the relationship between neighbourhood attributes and neighbourhood satisfaction and the perception of neighbourhood reputation. The study concluded the objective attributes contributed more in explaining perceived reputation than neighbourhood satisfaction. Subjective attributes are more important to explain neighbourhood satisfaction. The study found that the neighbourhood features and social/physical factors can affect neighbourhood satisfaction and overall QoL.

Fleming, Manning, and Ambrey (2016) found a different finding in which level of crime was correlated with neighbourhood satisfaction. Temelova and Slezakova (2014) studied the level of satisfaction of elderly people in Prague regarding public green space and safety. The results showed that there was a positive relationship between public green space and safety with neighbourhood satisfaction. In a study by Hur and Morrow-Jones (2008), they examined the impact of physical attributes that could impact on homeowners and neighbourhood satisfaction in Franklin County, Ohio. General appearance, density of housing, trees, safety from crime, cleanliness, pedestrian access to stores, local government services, and accessibility to recreational opportunities were the components of physical attributes that could influence homeowners' satisfaction on the neighbourhood. The results from the finding showed the most significant factors to neighbourhood satisfaction were general appearance and density of housing. Nevertheless, satisfaction with trees, satisfaction with pedestrian access to stores, and satisfaction with racial composition in the neighbourhood were not significant influences for the satisfactory neighbourhood group.

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Ibem et al. (2015) examined neighbourhood satisfaction among the residents of public housing in the urban areas of Ogun State, southwest Nigeria. The result from the study showed that poor access to basic services and infrastructure facilities caused dissatisfaction to the neighbourhood environment in the housing estate. Dissatisfaction also came from the social and economic environment features in the estates. From the study, availability and access to services and infrastructural facilities, cleanliness, socio-economic environment, location of homes, noise, privacy, and security in the estates were the important features that influenced neighbourhood satisfaction.

In the context of Malaysia, noise, crime rate, accidents, security, and community relations are the determinants for housing satisfaction. The results showed that neighbourhood social environment had a higher percentage of respondents with a low level of satisfaction in Sungai Bonus public low-cost housing (Mohit, 2010; Aiello, 2010). It is supported with the findings from Sedaghatnia (2013), whereby the respondents showed that safety gave the lowest satisfaction to the residents in the centre of Kuala Lumpur. Community interaction in housing areas and neighbourhood, demographic background, and place attachment were the social factors under the study by Salleh et al. (2012). Crime and distance to the city centre had no significant effect to satisfaction. In addition, Salleh's (2008) findings showed that neighbourhood facilities significantly impacted low-cost housing satisfaction.

However, it was shown later by Mohit (2016) in his study in Kuala Lumpur on the subjective perception of the residents regarding the neighbourhood environment and their QoL, that the neighbourhood physical features were highly dependent on the urban design/aesthetics of the neighbourhood, followed by the variables of nearness to facilities, street lighting, and landscape/greenery. Access to public transport and noise level in the neighbourhood had a negative effect upon on the physical features of the neighbourhood. In terms of social condition aspect, safety in the neighbourhood was the most important

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factor for neighbourhood satisfaction, followed by community cohesion, race relation. The least important were open space, sense of privacy at home, and ties with people in the community. Social interaction with neighbourhood and crime level in the neighbourhood showed a negative effect upon the social features of the neighbourhood.

Salleh (2012) highlighted dwelling unit, housing area, environment, education, health, public facilities, recreational facilities, and public transport as the physical features of neighbourhood satisfaction. Whereas, interaction with neighbours, social interaction, ethnic relation, public safety, religious facilities, and politics facilities were the social features of neighbourhood. The study was conducted in Pulau Pinang and the finding showed that the residents in urban neighbourhood were generally satisfied with the physical and social features in their neighbourhood. Nevertheless, there were some features that gave dissatisfaction to the residents, such as safety, public transportation services, political activities, and living cost, which would affect their QoL.

Therefore, this study proposes the following hypotheses:

H1: Social/physical attributes have a significant effect on neighbourhood satisfaction.

H2: Social/physical attributes have a significant effect on quality of life.

Some suggested that residential environment can contribute significantly towards neighbourhood satisfaction (Cerin et al., 2016). The residential environment can be described by objective criteria such as construction period, architectural style, spatial structure, amount of green space, and geographical area as the housing perception of the neighbourhood and the surrounding (Adriaanse, 2007). There is a direct effect on human health between the quality of the living environment and well-being, which can lead to dissatisfaction and low QoL in a poor environment. Ozdamar (2016) discussed the effect of air pollution and crime issues on the well-being of citizens in Turkey. Based on environmental variables that could affect neighbourhood life satisfaction, air pollution

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was an indicator. It was shown from the findings that people who self-reported to be exposed to air pollution and crimes had an average of 0.2–0.5 fewer satisfaction score than those who were not exposed to air pollution and crimes. In order to enhance air quality, air pollution plays an important role in subjective well-being, as the effect of air pollution on well-being would require extra monetary value (Welsch 2002; 2006; Luechinger, 2009; 2010; Levinson, 2012).

Soil, air, and water are the environmental quality measures that can impact human well-being and QoL. Air pollution takes into account and concentrates on transport emissions of PM10 and ground-level ozone and CO_2 emissions. Access to clean water is key to human well-being in terms of water measures. The findings of this research indicated that environmental quality, such as water and air, had a huge effect on human well-being (Streimikiene, 2015). Wokekoro's (2015) research evaluated the satisfaction of residents in the municipality of Port Harcourt, Nigeria, with neighbourhood quality attributes. The results showed that the eight communities in Port Harcourt were dissatisfied with community cleanliness, protection of life and property, energy supply, water supply, residential planning, provision of basic services, hospitals/clinics, police stations, waste collection and disposal, public schools, and shopping facilities.

A study done by Leslie and Cerin (2008) found that there was a negative relationship with neighbourhood satisfaction between traffic load and congestion. Newman and Duncan (1979) also supported the study, in which they found that there was no correlation between traffic flow and neighbourhood satisfaction. Traffic levels were also shown to have no significant effect on community satisfaction (Herting and Guest, 1985). Hur and Morrow-Jones (2008) indicated that traffic problems had negative effects on neighbourhood satisfaction, in contrast with the research by Appleyard (1981) and Bosselmann (1987). Their studies found that lower volumes of traffic resulted in higher resident liveability. It acted as a crucial factor for residents by reducing their community

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satisfaction when traffic volume exceeded alarming limits (Lipsetz, 2001). It is important to examine the impact of traffic flow on community satisfaction in this new age, with high rates of urbanisation in urban cities. The majority of people in the cities use private transport to drive, which can contribute to heavy traffic flows.

In their report on the UN-World Habitat Report, Ghonimi, and El Zamly (2017) noted that it is necessary to shift and concentrate on transport planning as cities continue to change. Results from the study showed that the satisfaction of the neighbourhood was correlated with a high amount of traffic on main streets and heavy traffic congestion during peak hours. This study indicated that in assessing community satisfaction in urban cities, it is important to think about the velocity of traffic flow and the amount of traffic. In this regard, the urban type might have a better effect on movement activity, which could increase the social, economic, and environmental impacts of sustainable growth.

Hur and Morrow-Jones (2008) observed that neighbourhood comparisons of physical characteristics in the neighbourhood had more important effects on safety and social problems. Some of the social challenges that occurred in urban communities and could impact community satisfaction were issues of homelessness and drug abuse. This resulted from the weakness of experience in solving such social problems as well as poor coordination at the city level (Temelova et al., 2017). In any city, property crime and vandalism often occur, creating social problems that can impact the neighbourhood environment (Lagrance, 1999).

Previous research indicates that the physical environment is positively associated with neighbourhood satisfaction as a result of most research on physical environment measured neighbourhood satisfaction (Herting and Guest, 1985). Greater pedestrian/traffic security, criminal safety, appealing aesthetics, access to destinations, variety of destinations, access to parks, and lower residential density were some of the characteristics of physical environment addressed in the study by Lee et al. (2017). The

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study by Parkes et al. (2002) showed that features of the neighbourhood environment were highly important as compared to demographic variables for neighbourhood satisfaction.

Kerr (2015) evaluated neighbourhood perception on environmental attributes associated with walking and cycling for transport among adult residents. The study put residential density, land use mix-access, street connectivity, pedestrian infrastructure, traffic safety, and crime as the environmental attributes. Ozdamar (2015) explored the effect of air pollution and crime in the neighbourhhood area and their effects on people's well-being. The result showed that individuals who were exposed to air pollution and crimes had lower satisfaction scores compared to those who were not exposed to air pollution and crimes in the neighbourhood area. Permentier et al. (2011) also further found that environmental cleanliness and quality of housing stock in the neighbourhood had a significant effect on neighbourhood satisfaction (Lee and Guest, 1983; Jagun et al., 1990; St John and Bates, 1990; Basolo and Strong, 2002) and affected people's QoL.

There are theoretical propositions explaining the relationship between youth development and well-being. The model developed by Lent (2004) stated that positive development attributes could affect life satisfaction. This model could be used in youth development where positive youth development influenced well-being and health outcomes (Sun and Shek, 2012). Nieuwenhuis (2017) studied relative deprivation and problem behaviours of youth. From the literature highlight in the study, growing up in an affluent neighbourhood led to better life chances as compared to growing up in poorer neighbourhoods (Dietz, 2002; Ellen and Turner, 2003; Galster, 2002; Nieuwenhuis and Hooimeijer, 2016). Even though the causal relationship is not clear, neighbourhood effects were found related to outcomes, such as education, unemployment, health, and deviant behaviour (Nieuwenhuis, 2017). All in all, the environment attributes are the

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factors that can contribute to neighbourhood satisfaction. Therefore, the following hypotheses were proposed:

H3: Environmental attributes have a significant effect on neighbourhood satisfaction.

H4: Environmental attributes have a significant effect on quality of life.

According to Sirgy and Cornwell (2002), economic features could significantly influence neighbourhood satisfaction and contribute to life satisfaction. The relationship between economic features and neighbourhood satisfaction was also confirmed by Mohit (2012) and Shields et al. (2009). In Australia, it was found that economic features' internal and external factors had significant effects on neighbourhood satisfaction and life satisfaction. In their study, it was stated that marital status, health, education level, and income level were internal factors under economic features. On the other hand, Balestra and Sultan (2013) affirmed that access to employment and job opportunities were other pathways through which neighbourhood can influence people's well-being under economics resources.

Erkip (2010) indicated that income and house ownership could influence neighbourhood satisfaction for urban residents in Ankara. Lovejoy et al. (2010) also found that income and household would significantly affect neighbourhood satisfaction in Californian neighbourhoods. The findings were consistent with a previous study by Grinstein, Freeze, and Quercia (2011), who indicated that homeownership was an important predictor of neighbourhood satisfaction for low and moderate-income households and would influence neighbourhood satisfaction and were associated with the overall QoL.

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Shield et al. (2009) examined neighbourhood affected life satisfaction by using social support and socio-economic as the measures in the study. The result showed that there was positive and significant correlation with individual satisfaction. Balestra and Sultan (2013) stated that access to job opportunities and public facilities with efficient transportation could affect neighbourhood satisfaction. This is important to people who reside in urban areas as they can easily find jobs and easily access job opportunities in the neighbourhood area as they do not have to travel far to their workplace. This can reduce their travelling cost. The access to public transport can also reduce travelling cost and travelling time.

Pendall et al. (2014) supported the study by Balestra (2014) in which access to job opportunity was important as it was as a function mainly of what the people are close to rather than what it contains. The study also stated that availability of job opportunities was important in measuring neighbourhood satisfaction. Access to job opportunity can be described as the availability, proximity, and quality of employment opportunities and critical of public service functions. Transportation also plays an important role in shaping the neighbourhood area and it can also affect the economic outcome of the residents, especially low-income households. Muth (1969) and Alonso (1964) examined the roles of transportation costs that led to household location choice. In the study, they argued that households would make a trade-off between housing costs and intra-regional transport accessibility. Housing that is located in the central area with high accessibility to employment will offer lower housing price, but all things are equal. From the study, it can be concluded that if the income elasticity of demand for housing exceeded the income elasticity of demand for savings in commuting costs, higher-income households would choose more distant locations to consume a larger housing bundle, while lower-income households would choose smaller housing with more accessibility features.

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De Vos et al. (2016) added proximity to shops as part of measuring neighbourhood satisfaction in Flanders. The study proved that proximity to shops, leisure activities, public transport, family/friends, and work were important to the residence in the neighbourhood, especially in urban areas. Accessibility of various shops in the neighbourhood area was found as an important role in economic attributes. Shops and retails had a significant impact on neighbourhood satisfaction. A variety of shops and stores in the neighbourhood area will encourage people to consume more. Such studies emphasised the importance of consumption possibilities and urban amenities to the growth and development of cities and regions (Clark, Lloyd, Wong, and Jain, 2002 ; Zenk et al., 2005).

In contrast to the measurement by Sirgy (2002), the economic features only involved were satisfaction with home value, satisfaction of the cost of living, satisfaction with socio-economic status, and neighbourhood improvement. Oner (2017) came out with new outcomes on the importance of accessibility to shops in measuring neighbourhood satisfaction in Swedish urban areas. With high accessibility to shops and stores in the neighbourhood area, it will attract more people to live in that area and lead to neighbourhood satisfaction as the people will feel happy that their neighbourhood area is provided with various shops and stores. This can be described as the individuals enjoying indirect benefits that are associated with the scale of the retail market in close proximity. The effect of retailing on the overall economy and attractiveness of a town can be extended beyond the linear relationship between the sector and the size of the respective local market.

A study in the European cities by Weziak (2016) discovered that dissatisfaction with public transport, cultural facilities, availability of retail outlets, green space, air quality, trustworthiness of people, public administration, and administrational efficiency contributed significantly towards dissatisfaction with life in a city. However, when

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citizens felt secure and were satisfied with their place of living, they were also more likely to be satisfied with life in the city.

In the Malaysian context, socio-economic backgrounds and economic value in the neighbourhood are the economic factors that can influence neighbourhood satisfaction (Salleh et al., 2012). Mohit (2016) found that socio-economic status, neighbourhood improvement/development, house value, and cost of living were the indicators of economic factors that could influence neighbourhood satisfaction. The results showed that all the variables had a significant positive relationship with the components. However, improvement, management, socio-economic status, and house value had higher correlations with the component as compared to cost of living. In another study by Mohit (2016), it evaluated the economic vitality in measuring the dimensions and attributes of liveability of lower-income housing communities in Kuala Lumpur, whereby the dimensions were household income, transportation cost, public transport, and standard of living. The result from the study found that economic vitality was significant in measuring the liveability of the neighbourhood. As a result from the above discussion, the following hypotheses were proposed:

H5: Economic attributes have a significant effect on neighbourhood satisfaction.

H6: Economic attributes have a significant effect on quality of life.

2.6.2 Housing Attributes and Neighbourhood Satisfaction

Generally, housing satisfaction research uses subjective measurement to demonstrate a correlation between housing attributes and neighbourhood satisfaction. Housing is the central point to the everyday life of human beings and plays an important role in providing people's satisfaction and QoL. In the United States (US) study by Lee and Guest (1983), it was found that there was a significant relationship between housing dissatisfaction and neighbourhood dissatisfaction.

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In the Malaysian context, Karim's (2008) findings stated that respondents with good community and facilities in their housing area were more satisfied with their neighbourhood. This study was also supported by Mohit's (2010) that showed that residents were moderately satisfied with the dwelling unit's support services, followed by public and neighbourhood facilities as compared to dwelling unit features and social environment, which had a higher percentage of respondents with low level of satisfaction. Baqutayan et al. (2015) evaluated the impact of housing conditions on the emotion of the middle-income group. The study was conducted to calculate the frequency of number and percentage of the respondents' answers to 'yes' or 'no' questions. The question of 'Are you happy with where you are staying?' gained a result of 71% of the respondents who were happy with the place that they were staying at. This is because the housing price in their area was low and suited their income. It can be concluded that happiness is associated with housing price (Ratcliffe, 2010).

Housing safety is also associated with household well-being, where the safety of the living home area plays an important role in family well-being. Questions in relation to this are such as 'Have you ever worried over the possibility of robbery at your house?' and 'Do you feel depressed when you hear about the crime cases at your place?' Both questions are 'yes' or 'no' questions. The result from the study showed that a majority of people were worried about the safety and security of their housing environment and felt depressed when they heard about criminal cases at their housing area (Baqutayan, 2015).

Housing price is not the only issue that affects human well-being. Concerns regarding housing affordability and hazards, housing quality, and housing safety should not be ignored. A study on housing affordability in Australia by Stone (2011) included many issues like housing size, neighbourhood quality, and location. Meanwhile, a study in Canada by Dunn (2002) stated that housing stress would increase human physical and mental health.

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This is supported by Baqutayan et al. (2015), who studied the housing stress and well-being of the middle-income group. The study used 'yes' or 'no' questions to gain the percentage of the causes of stress and well-being. The indicators of housing stress were safety and security, housing quality, economic development, housing affordability, transportation, and school issues. The result showed that a majority of the respondents were dissatisfied with safety and security, housing quality, and school availability in their housing area. Building features such as number of bedrooms, size and location of kitchen, and quality of housing units were strongly related to residential satisfaction (Ariffin, Nadarajah and Zahari, 2010; Mohit, 2014).

A study by Oh (2000) on housing satisfaction of middle-income households revealed that the residents were satisfied with the space and house price, but were dissatisfied with the size of kitchen, plumbing, and public facilities provided in their housing area. Mohit (2016) assessed residents' satisfaction in double storey houses by using multiple regression analysis. It was indicated that the improvement of two housing design elements, which were study room and family hall, and five neigbourhood elements, such as food stalls, neighbourhood relations, garbage collection, pedestrian walkways, and crime protection, could significantly affect residents' overall housing satisfaction. Pekkonen et al. (2015) and Lane and Kinsey (1980) found that tenure, age of dwelling, and structural quality affected housing satisfaction. The study discovered that there was a negative relationship between age of dwelling and housing satisfaction. A different study on the assessment of residential satisfaction on public housing by Etminani-Ghasrodashti (2017) revealed that built environment variables such as buildings' physical features were the main factors that contributed towards the overall residents' satisfaction. However, social features had little impact on residents' satisfaction.

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Based on the previous studies, most of the research (Ariffin, Nadarajah and Zahari, 2010; Mohit, 2015; Etminani-Ghasrodashti, 2017; Permentier and Van Ham, 2011) discussed more on the physical aspects, social, environment, and building features in examining housing satisfaction and neighbourhood satisfaction. There are various housing and neighbourhood characteristics that determine the level of residential satisfaction that vary by housing types, tenure, countries, and culture, and require further studies to determine residential satisfaction (Mohit, 2016). Housing choice plays an important role in structuring the cities and positively affects the satisfaction of the people in the neighbourhood. People will make sure they have a good choice in choosing their neighbourhood area and types of housing as housing is difficult and costly to demolish or modify. The people will decide first and consider the neighbourhood area where they will stay in the future, in which the consideration is based on their housing choice and preferences. If the types of housing on offer in a particular neighbourhood area are not suitable based on their preferences, they will simply choose somewhere else to live that suits their preferences (Kelly, 2011; Feins and Patterson, 2005).

A study by Salleh and Badrulzaman (2012) measured the impact of physical aspects in neighbourhood satisfaction, and public transport was one of the elements in the measurement. The result showed that public transport played an important role in neighbourhood satisfaction. The residents in Pulau Pinang were dissatisfied with the public transport provided in the neighbourhood area. It can be concluded that the accessibility to public transport in the neighbourhood area was low and had a positive relationship with neighbourhood satisfaction. Accessibility to public transport is an important dimension in housing attributes that can affect neighbourhood satisfaction.

Balestra and Sultan (2013) highlighted that housing affordability would affect people's satisfaction and well-being. The study stated that a lack of affordable housing represented a significant hardship for many low-income households and their well-being.

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In a study by Raji et al. (2016), it was stated that it was insufficient to provide and focus on adequate physical affordable house. Nevertheless, the liveability of the neighbourhood also needs to be concerned especially on safety and health aspects to ensure better well-being of the residents. Therefore, based on these findings, it is further proposed that:

H7: Housing attributes have a significant effect on neighbourhood satisfaction.

2.6.3 Neighbourhood Satisfaction and QoL

QoL is measured by two scientific approaches, objective well-being and subjective well-being. The objective indicators are based on quantitative statistics including infant mortality, crime rates, literacy rates, and indices of economic production and doctors per capita. Individual well-being is the indicator of subjective well-being, which comprises elements such as life satisfaction, pleasant, and unpleasant effects (Holder, 2012; Diener, 2009; Diener and Suh, 1997).

A study conducted in Australia by Western and Tomaszewski (2016) examined the relationship between objective well-being and overall life satisfaction. It showed that there was a positive relationship between objective well-being and life satisfaction. Higher satisfaction on subjective well-being could be achieved with better health, more leisure time, more frequent contacts with family and friends, and less material deprivation and financial hardship. Income had no independent effect on life satisfaction after accounting for other aspects of objective well-being. In addition, in a different context in Malaysia, QoL is related to neighbourhood satisfaction. There are three factors that influence neighbourhood satisfaction, i.e. physical, social, and economic conditions. The findings of the study showed that satisfaction on economic attributes showed high correlation with neighbourhood satisfaction, followed by satisfaction on physical attributes, and the least effect with neighbourhood satisfaction was satisfaction on social attributes (Mohit, 2016).

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Neighbourhood satisfaction is an outcome variable to the interest of planners, governments, and policy makers. There is an increasing emphasis on the sustainability of urban development by capitalist societies. To obtain a great QoL, neighbourhood satisfaction must be considered (Howley et al., 2009; Mohan and Twigg, 2007; Sirgy and Cornwell, 2002). A study in Dublin by Howley et al. (2009) evaluated the relationship between high-density living and neighbourhood satisfaction within the central city. The findings from the research showed that environmental quality, noise, lack of community involvement, traffic, and lack of services and facilities were the factors that influenced dissatisfaction to the neighbourhood.

In a study in Netherlands, neighbourhood satisfaction was influenced by dwelling satisfaction. The results from the study indicated that residents who were satisfied with the facilities provided, such as shops and green spaces, were more satisfied with the neighbourhood in general (Prementier et al., 2010; Lu, 1999; Mohan and Twigg, 2007). A study by Knies et al. (2016) evaluated the consequences of how neighbourhood affected life satisfaction in England among majority and minority groups. The result demonstrated that life satisfaction was lower among the minority than the majority.

Sirgy and Cornwell (2002) developed a conceptual model on how satisfaction with neighbourhood features affected residents' QoL. Most of the earlier studies supported the model and showed the direct relationship between neighbourhood satisfaction and QoL (Mohit, 2016; 2010; Ibem, 2015; Salleh et al., 2012; Abdul Rahman et al., 2012; Balestra and Sultan, 2013; Mohit, 2016). Therefore, the following hypothesis is proposed as follows:

H8: Neighbourhood satisfaction has a significant effect on quality of life.

The model by Sirgy and Cornwell (2002) explained that satisfaction with social, economic, and physical features of the neighbourhood affected life satisfaction through the mediation effects of one's overall feelings towards their neighbourhood. The well-

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being of the residents is generalised by the neighbourhood satisfaction, which has been viewed as a significant aspect of urban QoL, influenced by individual and household socio-economic variables, along with the neighbourhood features. Mohit (2016) in his study in the Malaysian context stated that urban QoL was mediated by neighbourhood satisfaction with social, economic, and physical features.

Permentier et al. (2010), in their study in Netherlands, also showed the importance of neighbourhood features' satisfaction that could affect QoL through neighbourhood satisfaction. Salleh (2012) indicated that social, economic, and physical features generally showed a significance to QoL by using neighbourhood satisfaction as a mediator to study the relationship between neighbourhood features and life satisfaction. In the study, it was stated that there was a significant relationship between life satisfaction from the physical, social, and economic aspects with household characteristics, such as ethnic background, age, education, and income. However, life satisfaction of the respondents from the social aspect was not quite significantly influenced by their educational background. This implied that the social aspect of life satisfaction was an important indicator of QoL as expressed by the respondents irrespective of their educational background.

In a study in Nigeria, the environment and conditions of the neighbourhood were important in measuring people's QoL through their satisfaction of the neighbourhood area (Wokekoro, 2015). Meanwhile, a study in Turkey by Ozdamar (2016) showed that environment had significant effectc to QoL from the assessment of neighbourhood satisfaction. These discussions have prompted the development of the following propositions for this study:

H9: Neighbourhood satisfaction mediates the relationship between social/ physical attributes and quality of life.

H10: Neighbourhood satisfaction mediates the relationship between environmental attributes and quality of life.

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H11: Neighbourhood satisfaction mediates the relationship between economic attributes and quality of life

Based on the above previous research on neighbourhood attributes, housing attributes, neighbourhood satisfaction, and QoL, this research carried out tests to identify the relationship between all the variables with the conceptual framework discussed in the next section.

RESEARCH HYPOTHESES
H1: Social / physical attributes have a significant effect on neighbourhood satisfaction. H2: Social / physical attributes have a significant effect on quality of life. H3: Environment attributes have a significant effect on neighbourhood satisfaction. H4: Environmental attributes have a significant effect on quality of life. H5: Economic attributes have a significant effect on neighbourhood satisfaction. H6: Economic attributes have a significant effect on quality of life. H7: Housing has attributes have a significant effect on neighbourhood satisfaction. H8: Neighbourhood satisfaction has a significant effect on quality of life. H9: Neighbourhood satisfaction mediates the relationship between social /physical attributes and quality of life. H10: Neighbourhood satisfaction mediates the relationship between environmental attributes and quality of life. H11: Neighbourhood satisfaction mediates the relationship between economic attributes and quality of life.

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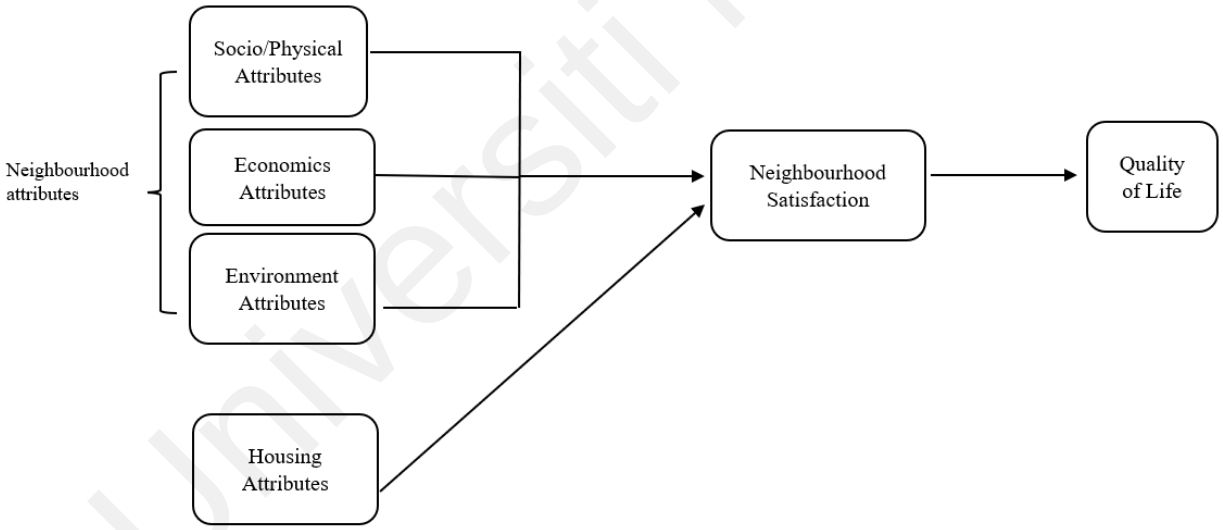
2.7 Conceptual Framework

A conceptual framework was developed as Figure 2.7 to answer the stipulated research questions. This conceptual framework was developed based on the concept that is relevant to neighbourhood satisfaction and QoL and on past studies by various authors. There were four independent variables considered as the factors that could affect neighbourhood satisfaction and QoL. The independent variables were classified as neighbourhood attributes, which were socio/physical attributes, economic attributes, environmental attributes, and housing attributes.

Figure 2.7: Conceptual Framework



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2.8 Summary

This chapter emphasised on the framework to understand QoL in urban areas. This study focused on neighbourhood satisfaction in the Greater Kuala Lumpur area. From the previous studies by various researchers, neighbourhood attributes and housing attributes are found as the factors that could affect neighbourhood satisfaction and QoL.

Neighbourhood attribute factors such as socio-physical attributes, economic attributes, environmental attributes, and housing attributes are found as the main attributes that need to be enhance in the research of neighbourhood satisfaction and QoL. From the previous studies, there is a lack of studies on environmental and housing attributes in relation to neighbourhood satisfaction and QoL. This research found that environmental and housing attributes should not be ignored because these two factors are important. The issues and crises in terms of neighbourhood environment and housing problems have increased recently, especially in Malaysia. In the main QoL framework from Mohit (2014), environmental and housing attributes were not included in the framework.

As there is a new contribution by this study by adding environmental and housing attributes in the framework, the next chapter will discuss on the Housing Policy and Urban Policy in Malaysia to address the policies that are highlighted by policy makers to enhance peoples' well-being.

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CHAPTER THREE:
HOUSING-RELATED POLICIES IN MALAYSIA

Housing policy in Malaysia

3.1 Introduction

Housing is known as a basic human needs and it is found has significant impact to the urban economy (Suhaida *et al.*, 2010) and it also found to be significance impact to personal and family life (Samad, 2017). During 2000-2010, the number of people increased to 2.0 per cent and the number of households also showed a growing trend of 4.8 million. However, Malaysia 's annual housing supply indicates a housing deficit where the supply of housing is only four units per 1000 populations which is less than the recommended units for developing countries, and this housing deficit units are expected to increase as the number of households has increased, generating greater demand for housing properties, especially in urban areas (Shuid, 2016; Leh et al., 2017; Olanrewaju et al., 2017).

Unfortunately, housing prices have increased, particularly in urban areas, creating problems with affordability (Shatar et al., 2017). In the report by Napic (2019) stated that Selangor, and Kuala Lumpur median housing price recorded at RM380 000 and RM480 000 respectively in year 2019 while the household median income for Malaysia stood at RM 4585 and with this report indicates that household are not afford to buy houses price that higher than RM300 000 (Samad et al., 2017). Young households are most affected on this affordability issues (Zyed et al., 2016). In the UK, young households are determined by the age between 20–39 years old (Wilcox, 2006) and the term ‘young’ has been introduced by the Malaysian Youth Council, in which the age range is between 15 to 40 years old (Sohaimi et al., 2017).

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This chapter aims to highlight housing policies related to Malaysia starting with the history of housing policy and programme, Malaysia National Housing Policy, National Housing Policy, National Urbanisation Policy and National Community Policy. As this study aims to explore neighbourhood satisfaction and QoL, it is important to study current Malaysian policies pertaining to housing, urban, and community development. As a result of the findings, this study will discuss how to strengthen the current policy by identifying factors that can improve neighbourhood satisfaction and QoL.

3.2 History of Housing Policy and Programme

Housing policies historically started since colonial period (before 1957), continue to second stage or early stage of independence (1957-1970), followed by New Economic Policy (1970-1990), National Development Plan (1991-2000) and lastly Vision Development Plan (2001-2010). Providing good and quality housing and adequate for all citizens are under government responsibility. Policies and housing programmes are the initiatives done by the Malaysian government to ensure that the government can provide suitable and affordable housing for the society and it is one of the important national agendas to enhance QoL. Policies relating to housing development are outlined in the five-year Malaysia Plans and the longer-term Outline Perspective Plans (1991–2000). It also has enacted the National Housing Policy in 2011 and the objective is to provide adequate and quality housing with comprehensive facilities and conducive environment. This NHP policy was focused all Malaysians especially those in the low-income group to have better access to adequate and affordable housing with sufficient facilities.

During the British Colonial Administration, the housing programmes are provided by the government where the concept is public housing which associated with the provision of institutional quarters. This public housing is for the government servant and

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used for Malaysian people during emergency period and it is located in urban centres where there are other facilities provided such as hospital, schools, police department and local authorities (Agus, 2002). Second phase of the housing policy began with the low-cost housing by the public sector in 1950 and known as The Housing Thrust and it served as a federal agency, providing technical and supervisory services to the state governments in undertaking low-cost housing and focusing the lower-income group. The Thrust continues to play more roles in the provision of housing by constructing low-cost houses for state governments that provide land on nominal terms and building infrastructure such as roads and water supply. During that period (1967–1975), 17,573 units of houses were built and the Thrust was run down on 1975. The low-cost housing was under the responsibility of the state government and the private sector was urged to take up the leading role (Hai, 1983).

As the number of populations has increase rapidly especially in urban areas, in 1971, New Economic Policy (NEP) was introduced and the housing programmes undertaken by both public and private sector. Under this NEP, the housing industry was envisaged to play a leading role in stimulating economic growth and industrial expansion and support the urban development (Abdullah et al., 2017). In addition, eradication on the poverty and national unity is one of the objective under the New Economic Plan (NEP) 1970-1990 and it is also aimed to balance the housing development between urban and rural area (Soffian, Ahmad, & Rahman, 2018). During this period, most of the Malays stayed in rural areas, Chinese lived in the cities and Indian lived in oil palm and rubber estate (Tan, 2011). As a result of the NEP and the rise of the industrial sector in urban areas, most Malays who live in rural areas have chosen to migrate to urban areas in order to obtain better job opportunities, consequently increase the demand for affordable housing in urban areas (Soffian, Ahmad, & Rahman, 2018). Furthermore federal government has introduced the 30% of the housing ownership quota for Bumiputera

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(Idrus & Siong, 2008; Shuid, 2004). *FELDA, FELCRA, KETENGAH*, and *KEJORA* are the agencies handling the land and regional development under the Ministry of Rural and Regional Development. These agencies play an important role in providing low-cost housing. Since 1982, the government has set a ceiling price of low-cost housing at RM25,000 and it is only eligible for those households with income less than RM750 per month (Shatar, 2017; Shuid, 2004). This enforcement and obligation by the government has eased the burden of the government in providing low-cost housing through the involvement of the private sector (Shatar, 2017).

Programmes on public housing were continued in the Fourth Malaysia Plan and ranked as a top priority by the Ministry of Housing and Local Government and State Economic and Development Corporations. This programme was the final approach on housing provision as this approach was aimed at cutting the public sector financial costs and offerring accommodation and services for the urban poor. Housing programmes under the Fourth Malaysia Plan also targeted to offer housing for households with income less than RM500 per month (Idrus and Siong, 2008). Under the Fifth Malaysia Plan, the focus that was highlighted in the housing policy was the population settlement concept that provided with infrastructure and public amenities for public unity. The private sectors were responsible to provide large markets for low-cost housing that cost at a ceiling price of RM25,000 (Idrus and Siong, 2008; Soffian et al., 2018).

The next development plan was the National Development Plan (NDP) 1991-2000, which considered that the main goal was national unity and incorporated into the Second Outline Perspective Plan (OPP2), which in turn included the Sixth and Seventh Malaysia Plans, to inject new elements from NEP. Both Sixth and Seventh Malaysia Plans focus on providing sustainable development for both urban and rural areas and enhance people's QoL by providing facilities and social services. Under both programmes, the private sector is chasing more on high profit while the public sector remains to provide

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housing for the low-income group (Ezeanya, 2004). During Sixth Malaysia Plan, implementation of privatisation that incorporated the concept in low-cost housing construction (Soffian et al., 2018) from 2001 to 2004.

National Vision Policy (NVP) 2001-2010 was contained in the Third Outline Perspective Plan (OPP3) and supported by the Eighth and Ninth Malaysia Plans. The objective of NVP was outlined as achieving a united, progressive, and prosperous Malaysian society that engages in full and fair partnership. Both Eight and Ninth Malaysia Plan continued with the development on housing for low-medium-cost and low-cost houses where both private and public sectors struggle to increase housing demand and improve QoL. There were more policies discussed on the next section that explained the establishment and enhancement the quality of houses with new design that meet the demand and comfort to the people where affordable price is the target to promote to the low and middle-income households, to enforce on *Program Perumahan Rakyat*, and provide 78,000 affordable houses and friendly housing environment.

3.3 Malaysia National Housing Policy (NHP) (2013–2017)

Providing quality housing that adequate for all its citizen is one of the government responsibilities that can be done through policies and housing programmes. The government is also committed towards ensuring access to quality and affordable housing to all level of incomes. As the population is growing rapidly, promoting an efficient and sustainable housing industry, efficient public transport and services and a clean environment is also part of government responsibilities as it is inline in the Fourth Thrust under the Ninth Malaysian Plan (2006–2010) to improve the standard and sustainability of our QoL. In the Ninth Malaysia Plan, the government has put an objective of 'providing quality housing and urban service' as can be seen in Figure 3.1.

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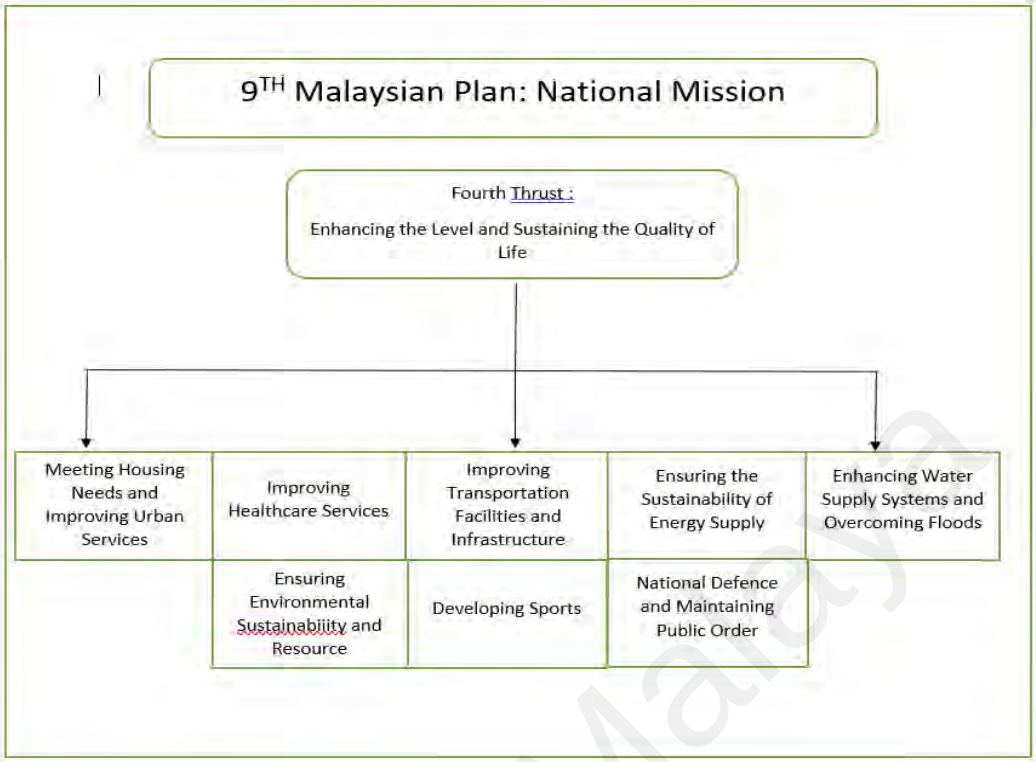
Figure 3.1: Ninth Malaysia Plan



Source: Malaysia National Housing Policy

In 2011, the government has enacted the National Housing Policy and started to focus on middle-income households in the housing sector as the previous policies emphasised on low-income households. Escalating houses prices especially in the urban areas have badly affected the middle-income group as they are not afforded to own a house in the market and not eligible to participate in government housing programmes. The government housing programmes is meant for the poor and low-income household. *Program Bantuan Rumah (PBR)* and *Program Perumahan Rakyat (PPR)* are design specifically to attend the demands of the poor and low-income household in urban and rural areas. Multi-level units flats were built in urban areas, single and double story terrace houses were built in suburban areas and semidetached or detached wooden houses were built in rural areas (Shatar, 2017; EPU JPM, 2015).

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National Housing Policy is needed as to provide the direction and basis for the planning and development of the housing sector by all relevant ministries, departments and agencies at the federal, state and local levels as well as the private sector. The goal of the NHP is to provide adequate, comfortable, quality and affordable housing to enhance the sustainability of people's QoL. There are three main objectives with six thrusts to achieve under NHP. The three main objectives are providing adequate and quality housing with comprehensive facilities and a conducive environment; enhancing the capability and accessibility of the people to own or rent houses; and setting future direction to ensure the sustainability of the housing sector. Six thrusts that are focused under NHP are as per below:

Thrust 1 : Provision of Adequate Housing Based on the Specific Needs of Target Groups
Thrust 2 : Improving the Quality and Productivity of Housing Development
Thrust 3 : Increasing the Effectiveness of Implementation and Ensuring Compliance of the Housing Service Delivery System
Thrust 4 : Improving the Capability of the People to Own and Rent Houses
Thrust 5 : Sustainability of the Housing Sector
Thrust 6 : Enhancing the Level of Social Amenities, Basic Services and Liveable Environment

This chapter will choose and discuss about Thrust 1, Thrust 4, Thrust 5 and Thrust 6. The first thrust, provision of adequate housing based on the specific needs of target groups. The previous policy only focused on the low–income group, in which the policy is about providing low-cost housing to the lower-income residents. In this NHP, middle income is also the target group to ensure both low-income and middle-income groups are able to own and rent a house. Unfortunately, the housing needs for the low-income group who earn a monthly income of less than RM2500 are still not adequate. The government

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has taken another initiative and worked together with the private sector to continue providing affordable houses for low-income group, disabled citizens, senior citizens, and single mothers. The private sector will focus on providing affordable housing for the middle-income group. The middle-income group monthly income is RM2500 to RM 3,999. NHP enhancing the role of State Government agencies in participating in the housing sector by providing more affordable houses and continuing the effort by the Federal Government and the private sector. State government also are given flexibility in determining the quota of low-cost houses to be built in mixed-development area based on the suitability of the location and local demand.

For the Thrust 4 is about improving the capability of the people to own and rent houses. Under this thrust, the focus is about affordability for low-income and middle-income groups. Factor such as affordability, cost of development and selling price are found the main factors that can influence demand and supply in the housing sector. Purchasing power and market are significantly high in high density urban and suburban areas where housing developments are concentrated and the government and private sector has to work together and play their roles to fulfil the social responsibility as to balance up the current housing needs by low-income and middle-income groups. Moreover, through NHP, a comprehensive and holistic approach is introduced to increase the accessibility to own or rent the provided houses. Setting prices for low-cost houses as well as controlling ownership and sales to avoid speculation, setting a realistic rental rate for low-cost houses and providing financial support for the low-income group in order to own houses are the policies statement under fourth thrust.

Thrust 5 is about sustainability of the Housing Sector. Under this housing policy, both government and private sector put an effort to enhance the housing sustainability by balanced the development implementation and the use of environmental-friendly housing development concept with new technologies and innovations. Green technology is known

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to help to conserve the environment in the context of energy efficiency specifically in building design, the use of recyclable materials and the development of smart buildings, is given emphasis. Indirectly, the aspects mentioned can elevate the QoL as well as preserve the environment. There are three policy statements mentioned in the fifth thrust, first is increasing the use of new technologies, innovation and provision of environmental-friendly housing, second is improving research and development (R&D) efforts in the housing sector and thirdly encouraging urban renewal and redevelopment of old buildings in line with the Government's objective for conservation and preservation purposes.

Lastly, Thrust 6 is about enhancing the level of social amenities, basic services and liveable environment. NHP propose under this policy to incorporates improving the level of basic and social amenities and conducive and liveable environment since some of the housing area do not have complete basic social amenities and facilities such as transportation, safety and maintenance. This can be achieved by well-planned development with the concept of Safe City and community building. To achieve this objective under sixth thrust, there are three policy statement highlighted, which are providing housing and sustainable development complete with basic amenities and facilities based on standards and current needs as well as other social needs to create a conducive and liveable environment, strengthening the management mechanism and maintenance of stratified buildings and common properties and implementing the concept of Safe City in housing areas. As the National Housing Policy (DRN) duration are only for 2013-2017, the Ministry of Housing and Local Government (KPKT) has re-evaluated the current DRN to identify the gaps in setting the framework for a new DRN (2018–2025) policy and strategy.

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3.4 National Housing Policy (DRN) 2018–2025

National Housing Policy 2.0 or *Dasar Perumahan Negara (DRN*) 2018-2025 was launched on 28th January 2019 by Housing and Local Government Ministry which DRN policy is to strive to address the home ownership issues especially in urban areas. DRN have been studied and identify on the gap from NHP 2013-2017. DRN objectives is to gather public and private sector resources to solve the demand and supply mismatch problem in housing market by systematic and efficient planning, development and housing management to generate sustainable, affordable habitats for the people. Under this policy, the B40 (bottom 40% income group) remain the key thrust of the housing policy as to be a homeowner.

There are five focuses, 16 strategies and 57 action plan that will implemented for this phase (2018-2025). There are three phases under DRN 2018-2015 namely Phase 2018-2020, Phase 2021-2023, 2024-2025, which all these three phases revolving with five core themes. First theme is quality housing for all, second, improving accessibility and affordability, third cohesive and quality neighbourhood, fourth, improving coordination between housing development and transportation and lastly, strengthening institutional capability for the New Housing Policy. DRN is crucial to address the current housing issues where proactive and comprehensive measure are needed for the Federal Government to achieve the aspiration of a sustainable housing industry in the future.

For Focus 1, Ensuring Good Quality for All. Under this focus, quality housing is important as to achieve liveable and sustainable living environment where the definitions of quality housing is the housing that meets the minimum standard, well- maintained, equipped with convenient amenities and ventilation aspects. Quality Housing Standard will take into account the existing housing maintenance requirements to improve life span of a residential building, maintain the value of building investment, improve the safety

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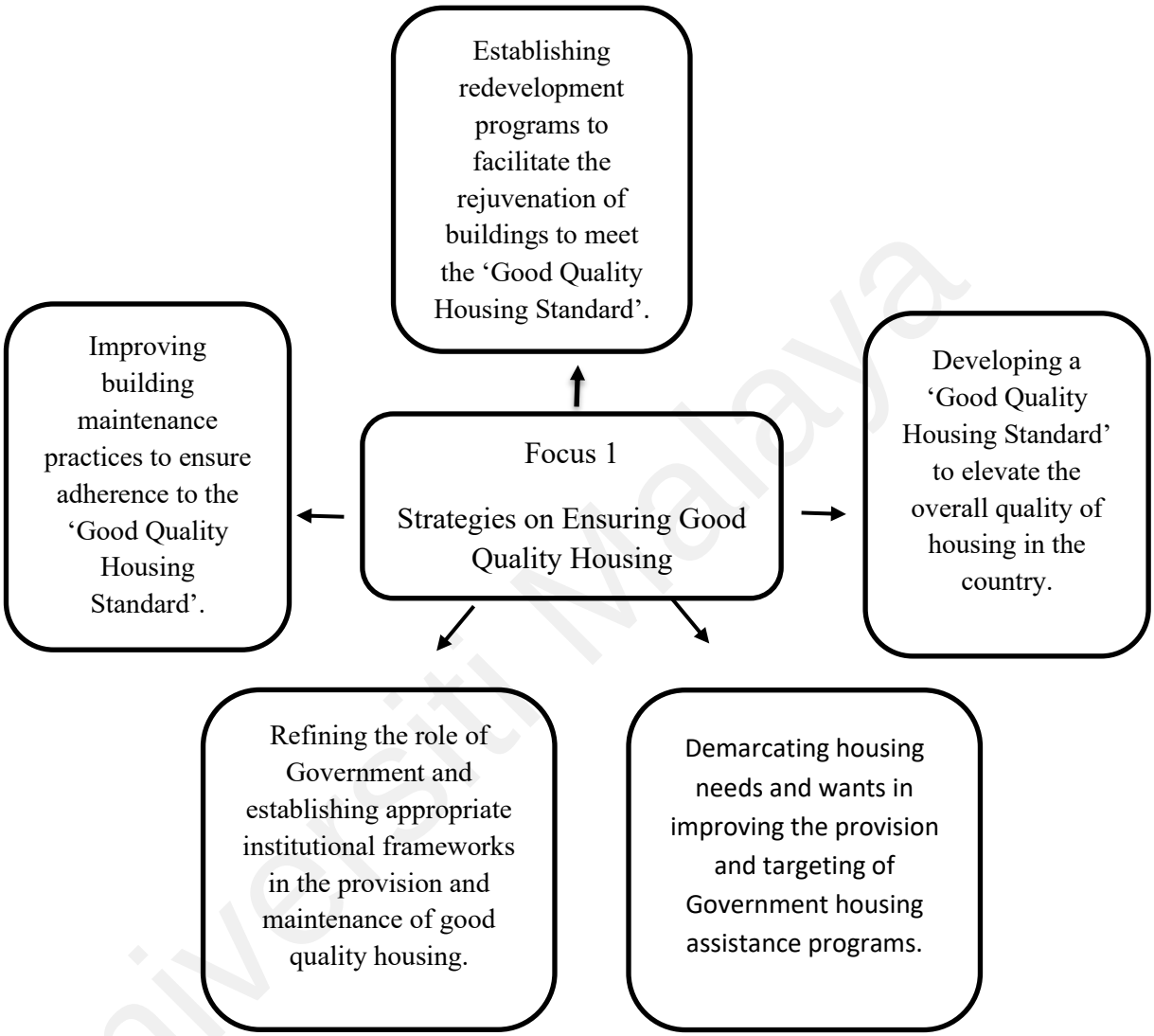
and comfort of the occupants and ensure a resilient environment. There are five strategies under focus 1. The strategies as figure 3.2 :

Figure 3.2 : Focus 1 Ensuring Good Quality Housing for All



For Focus 2, Improving Accessibility and Affordability of Housing. The used of latest technology and modern construction method such as industrialised building system, building information modelling and life cycle costing will be promoted and expanded among the housing construction players in order to increase construction productivity. This transformation expected to improve the access to housing and supporting ecosystem will also be strengthened to increase the housing supply. Framework on housing affordability will be developed to ensure the delivery of housing assistance to target group

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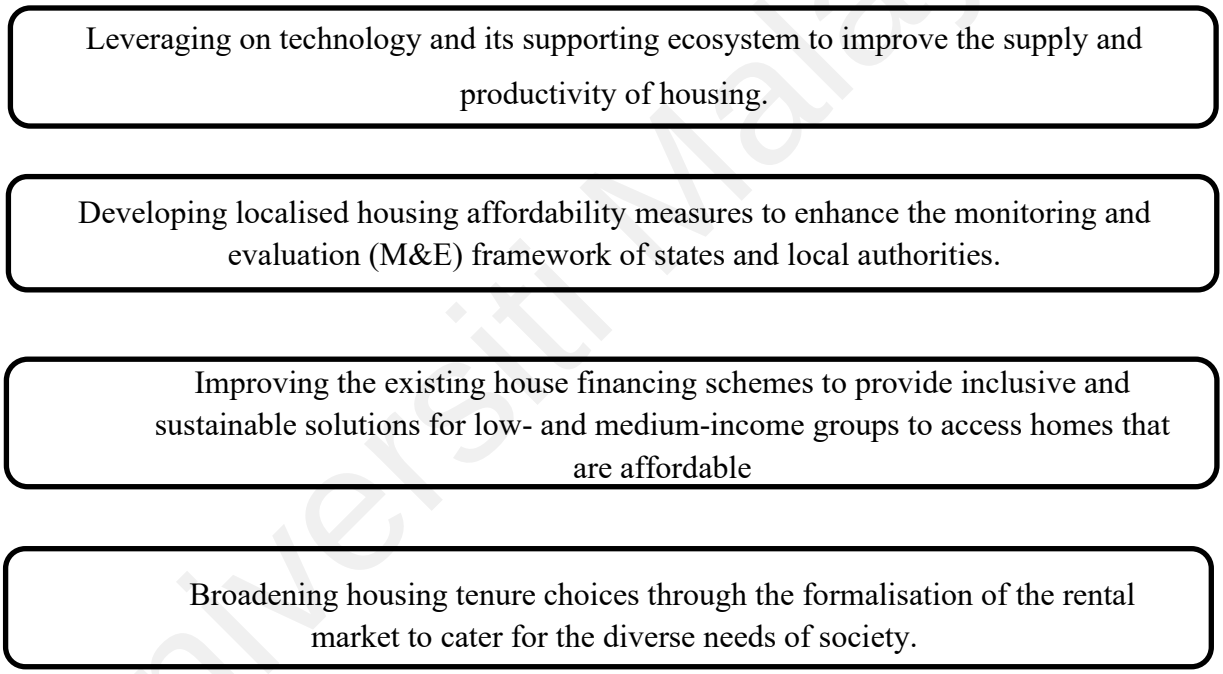
is more effective. This framework will be inclusive of housing requirement guideline, housing affordability indicator, and planning approval and licensing processes will be made locally. In addition, inclusive housing financing schemes will be improved to help B40 and M40 group to own a house. Under this focus also will focus and give attention to the rental segment of both public and private housing as to provide greater choices to the public in meeting their housing needs. To regulate the rental market, suitable law will be drafted and the rental ecosystem will also be improved. There are four strategies to support Focus 2 agenda.

Figure 3.3 : Focus 2 Improving Accessibility and Affordability of Housing



Focus 3, is about ensuring quality and cohesive neighbourhood. A quality and cohesive neighbourhood endangers the living in harmoniously in safe and comfortable surroundings with close-knit community with shared identity. The aspect of facilities provided is one of the initiatives to foster quality neighbourhood and guidelines pertaining of facilities provision will be reviewed to ensure facilities and services provided are with quality and meet the community's needs. To generate cohesiveness within the communities in housing area, residents are encouraged to share common identity and

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suggestion as they are belong to the area that they are living as this initiative to enhance the neighbourhood area with necessary skills to undertake and organise community programmes effectively.

There are two strategies form by the government in order to achieve focus 3. First is providing and maintaining quality amenities and services in residential neighbourhoods to support community life. Under this strategy, the action is to identify and address gap in the compliance and implementation of existing neighbourhood and amenity quality guideline by Plan Malaysia at state and local authority level. Other action plan is, to review the current standard and guidelines pertaining to neighbourhood conditions and quality of amenities and services. To develop a comprehensive neighbourhood quality checklist incorporating elements from related existing and new guidelines and standard. The next action plan also include to update the neighbourhood, services and amenities quality in the current Malaysian Evaluation Standard to be align with the new neighbourhood quality checklist. To establish 3P with scope and authority to ensure effective management and maintenance of public housing, to strengthen the scope and authority of Joint Management Body (JMB) and management Committee (MC) to ensure effective management and maintenance of the residential building.

Second strategy under focus 3 is revitalising the role and vibrancy of communities in strengthening neighbourhood quality. The action plan under this strategy is, to build the capacity of communities in ensuring quality neighbourhoods initiatives. Second, to implement community funding mechanism to enhance the efficient functioning of neighbourhood-based community organisations and the third is to encourage community participation in neighbourhood activities and increase awareness in managing and maintain common properties.

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Focus 4 is about improving and transportation coordination for better QoL. In Malaysia, it is found that house financing and transportation are the highest expenses incurred by most of the Malaysian household. To reduce the working household burden, the synchronisation between housing provision and transportation system will improved by strengthening the ability of development plans to address the relationship between housing and transportation. Planning analyses will be employed to have more integrated and participation of the public in plan preparation also will be promoted. Cooperation between housing and transportation agencies and research into housing and transportation issues will also be encouraged.

There are two strategies under focus 4. First strategy is streamlining housing and sectoral planning processes in regional, structure, local and special area plans to enhance clarity and consistency of vision and increase the effectiveness of public participation. Second is strengthening the capacity of state and local authorities to monitor and integrate housing and transportation considerations at the analytical, planning and implementation levels. For the first strategy, there are two actions taken to support the strategy, to ensure the urban planning and transportation initiatives align at the national and sub-national level and to strengthen community engagements throughout all stages to solicit guidance, feedbacks, and opinions as part of the planning process. The second strategy is on strengthening the capacity of state and local authorities to monitor and integrate housing and transportation considerations at the analytical, planning, and implementation levels. This strategy highlighted two action plans to support the strategy. To establish and strengthen state housing and transportation agencies partnerships to conduct households needs assessment in order to inform and implement coordinated planning and to allocate budget for continuous and periodical housing and transportation research and development at state level.

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The last focus is Focus 5 under DRN is strengthening institutional capabilities to deliver DRN (2018-2025). The capacity and ability of the related agencies to implement DRN is important in guiding the nation's housing sector in effective and efficient manners. Hence, these agencies will be strengthened from the aspects of organisation, governance, and supporting tools and technologies. It is also include increase staff technical expertise, encourage research, develop integrated databases, provide resources for manpower and monetary, and enact laws to ensure DRN (2018-2015) action plan can be implemented. Focus 5 have three strategies to support DRN. First is consolidating data and addressing data gaps to advance national housing research, second is building internal research capacities to formulate, monitor and evaluate housing policies and action plans and third is increasing resources as well as strengthening legislations and technical capacities to enhance the effectiveness of implementation and enforcement.

First strategy, there are four actin plans to support focus 5. First action plan is to develop National Housing System as main source of complete and up-to-date national housing data. Second is, to promote the use of the National Housing System as the primary and common data source by all state and local housing agencies. Third is to conduct a National Housing Survey to ensure complete and up-to-date data and forth is to digitize physical files related to housing to boost efforts in creating an open data environment in National Housing System. The second strategy has four action plans. First is to incubate a housing research programme that is anchored in the housing policy cycles at federal and state levels. Second is to optimise the talent pool and enhance the culture of life-long learning to drive the housing research programme. Third is to conduct periodic monitoring and evaluation of housing policies and action plan, while fourth is to develop housing policies based on research studies.

Lastly, for the third strategy, there are four action plans highlighted to support the third strategy. First action plan to ensure the civil servants with adequate professional

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qualifications and increase staff effectiveness in policy implementation and enforcement; second is to provide training for enforcement officers to strengthen the effectiveness of DRN implementation (2018–2025); third is to ensure adequate financial resources and prudential financial management for effective implementation and enforcement processes and forth is to review and improve relevant legislations to empower the enforcement and implementation of action plans. With all the focus and strategy discussed in this section, it can be concluded that the Malaysian government has provided initiatives and strategies to ensure all Malaysians are able to have a better life with high satisfaction, especially in neighbourhood areas that are provided with affordable housing. Apart from the housing policy, national urbanisation strategies are being built towards urban centres that claim that they can enhance the QoL and increase the satisfaction of neighbourhood that are safe, systematic, modern and attractive.

3.5 National Urbanisation Policy

In line with urban economic growth, attention needs to be given to the development of infrastructure, utilities and public amenities. There are 50% or 3.3 billion of the world's population who lived in cities in 2014 and it is expected that the population will increase by 5 million by 2030. In Malaysia, it is expected that the population will increase from 20.29 million (2010) to 27.30 million by 2025. As the number of population rapidly increases in urban areas, cities should provide safe living, sufficient recreational facilities, provision of sufficient electricity and telecommunications, and sufficient public transport systems. Federal Department of Town and Country Planning Peninsular Malaysia has formulated the Second National Urbanisation Policy (NUP2) to ensure that urban development and growth are planned harmoniously at the national, state and local levels and required more systematic planning and management that is well planned and efficient that promotes sustainable urban environments and communities.

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3.5.1 National Urban Policy (2006–2015)

National Urban Policy was approved in 2006 and adopted for all areas in Peninsular Malaysia focusing on six main thrust. All these six thrusts outlined the strategies towards creating urban centres that were safe, systematic, modern and attractive. The main six thrust is as below :

Figure 3.4: 6 Thrust on National Urban Policy

There are several constraints identified from NUP where there are 30 policies and 201 actions were formulated, encompassing important elements in the planning, development and management of cities in the country. Unclear custodian agencies of the NUP 2006, lack of guidelines or specific studies on the implementation mechanism of NUP 2006, insufficient financial resources to implement the NUP 2006 and limited on public awareness and participant is among the constraint to implement National Urban Policy 2006. With these constraints, there are also major outcomes of NUP 2006 implementation. The outcomes are formulation of guidelines for the Process of Planning Permission and Development, the establishment of One Stop Centre at all local authorities in the country to expedite the process of planning permission under Act 172 and

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establishment of an Urban Information System through a Study on Urban Profiles encompassing 249 urban centres.

3.5.2 Second National Urban Policy (NUP2 2016-2025)

The Second National Urbanisation Policy is prepared to continue the actions which have not been implemented fully in NUP 2006. This Second Urbanisation Policy is incorporated with The National Policy. NUP2 has incorporated with the following agenda:

i. Latest policies of the Federal and State Governments
ii. Current urban issues
iii. National Vision Plan
iv. The 11th Malaysia Plan
v. International policies and strategies such as the Eco2 Cities, COP15 Copenhagen, The Sustainable Development Goals (SDGs) and The Global Competitiveness Report.

The Second National Urbanisation Policy is to focus on to drive and coordinate sustainable urban planning and development focusing on balanced physical, environmental, social and economic elements. NUP2 is supporting the 11tH SDG's Sustainable Cities and Communities which is to make cities and human settlements inclusive, safe, resilient, and sustainable. SDG 11 target to ensure access to adequate safe and affordable housing and basic services for all. Second is to provide access to safe, affordable, accessible and sustainable transport for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, person with disabilities and older person. Third, to enhance the planning and management for inclusive and sustainable urbanisation and capacity for

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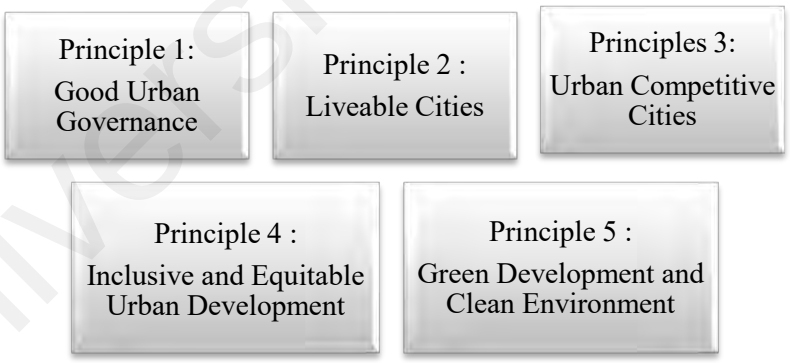
participatory, integrated and sustainable human settlements in all countries. Forth, is to strengthen effort to protect and safeguard the world's cultural and natural heritage. And lastly, to significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to global gross domestic product caused by disasters, including water-related disasters, with a focus on protecting the poor and people in vulnerable situations.

As the sustainability in NUP2 encompasses physical, environment, social and economic elements, the physical development of an urban area is optimised based on the population's needs without compromising the environment and in which the benefits of development and growth can be shared among all societies. NUP2 vision is sustainable cities for people's well-being. To achieve this vision, there are five underlying principles have been formulated as a basis for the strategies and actions that will be undertaken.

Figure 3.5: Five main principles of NUP 2



Principle 1: Good Urban Governance

Good urban governance is a pre-requisite to liveable, safe and competitive cities. Healthy economic growth in cities are comes from efficient management by the authority. Effective and optimum use of resources, besides providing fast and efficient services is part of good urban governance process. Below table is the objectives and strategies to implement principle 1 Good Urban Governance.

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Table 3.1: Principle 1 Good Urban Government

Objectives	Strategies / Action
Implementing NUP2 effectively	• Undertake periodic publicity of NUP with involvement of implementing agencies and stakeholder. • Providing NUP2 access at local authority portal
Demarcation of Urban Boundary	• Demarcate the urban boundary based on the definition in NUP2
Application of Accountability Values and Integrity in Urban Planning, Development and City Management Towards a sustainability Development	• Ensure all planning permission applications comply with development plans and planning guidelines. • Improve the service delivery system for the community through online one stop centre (OSC) where all the local authorities need to process planning permission application. • Allowing public to access information on the status and decision of development application • Upload all latest development information such as land information, guidelines, and other related information in the local authority's and state JPBD's portal. • Provide call centre facilities to enable the public to respond and lodge complaint to ensure prompt action taken by the relevant agencies. • Strengthening Management Commitment to the quality of service delivery and to ensure the establishment of integrity unit in all local authorities in Peninsular Malaysia. • Establish an audit unit in all local authorities to be led by Federal KADER officer.
Efficient and Systematic Asset Management	• Adopt life cycle asset management towards efficient and systematic management of urban assets by implementing life cycle asset

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	management for all social and infrastructure facilities. • Organise training and management skills in the field of life cycle asset management system.
Community Involvement in The Development of Projects and Programs	• To make sure effective and comprehensive community involvement in all phases of urban planning and development by organise brainstorming sessions with the community in establishing planning vision by the local authorities. • Organise dialogue sessions among all community groups periodically to inform on urban development planning. • Encouraging private agency and non-governmental organization (NGO) in CSR projects such as gotong royong, recycling campaign and others.
Strengthening Communication and Integrated Collaboration Amongst All Agencies of Federal Government, State Government, Local Authorities and Statutory Bodies	• Identify adjacent urban centres under different local authorities. • Prepare strategic policy plan together such as an infrastructure plan and investment plan.
Implementing Program LA21 and Sustainability Initiatives More Effectively	• Establish a special unit led by a Sustainable Development Officer to manage the LA21 programmes • Make resident associations as a driving force for the LA2 programmes. • Undertake wider publicity and promote the LA21 programmes.
Empowerment of Local Authorities in Physical and Service Delivery	• Improve communication and interaction skills between local authorities officer and the public by providing training, development of up-skilling and capacity building to all levels staff. • To have qualified town planners to all local authorities. • To have a sharing system of expertise and experiences amongst local authorities in the state by providing a

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	comprehensive and effective system of job rotation system.

Principle 2: Liveable City

Each city should be equipped with the latest updated telecommunication facilities to enable economic and social activities that easy and fast as the rapid population growth in cities required good planning. It is also to ensure every city is safe, comfortable to live in with comprehensive facilities such as schools, hospital community centres as well as safe surroundings with clean environment. Table 3.2 summarise the objective and strategies of liveable city.

Table 3.2: Principle 2 : Liveable City

Objectives	Action/ Strategies
Provision of Adequate, quality and comprehensive affordable housing for all walks life	• Providing different types of quality housing for all level of society based on needs by identifying land plots and brownfields within the urban centre that can be developed for affordable housing. • Prepare a strategic housing plan and monitor the supply of affordable homes and people's housing project. • Detailing the policies and conditions on housing projects, especially affordable housing for every state and establish a housing board in every state. • Build houses with flexible designs for big families to live together or nearby (multi generation housing). • Provision of transit centres and shelters for those citizens who are homeless. • Ensure the provision of workers' housing in new large industrial areas.
Address the increase in cost of living	• Encourage the development of affordable housing and community

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	facilities within one kilometre radius of transit station. • Increase the provision of free or subsidized public transport for citizens who elderly, disabled and students. • Provide more Urban Transformation Centres (UTC) or mini UTC in urban centres. • Facilitate access to government services and affordable daily needs by increase the number of *Kedai Rakyat 1Malaysia.* • Provide sites and develop community gardens of urban farming in the urban centre.
Strengthening public transportation system to be comprehensive, sustainable, integrated, efficient and affordable.	• Formulate an integrated public transportation action plan for every urban centre. • Provision of new pedestrian and cycling network near to transit stations and public transport terminal. • Formulate an integrated traffic management plan. • Provide incentives to encourage citizens to use public transport especially during peak hours.
Efficient, integrated infrastructure and utilities and urban facility services.	• Encourage the use of Common Utility Trench (C.U.T) and provide incentives to developers to use common utility tunnel in large developments. • Implement effective management of water supply distribution and reduce non-revenue water by replacing old pipelines.
Implementing urban design that is safe and with individual identity.	• Creating a safe city, strong sense of place with identity for living, work and play by preparing a public space development plan for the urban centre. • Increase cooperation and effort between related and agencies and the local community to implement conservation and preservation initiatives and to gazette heritage

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	sites and buildings in the urban centre.
Improvement in low carbon healthy lifestyle.	• Strengthening the urban centres as a centre for leisure and recreation by ensuring all open spaces and recreational areas are preserved and gazette and to improve the implementation of healthy cities programme. • Low food miles to reduce the carbon footprint and encourage community markets in residential areas in the urban centres.
Comprehensive access to quality health facilities	• Provision of comprehensive and integrated health care services by encourage the provision of integrated health care services in the city.
Urban communities that are united, caring and sharing	• Encouragement and diversification of activities towards community integration in the urban centres by increase and diversify the number of social and community activities for all age groups.
Safe city environment	• Extend the implementation of safe cities programme by applying all the safe city programme in urban centres.
Comprehensive disaster risk management	• Formulation of risk management plan by formulate and incorporate a disaster area management plan in all local plans and special area plans. • Provision a special area of building for shelter during a disaster with comprehensive facilities that can accommodate disaster victims. • Collaboration among agencies involve to provide innovative actions to reduce risk and undertake appropriate risk management programmes with the community.

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Principle 3 : Urban Competitive Economy.

Cities have important roles in the national economic development. Cities not only to be liveable but also competitive to attract foreign investments. A competitive city needs to leverage its location and functions, keeping costs low ad effective. Principle 3 have six (6) objectives with eight (8) strategies and action plans to implement as per below:

Table 3.3 : Principle 3 Urban Competitive Economy.

Objectives	Strategy / Actions
Increase in Competitiveness and Upturn in Urban Economy	• Strengthen economic activities based on selected sectors in line with the city's growth directions by identify areas or economic clusters for every city, formulate and economic cluster master plan for the city and provision of an integrated information and business centre to support the town's economic growth. • Strengthening digital applications towards smart cities by improving the urban services through digital applications and encourage the use of digital application through public announcements and hands-on training for the community
Increase Productivity of Human Capital	• Encouraging talented and skilled people that will participate in high value economic activities by undertaking promotions on upskill training and life-long learning as well as career path exhibitions through partnerships with local institutes of higher learning and the private sector.
Provision of efficient and effective communication systems	• Upgrading of communication system in all urban centres by providing high speed broad band throughout urban centres at competitive rates.
Optimization the use of endowment land, Malay reserve land, and Indigenous Land in City	• Updating information on wakaf lands, malay reserve customary lands in urban areas.

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	• Planning that can increase the value of endowment lands, Malay Reserve land and indigenous lands in the city.
Integration of urban villages in development planning.	• Update information on urban villages and formulate an integrated strategic development plan.
Optimization the usage of brownfield sites	• Update information on brownfield areas in the city by establishing the database containing information on brownfield sites in the city.

Principle 4 : Inclusive and Equitable Urban Development.

Inclusive means development efforts are enjoyed by all sectors of society in terms of age, ethnicity, sex, economic status, education levels and religion. Regardless of the location or social status, all citizens should have equal opportunity to access public amenities and infrastructure.

Table 3.4 : Principle 4 Inclusive and Equitable Urban Development

Objectives	Plan / Strategic
Program-specific focus on welfare of B40 household	• Increase in the livelihood of B40 household in cities by undertake more social programmes such as providing education aids, housing assistance, health care and others to help B40 households in urban areas and encourage the setting up of childcare centres in government and private buildings.
Increase income for B40 household	• Increase B40 household income opportunities by providing new commercial premises suitable for B40 households. • Provide mobile or permanent information centres on business opportunities, training, insurance coverage and credit for small

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	business and encourage community and social based enterprises to generate additional income.
Bumiputra participation in economic development	• Increase Bumiputera ownership in business premises at strategic locations by enforcement of 30% quota of business premises for Bumiputera in strategic locations identified in the city.
Enhancing the ability in youth to contribute and gain benefits of urban development	• Provision of specific facilities for youth in urban areas and build more facilities for youths in urban areas.
Provision of multi needs in urban development for elderly and disabled	• Increase the provision of facilities for the elderly and disabled in all urban development.

Principle 5 : Green Development and Clean Environment

Malaysia has pledge to reduce its carbon intensity up to 45% by 2030. In line with this, the cities of Putrajaya and Cyberjaya have been selected as the premier green technology cities of the country. Amongst the initiatives to inculcate green development include creating green neighbourhoods focusing on low carbon lifestyles such as the use of public transportation, cycling, low carbon buildings design and community gardens. Green development will ensure a comfortable and healthy environment whereas the community garden concept will encourage close community interaction within neighbourhood. Green developments will also assist in the more efficient and sustainable use of energy. Objective of green development and clean environment as per below table:

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Table 3.5: Principle 5 Green Development and Clean Environment

Objectives	Strategies / Action
The implementation of green elements in urban development	• Incorporating elements of green development in all planning documents and ensure all development plans incorporate the elements of green development and low carbon cities comprehensively, undertake training on green development planning and national climate change.
More efficient and sustainable use of energy	• Increase number of participants in green building and low carbon township accreditation, by encourage the construction of more green and low carbon buildings and retrofitting government buildings using green and low carbon technology. • Reduction in carbon intensity through reduction in the use of energy and water in buildings by providing incentives for household using green technology facilities, provide incentives for retrofitting old business premises to reduce consumption of energy and water and encourage the development of renewable energy such as wind turbine, solar farms and bio-gas stations in suitable areas. • Developing of urban mobility oriented towards pedestrianization, cycling and public transport by providing a comprehensive sheltered pedestrian paths and cycling network connecting one area to another and one building to another, provides bicycle parking/storage at community centres, commercial centres, government buildings and public transportation terminals. • Reduce carbon emission from vehicles by providing special parking for hybrid and electric vehicles in the city, encourage the increase in the number of petrol stations that provide natural gas for vehicles (NGV) and increase the

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	construction and provision of charging bays for hybrid and electric vehicles.
Healthy lifestyle improvement and clear air in city	• Reduce air pollution in cities by reduce private vehicle use in the city by organizing 'Car Free Days' periodically, encourage the development of integrated industrial parks that incorporates the concepts of an eco-industrial park. • Reduce water pollution in urban areas by upgrade sewerage treatment plants to environmentally friendly, ensure village in urban centres have central sewerage treatment plants, establish centre for collection of used cooking oil, installation of suitable treatment system of sullage and grey water at all food-based outlets, enforce the polluter pay principle on industries that do not comply with emission standards.
Efficient and sustainable management of water bodies	• Increase the potential of water bodies as recreational areas in the city, by formulate a comprehensive Blue Corridor Plan in all urban areas, gazette all river reserves and retention ponds in urban area.
Increase in size, quality and number of open spaces	• Macro planning for open spaces and to ensure all current open spaces are gazette, use innovative designs to create public open spaces that have high social values based on unique local characteristics.
Increase in size, quality of green areas	• Increase effort to protect trees in the city by enforcing the tree preservation order under section 35A-35H Town and Country

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	Planning Act 1976, create the position of an arborist in Local Authorities, prepare a tree inventory plan for the urban areas for easy implementation of the Tree Preservation Order under Act 172, encourage provision of rooftop and vertical gardens for buildings in the city and encourage annual tree planting in the city.
Effective solid waste management to ensure a clean city.	Increase in 3R, by implementing below actions: • undertake public awareness programmes on separation of solid waste at source and 3R practices, • encourage separation of solid waste at source and 3R practice as part of educating pre-school going children, • give recognition, appreciation and incentive to local authorities and community groups that have been successful in reducing solid wastes annually, • implement solid waste separation in every home, establish 3R communities in line with the Ministry's initiative, • increase the number of collection centres for electronic wastes in commercial, • industry, • institutional and residential areas, • encourage policy on no plastic bags and no Styrofoam containers in all urban areas, • give incentive and recognition for traders adopting zero-waste concept. • encourage private sector participation in mechanical composting and bio-fuel generation from food waste and cooking oil, on a commercial scale • impose conditions on commercial food outlets such as restaurants, hostel, cafes etc in pilot project areas to separate food waste and used cooking oil and;

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	• increase awareness of owners, managers, and employees of commercial food outlets on proper handling of food wastes through workshop and training.

On the basis of the above-mentioned National Urban Policy, it is a policy that directs and coordinates planning and urban growth is designed to be more effective and comprehensive, in particular to handle the increasing number of urban residents, with a focus on balancing the social, economic, and physical development of the city. In the next section, the discussion will address the National Community Agenda, which focuses on creating an inclusive community for people's well-being and engaging the community in residential areas.

3.6 National Community Policy

The National Community Policy was drafted to implement programmes by the government to build a better climate, strengthen civic programmes to enhance land management and maintenance, and encourage public participation in the planning of their local development. This Policy also seeks to safeguard urban housing in accordance with the National Housing Policy (2018-2025). There are also numerous projects will be introduced to enhance the QoL of the respective housing populations by close collaboration between the Community Consensus Office, community leaders and collaborating parties such as government departments and agencies, private businesses, educational institutions and registered associations and professional bodies. The key task of this numerous projects is to improve the QoL of the low-income group through a holistic development of the society. Continuous education and training are integral to the advancement of the community, such as consumer and financial education, vocational skills, economic empowerment, and social well-being.

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The Ministry of Housing and Local Government (MHLG) also plays a role in ensuring that stratified residential management and community growth are well handled to ensure that the neighbourhood enjoys a convenient, healthy and sustainable living, in addition to providing affordable housing for those who qualify. However, low-cost and medium-cost housing communities often face a variety of social housing problems. As for example tenants failing to pay monthly rentals and building management fees, selfish and irresponsible conduct towards public utilities and common property, and issues of hygiene and cleanliness in the surrounding areas. In addition, a low support system for the community, the lack of unity and a sense of unity among the members of the community and lack of concern for those in need, such as children, the elderly, people with disabilities (PWD), women, single mothers, and the indigent, social problems between young people and tenants are some of the problems facing in low-cost housing.

The National Community Policy, approved by the Malaysian Cabinet on 23 November 2018, aims to empower the community in residential areas, in particular those in social housing (People's Housing Programme), to be actively involved in the management and maintenance of public property. This policy also focuses on building an inclusive community for the well-being of the people. A cohesive and prosperous community is building a close network and fostering harmony and safe living. The goal of this policy is to create a sustainable generation and community. There are four objectives under this policy which are first is to empower the community with a sense of belonging and responsibility towards shared properties, facilities and spaces, second is To create a caring, cooperative and respectful community that is sensitive towards community issues, third is to cultivate strategic partnerships among the community, public sector, private sector and NGOs in developing the community, and finally, fourth is to produce more leaders and volunteers among the social housing community.

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There are eight clusters that implemented under National Commutiy Policy where all these clusters are to change their mindset and attitude of the community in the housing area. The eight clusters are shown in Figure 3.6.

Figure 3.6: Eight Cluster Implementation of National Community Policy

Source: National Community Policy

Cluster 1 is about Infrastructure and Maintenance, where under this cluster focus on good quality stratified housing infrastructure that found is important to achieve a liveable and sustainable environment. It should comply with the minimum standard requirements and be well maintained. The main damages relate to installations such as elevators, sewerage and unmanaged public properties. To build a community which has a sense of belonging to its residential area, community awareness and engagement need to be enhanced.

There are three strategies outlined in Cluster 1,

Strategy 1.1 : Promote strategic collaboration with external parties to improve common infrastructure and properties

Strategy 1.2 : Enhance community involvement in managing and maintaining common properties.

Strategy 1.3 : Strengthen community skills in managing and maintaining common properties.

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Cluster 2, the focus is on cleanliness, environment and health. Local society plays a major part in caring for the environment. Attainment of a clean environment requires efforts from all age groups within the community. Communities must make healthcare a priority starting with themselves and their families and the society. This involves ensuring residential areas are safe and clear from any diseases and risks to the epidemic. There are four strategies outlined in cluster 2 and the strategies are:

Strategy 2.1: Increase awareness and healthcare in individuals, families and communities.

Strategy 2.2: Increase knowledge and skills in environmental management to ensure cleanliness and a well-protected environment.

Strategy 2.3: Nurture the importance of community healthcare.

Strategy 2.4: Increase awareness and knowledge on risks of communicable Diseases

For cluster 3, the focus is in safety where it is one of the key factors in reducing the risk of accidents and injuries in the People's Housing Programme. High-rise residential buildings are prone to accidents and when that happens, it can be difficult to provide assistance. Social problems like theft, drug trafficking and addiction, vandalism, nuisance and other crimes can also contribute to fear among members of the group. Thus, the strength of social bonds within the members of the community itself can trigger the occurrence of social phenomena.

The three (3) strategies outlined under Cluster 3 are as follows:

Strategy 3.1: Ensure safe and secure living environment.

Strategy 3.2: Increase awareness and knowledge on the aspect of safety.

Strategy 3.3: Strengthen social network between communities and stakeholders to ensure priority is given to safety issues.

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For cluster 4, is focus on education and skills. Education is the future investment particularly for children who live in the People's Housing Programme from the low-income community. All various parties and the government need to work together to remove dropouts from education. Improving the skills of members of the group is essential to motivate them. Furthermore, strong collaborations between the public and private sectors, as well as NGOs, are inevitable in supporting increasing their experience, capabilities and know-how which can be applied in turn to help raise their household income.

The four (4) strategies outlined under Cluster 4 are as follows:

Strategy 4.1: Cultivate conducive and effective environment for early education.
Strategy 4.2: Increase the level of education and skills among youth.
Strategy 4.3: Improve knowledge and skills among community members.
Strategy 4.4: Establish strategic cooperation with stakeholders to strengthen knowledge and skills among community members.

For cluster 5, is focus on care for the children, elderly, persons with disabilities (PWD), women, single mothers, and the indigent. There are numerous programmes that need to be introduced to ensure that infants, elderly people, PWD, women, single mothers and the poor are not left behind in the urban mainstream. Such disadvantaged groups have rights to access schooling, public services, job opportunities, business opportunities, and health care. Good interaction between members of the society needs to be strengthened to promote compassion and empathy for those communities. There are three (3) strategies outlined under Cluster 5 are as follows:

Strategy 5.1: Enhance inclusivity of the children, elderly, PWD, women, single mothers and the indigent in community development programmes.
Strategy 5.2: Nurture caringness and empathy towards children, elderly, PWD, women, single mothers and the indigent.

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Strategy 5.3: Encourage strategic collaboration with external parties to assist children, elderly, PWD, women, single mothers and the indigent.

Cluster 6 focuses on entrepreneurship. The group that lives in the People's Housing Programme faces difficulties and struggles in getting through their everyday lives, particularly those with many children and living in small housing. To ensure that this group is not left behind especially in the economic situation, many initiatives need to be introduced to provide the group with entrepreneurship and business opportunities. Awareness of the members of the group regarding entrepreneurship will help them start up businesses and increasing their profits. At the same time, by charging their services at a minimal fee, they can foster the spirit of contributing back to the community members. The three (3) strategies outlined under Cluster 6 are as follows:

Strategy 6.1: Promote entrepreneurial and business culture.
Strategy 6.2: Expand income growth opportunities.
Strategy 6.3: Promote execution of social entrepreneurship and encourage charity.

Cluster 7, is about social services. In developing social housing communities social services need to be developed and strengthened. Aiding community members in need of assistance and support is critical. In addition, the public sector, the private sector, scholars and NGOs need to enhance in giving more benefits to the society. The four (4) strategies outlined under Cluster 7 are as follows:

Strategy 7.1: Instill the spirit of volunteerism.

Strategy 7.2: Encourage the formation of social services according to needs and necessities.

Strategy 7.3: Enhance existing social services in the communities.

Strategy 7.4: Establish strategic social service collaborative networks between external parties and the community.

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Lastly, cluster 8 is focusing on sports and recreation. Sporting and recreation culture should be nurtured among the community members so that it is part of their lifestyles. Safe lifestyle leads to good body and healthy mind. Sports and leisure can also strengthen group co-operation at all ages and improve the sense of belonging amongst them. The three (3) strategies outlined under Cluster 8 are as follows:

Strategy 8.1: Establish and maintain safe infrastructure for sports and recreational activities.

Strategy 8.2: Increase the number of appropriate sports and recreational activities.

Strategy 8.3: Enhance collaboration with strategic partners in promoting a healthy lifestyle.

3.7 Summary

This chapter has presented three policies that relevant to this research which are National Housing Policy, National Urbanisation policy and National Community Policy and discussed on the latest policies used for the current housing and urbanisation by the Malaysian government. It is important to look into the history of the housing policy and programme implemented by the government since Malaysia Independence Day. This is due with this history we can learn the process and progress of the housing policy that implemented by the government and how they manage to fulfil the needs by the people on the housing. As what have been discussed in this chapter, the housing policy start with Malaysia National Housing Policy (NHP) that start from 2013 to 2017. Once the government and the politicians changed, the new policy has been developed and it is called as National Housing Policy (DRN) which this policy cover from year 2018-2025. This chapter also showed that the focus on the policy has changed from focusing only the low-income group to the middle-income group as it showed that the middle-income group

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has to be focused as when it comes to urbanisation in urban areas. There are issues faced by most of the middle-income group to own a house. It is also showing that the government always aware on the situation facing by the low-income group and middle-income group. Table 3.6 summarises the periods and main development of the housing policy that focusing to enhance people quality of life as housing development is critical to ensuring the quality of life. The government of Malaysia government and corporate developers are the driving forces behind the development of adequate housing and shelter for its citizens. Affordability also affects an individual's or family's capacity to acquire or rent a home.

Table 3.6 : Summary of the periods and main development of Housing Policy

Year	Policy	Housing Policy Focus
Before 1957	Colonial	Housing Trust and quarters.
1961-1970	2nd Malaya Plan	Democratic housing ownership and squatters.
1966-1970	1st Malaysia Plan	Low cost and public housing
1971-1975	NEP – 2ND Malaysia Plan	Urbanization, industrialization, public housing, estate, SEDC, UDA, FELDA, SPPK
1976-1980	3rd Malaysia Plan	National Housing Council 1980. Low cost housing, FELDA, quarters
1981-1985	4th Malaysia Plan	Low cost, medium and high – public and private price, qualification, type and design.
1986-1990	5th Malaysia Plan	Population settlement concept, infrastructure and public amenities for public unity
1991-1995	6th Malaysia Plan	Malaysian privatization and incorporated concepts in housing construction such as low cost
1996-2000	7th Malaysia Plan	Nationsl Housing Company – RM 2 billion

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		and CIDB, smart partnership and housing.
2001-2004	8th Malaysia Plan	Integrated National Housing Policy. Government – Low cost housing. Private – Medium low, medium and high cost housing Target achievement zero squatter.
2006-2010	9th Malaysia Plan	Improving the quality of houses. Ensure the sufficient quality of affordable houses. Enforcement on Program Perumahan Rakyat.
2011-2015	10th Malaysia Plan	Provide 78000 affordable houses and friendly housing environment.
2016-2020	11th Malaysia Plan	Provide quality and sufficient affordable housing from poor to middle income households.

Sources: Agus (1998 & 2002), Omar (2000), Samsudin (2001) and the 8th Malaysian Plan, National Housing Development (2004) as cited by Bujang, Zarin (2005) and the 9th Malaysian Plan, 10th Malaysia Plan and 11th Malaysia Plan & Soffian et al. (2018).

This chapter also discuss on the National Urbanisation Policy and National Community Policy that focus on the development of urban areas to ensure that the urban residents will receive high QoL and to ensure no one is left behind on the policy. After the problem is identified and the policy has been discussed in detail in Chapters One, Two, and Three, the next chapter of methodology discusses in depth on the research planning and research procedures for this research.

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CHAPTER FOUR:

RESEARCH METHODOLOGY

4.1 Introduction

This chapter outlined the stages used to explain and clearly describe the research plan and systematic procedures adopted to address the research aim and objectives of this research. The aim of this research is to evaluate the urban neighbourhood attributes that can contribute to the urban residents' QoL through neighbourhood satisfaction in Greater Kuala Lumpur. This study adopted primary research methodology to capture data concerning on resident's satisfaction towards their neighbourhood and QoL, to estimate the structural equation model.

This study will provide with research design, questionnaire development and data collection method. In the sub-section in data collection method will further discuss with specific procedures on sequential methodology used in the method of collecting data and type of data that necessary for this study.

4.2 Research Design

The aim of the study is to examine the influence of neighbourhood attributes on neighbourhood satisfaction that can lead to urban QoL. The respondents' level of satisfaction towards the physical, social, economic, and housing conditions in their neighbourhood was measured, and their satisfaction level of their neighbourhood area and QoL was also measured in this study. To achieve the main purpose, this study conducted a quantitative research using primary data collected through surveys distributed to the residents in GKL.

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Quantitative approaches were used in this study as quantitative research methods are intended to gather numerical data that can be used to quantify variables. Quantitative data is structured and statistical, with objective and conclusive results. Quantitative research is a methodology that can help researchers draw broad conclusions from research and predict outcomes. Surveys are an excellent tool for quantitative research because they are cost-effective, adaptable, and allow researchers to collect data from a large sample size (William, 2007). This study moved toward positivism in epistemology, with an emphasis on neighbourhood attributes satisfaction-neighbourhood satisfaction-quality of life. Positivism is the most effective way of describing a phenomenon where positivism is assume that knowledge is gained through experience and observations (Chenery, Faith & Ruth 1987). Positively collected and analysed data is more reliable and valid, and it can be used more effectively for population generalisation (Cassell & Symon, 1994). Positivism view that evaluation studies should employ testable hypotheses that can be generalised using quantitative data (Douthwaite, Keatinge & Park, 2002). This study used residents' experiences with their neighbourhood and housing to determine neighbourhood satisfaction and quality of life. As a result, satisfaction with socio/physical, economic, environmental, and housing attributes derived from residents' experience and satisfaction was measured without considering personal opinions.

This study carried out by cross-sectional study which the data are gathered just once. The data collected from Sept 2017 to November 2017. Self-administered questionnaires were distributed to the household as a respondent for this study. A self-administered questionnaire is more convenient because responses from a large number of people can be collected in a short period of time (Sakaran, 2006). Potential respondents were requested to complete the questionnaire at their own time. Pre-testing test were conducted to serve as a guideline for the larger study (Chnadran, 2011). Pre-testing testing allow researcher to detect questions that are hard to understand and could be interpreted

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differently by respondents (Krosnick, 1999). Chisnal (1992) suggested the number of cases suitable for pre- testing should be at least 10% from the sample size. The study proposed to conduct 40 cases. A general rule of thumb most pretest of about 30 to 100 samples are adequate and cover subgroup in survey (Smith and Albaum, 2005)

4.3 Questionnaire Development

The purpose of questionnaire is to obtain the desired information and developed from the objectives of the study. The questionnaire must be precise, exhaustive, structured, and easy to understand by the respondents.

4.3.1 Questionnaire and Instruments of Data Collection

The purposes of questionnaire are to obtain accurate information from the respondent. This study is trying to obtain accurate information about the resident's feeling and satisfaction towards their neighbourhood area. To obtain accurate information, the question is about how they evaluate their satisfaction of their neighbourhood physical attributes, public facilities, the transportation, housing recreational area, neighbourhood environment and their evaluation on how they satisfied with their income, health and education. To get accurate information, respondents must be allowed to respond on their own convenient time. The structure of the questionnaire is also important in this research study so that the interview will be smooth and orderly.

4.3.2 Questionnaire Design

The questionnaire survey was self-administered and this survey will be conducted to seek the factors that can influence on neighbourhood satisfaction. Questionnaire must be involved and developed in order to get the desired questionnaire (Chandrann, 2011). Conducting in a different culture groups require translation for convenience (Mc Gorry, 2002). A bilingual expert that thoroughly check back-to-back (translated from English to

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Bahasa Malaysia) is employed and been widely used in research area (Craig and Douglas, 2000). This study all items were measured using 5-point likert scale that range from (1) very dissatisfied to (5) very satisfied as to increase the response rate and the consistency of the response (Babakus and Mangold, 1992).

The questionnaire consisted of four parts, which was divided into Part A to Part D. Part A in the questionnaire captured the respondents' profile including their age, gender, higher education level, marital status, employment sector and income. For Part B, the respondents were asked on their housing profile. The questions included their type of house, location and house ownership status.

Part C, the question is about the current living environment and quality of neighbourhood environment. The questions consist from this part are such as neighbourhood assessment, socio economic infrastructure, housing, open space a reacreational area and public facilities and services. Part D, the question is about respondent's satisfaction related to education, income and health. Next section will discuss the measurements for all variables of dependent and independents based on the objective of this study.

4.3.3 Formulation of Urban QoL and Neighbourhood Satisfaction Questions

The first objective of this study to investigate the perception of urban neighbourhood satisfaction and QoL in selected Greater Kuala Lumpur. Previous researchers use these two terms often in explaining urban QoL and neighbourhood satisfaction interchangeably as the concepts of neighbourhood satisfaction are much linked with the urban QoL. Neighbourhood satisfaction and urban QoL are two different aspects. Neighbourhood satisfaction aspects such as environment, economic and social are important in measuring the satisfaction among the residence which these aspects can affect to the life satisfaction and led to urban QoL. Urban QoL describes all the

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relationship, the dynamics and the reticular relationship that exist between those physical features. Urban QoL also describe about the good life and living well (Serag et al., 2015). Formulation of QoL, and neighbourhood satisfaction, and neighbourhood attributes are based on the theory that have discussed in chapter 2, where the theories are Theory of Utility Maximisation, Housing Demand Theory and Housing Needs Theory. These theories touched on residents' evaluation on their satisfaction towards neighbourhood environment based on the measurement of each attribute.

4.3.4 Measurements of Urban QoL

QoL has two aspects, which are objective assessment and subjective assessment. Objective assessment typically relying upon single- or multiple-item indexes of census measures of socioeconomic conditions and measure a broad sense of the individuals' standard of living that reflects human conditions such as employment, poverty, pollution, mortality and morbidity, and crime rates. A subjective assessment of QoL involves residents satisfaction on physical, social and economic domains and explore individual life satisfaction by implicit or explicit perception (Dissart & Deller, 2000). Subjective indicators illustrate QoL by the psychological aspect of life satisfaction. To measure urban QoL, subjective measures are used for this study as it is important to establish the significance. In this research, urban QoL focused on the assessment on employment, income, and health based on the previous studies as stated in Table 4.1.

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Table 4.1: Items for QoL Measurement

Items	Adopted from
Education • Education level is linked with employment opportunities. • How the university degree is associated with job opportunities. • The important of soft skills towards employment.	Hu et al. (2016); Luo and Wang (2010); Kahneman and Deaton (2010); Yahya and Selvaratnam (2015); Rezvani et al. (2012); Feneri et al. (2014); Hayward, Pannozzo, and Colman (2005).
Income • Monthly income. • Income sufficiency to support family needs and expenses.	
Health • Health facilities provided in the residential area. • Satisfaction on health condition	

4.3.5 Measurement of Neighbourhood Attributes

Satisfaction with specific neighbourhood attributes contributes and is strongly correlated with the overall neighbourhood satisfaction. Neighbourhood attributes are divided into three factors, which are social/physical, economic, and environmental. In addition to these three factors, housing also contributes towards neighbourhood satisfaction.

In this research, neighbourhood attributes could be divided into four categories with a total of 28 items measured in a Likert scale, where 1 = very poor, and 5 = very

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good. Those four neighbourhood attributes were social/physical attributes, economic attributes, environmental attributes, and housing attributes.

Measurement on Social and Physical Attributes

Social and physical attributes were divided into three sub–components, namely open space, social, and public facilities and services. Satisfaction on open space was represented by the feeling of the residents on the physical aspect of the neighbourhood area that focused on leisure and landscape facilities provided in the neighbourhood area. For the social component, the satisfaction focused on worship place and public community space where the people met the community and socialised in their neighbourhood area that involved different types of races. For public facilities and services, the satisfaction assessment was based on the how they assessed the facilities such as education, health, and other services that were provided in their neighbourhood area.

Table 4.2: Items on Social and Physical Attributes Measurement

Items	**Adopted from**
Open Space • Conditions of playground and recreational area. • Condition of pedestrian walkway. • Landscape in the neighbourhood. • Recreational area and urban public spaces in the neighbourhood area.	Sirgy and Cornwell (2002); Prementier (2011); Basolo and Strong (2002); Parkes et al. (2002)
Social • Provision and condition of place of worship. • Provision and condition of public community spaces. • Public community spaces that are accessible to all races.	

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• Provision and condition of public library. • Provision of barrier free for disabilities and elderly. • Locations of public spaces in the neighbourhood are strategic.	
Public facilities and services Satisfaction on • Education facilities. • Health facilities. • Public toilet. • Parking facilities. • Post office. • Police station. • The location of public facilities and services are strategic and accessible	

Measurement on Environmental Attributes

There were ten items under the environmental factor that contributed towards the neighbourhood satisfaction. Environmental attributes used in this study include satisfaction on speed of traffic flow, volume of traffic, noise, air pollution, rubbish, property crime, unemployed youth, drug activity, alcoholism and public drinking, and homelessness. All these items represented the environment of the urban neighbourhood area.

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Table 4.3: Items on Environmental Attributes Measurement

Items	Adopted from
• Speed of traffic flow • Volume of traffic • Noise • Air pollution • Rubbish • Property crime • Unemployed youth • Drug activity • Alcoholism • Public drinking • Homelessness	Sirgy and Cornwell (2002); Białowolska (2016); Nieuwenhuis (2017); Cerin et al. (2016); Adriaanse, (2007); Kerr (2016); Ozdamar (2015); Lee and Guest (1983); Jagun et al. (1990); St John and Bates (1990); Basolo and Strong (2002).

Measurement on Economics Attributes

Economic attributes were represent by the evaluation on how the residents evaluate the available job opportunities in their neighbourhood area, where more available job opportunities in their neighbourhood area could increase their economic value for the household. Economic attributes were also represented by the availability of shops and other services in their neighbourhood area, where the availability of shops and others service would ease them to buy and get all the daily needs. Transportation and accessibility of public transport were also part of the economic attributes as they showed the development progress in a certain neighbourhood area. A developed urban area should provide sufficient and accessible public transport.

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Table 4.4: Items on Economic Attributes Measurement

Items	Adopted from
• Availability of shop and other services. • Location of shops and stores are strategic and near to the living area. • Availability of job opportunities. • Satisfaction on transportation. • Accessibility to public transport.	Sirgy and Cornwell (2002); Mohit (2012); Shields et al. (2009); Sultan (2013); Zenker et al. (2013); Białowolska (2016).

Measurement on Housing Attributes

Housing attributes assessed how residents evaluated their satisfaction on the housing provided in their neighbourhood area. The current study focused on housing affordability and it was part of the problems faced by low- and middle-income earners. This study evaluated the satisfaction on housing choice and affordability in residents' neighbourhood area. This study also assessed the satisfaction of the location that is near to public facilities and services.

Table 4.5: Items on Housing Attributes Measurement

Items	Adopted from
• Various choices of housing (from high-end to low-cost housing) • Housing in the neighbourhood area is relatively affordable • Location of house with nearby public facilities and services • Physical condition of the house meets their need • Safety and security is good in their neighbourhood area.	Lee and Guest (1983); Karim (2008); Mohit, (2010); Balestra and Sultan (2013); Raji et al. (2016)

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4.3.6 Measurement of Neighbourhood Satisfaction Attributes

This study used neighbourhood satisfaction as a mediator between social/physical, economic, and environmental attributes, and urban QoL. Neighbourhood satisfaction was measured by seven items. Neighbourhood satisfaction attributes assessed the satisfaction towards the facilities and services provided in the neighbourhood area in overall, the relationship among the residents, the crime rate in their neighbourhood, the landscape, the feeling if their neighbourhood area is a good place to raise, and adaption of green technology.

Table 4.6: Items on Neighbourhood Satisfaction Attributes Measurement

Items	**Adopted from**
• Neighbourhood that has good provisions of facilities and services that meet residents' needs. • Neighbourhood that is clean and well-maintained. • Neighbours have trust and confidence among each other. • Neigbourhood that is safe and have a low crime rate. • Neighbourhood that has beautiful landscape and green area. • The location of the neighbourhood that is strategic and easy to access from other areas. • Neighbourhood adopts green technology for a sustainable lifestyle and good place to raise children	Mohit (2012); Sedaghatnia (2013)

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4.4 Pre-Testing Questionnaire

Before conducted the main survey, pre-testing might be employed using qualitative or quantitative methods. Pre-testing study can be defined as a 'small study to test research protocols, data collection instruments, sample recruitment strategies, and other research techniques in preparation for a larger study. Pre-Testing questionnaire is conducted to identify the deficiencies in the research instruments and the protocol prior to the full study and conducted to identify potential problem areas. Pre-testing questionnaire focuses on the questionnaire, particularly on the wording. Did the respondents can read easily and understand on the question, the order of the question or the range of answers on multiple choices (Zailinawati et al., 2006; Baker, 1994). It also could be conducted to test the research process, how the questionnaires can be distributed and how the process of collecting the questionnaire (Resnick, 2015). The reason or advantage of conducting pre-testing questionnaire might give advance warning about where the main research project could fail, where research protocols may not be followed, or whether proposed methods or instruments are inappropriate or too complicated (Van and Hundley, 2001)

For this research, the objective was to examine the relationship between neighbourhood attributes, housing attributes, and neighbourhood satisfaction. Baker (1994) stated that the samples size for this pre-testing was 10% to 20% from the sample size of actual study are reasonable for pre-testing questionnaire. Pre-testing was conducted on 15th July 2017 and the respondents for this study were 53 respondents. Any adult who was 21 years old and above residing in Greater Kuala Lumpur was eligible for this study. The respondents for this pre-testing were used to identify the key issues from which the questionnaire could be developed. This pre-testing study sample used different respondents from the actual study to avoid any bias for the main study. The pre-testing

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was conducted in Seksyen 13 Shah Alam landed housing where the respondents were selected randomly to answer the questionnaire. This pre-testing took 20–25 minutes to be answered by the respondents.

4.4.1 Instrument Measurement Testing

The respondents required self-completion on the questionnaire. The purposes are to test whether questionnaire easy to understand, comprehend and the questionnaire was well defined and clearly understood by the respondents.

The questionnaire was divided into 8 sections where the sections are divided as follows:

- Section A – Respondent's Profile
- Section B – Respondent's Housing Profile
- Section C – Current Living Environment
- Section D – Evaluation on the satisfaction on Education, Income and Health

This pre-testing study was observed the issues that will come from the questionnaire distributed. The issues are included the instruction of the covering letter, understanding of questionnaire items, the terms and words used in the questionnaire, the sequence of the question and the flow of the questionnaire, the font and layout of the questionnaire, the length of the items of the questionnaire, time taken to complete the questionnaire and other comments by the respondents. All the comments and feedback by respondents were taken into consideration necessary action will be taken on the errors reported by the respondents. Thirty-eight respondents involved in this pre -testing study. The questionnaire distributed to the respondents who reside in low and middle housing area with even serial number (2,4,6,8..50) that chosen from each housing types for pre-testing study.

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4.4.2 Pre-Testing Result and Feedback

On average, the respondents took 20 minutes to 30 minutes to answer the questionnaire given. From the answer given from the respondents from study, there were some items that they are missed out and avoid answering. This appeared to be because the questions request the respondents to answer in details of their per month side income. Most of the respondents leave it blank for this question. Thus, this question will be excluded for the actual study due to some respondent's feedback that this question is private and confidential, and they avoid to answer.

Lastly, the respondents did comment on the part of the question that asking about the opinion on what element essential in planning a good city? Respondents are required to write and answer the question. The style of the question is open ended instead of scale. It can be concluded that the respondents refuse to answer open ended question.

4.5 Data Collection Method

This section describes into specific procedures and logistics used to collect the data in the study including when, how, where and for how long the research took place. This study was carried out by cross-sectional study which the data are gathered just once. Self-administered questionnaires were distributed to the respondents and fill up by the respondents (Chandran, 2011). Self-administrated questionnaire beneficial as respondent response can be collected at a short period of time to many individuals (Sakaran, 2006). Potential respondents requested to complete the questionnaire at their own time.

4.5.1 Site selection

This study covers seven local authorities in the Greater Kuala Lumpur namely Kuala Lumpur City Hall, Petaling Jaya City Council, Shah Alam City Council, Klang Municipal Council, Sepang Municipal Council, Subang Jaya Municipal Council and

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Selayang Municipal Council. The main reason to choose these seven local authorities was because they represent the Greater Kuala Lumpur (Zyed et al., 2016).

4.5.2 Sampling Technique

Stratified sampling was used as the sampling technique as it will represents each stratum (landed housing and high-rise building housing) in a population. The population size reported by Department of Statistic (2016), show in Table 4.7 (DOSM, 2016) to get the sample size of the respondents based on the population of household in Greater Kuala Lumpur. The number of samples from each stratum are proportionate to the number of units of the stratum shown in table 4.7 where the sample for each local authority will divided into two which are landed housing and high-rise building housing. The selection of the respondents for landed housing and high-rise apartments is based on random sampling. Questionnaire distributed to the landed household based on odd number for each housing area and even number used to distribute the questionnaire for high-rise apartments.

The distribution was used stratified sampling with pre-requisite conditions which the criteria of the respondents who fulfil the following criteria.

(1) The respondents must reside in landed housing and high-rise building housing in Greater Kuala Lumpur.

(2) Respondents must be head of household age 21 and above. Any individuals with the age of 21 years and above can be a representative of the head household if the head of household is not available during the survey.

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4.5.3 Sample Size and Sample Frame

To achieve the research objectives, Heir (2010) suggested that 500 samples is required if the research contain a large number of constructs. As the population in Greater Kuala Lumpur is 2,047,646 the total number of respondents in this research is five hundred thirty (N = 530) as this study used large number of construct and this study choose to collect extra 30 respondents to cover any missing respondents. The distribution of the questionnaires was covered into two types of housing, landed housing and vertical high-rise building housing. Landed housing will focus on terrace housing, while vertical high-rise apartments will focus on low-cost apartment and medium-cost housing. The reason to choose these two types of housing is to differentiate the satisfaction level among the residents from both types of housing, which are landed housing and vertical high-rise apartments.

Table 4.7: Number of Household in Greater Kuala Lumpur

Local Authorities	**Number of household (000)**	**Percentage of household**	**Number of distribution (N = 530)**	**Landed Housing (n=265)**	**Vertical ,High Rise Apartment (n=265)**
Kuala Lumpur City Hall	670	15 %	80	40	40
Selayang Municipal Council	581	13 %	68	34	34
Shah Alam City Council	509.5	12 %	64	32	32
Klang Municipal Counci	820.8	19 %	100	50	50
Subang Jaya Municipal Council	814.2	19 %	100	50	50
Petaling Jaya City Council	705.7	16 %	88	44	44
Sepang Municipal Council	272.4	6 %	30	15	15
Total	4373.6	100 %	530	265	265

Source: Adapted from Department of Statistics (2016)

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4.6 Methods of Data Analysis

This section discusses the use of statistical techniques in this study. The first section of this chapter will explain on the descriptive analysis and followed by the statistical analysis section. As the statistical sub section are divided into three, factor analysis, confirmatory factor analysis (CFA), and ended by Structural Equation Model (SEM). Statistical Package for the Social Sciences (SPSS) was used for descriptive analysis and Structural Equation Modelling (SEM) were used to test the proposed relationship among the study variables and conducted using AMOS programme. Confirmatory Factor Analysis (CFA) was conducted to assign variables to manifest a construct by determining reliability and validity of the items used (Tan, 2013).

4.6.1 Descriptive Analysis

Descriptive statistics was performed to know the general socio-demographic characteristics of the respondents in the survey. Descriptive analysis summarises data such as frequency, percentages, mean and standard deviation. Mean is the major characteristics by computation of the mean based on all values in the set. The median is the value of the middle item when the numbers are arranged in order of magnitude. The major characteristics of the median are that, as it is a positional average. The mode is the value that occurs most frequently in the data set. The major characteristics of the mode are that it is the highest frequency in a set of values, it is not affected by extreme values, the mode of a set of discrete data is easy to compute, and the value of the mode may be significantly affected by the method of designating the class intervals (Shao, 2002, p. 421).

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4.6.2 Confirmatory Factor Analysis (CFA)

The Confirmatory Factor Analysis is required to validate the measurement model of all latent constructs involved in the study. The validation procedure in CFA will assess the unidimensionality, Validity, and Reliability of all constructs (Zainudin, 2015; Tabachnick and Fidell, 2007). Three types of validity will be assessed namely Construct Validity, Convergent Validity, and Discriminant Validity. Meanwhile, the reliability of the constructs will be assessed through the Composite Reliability. The CFA technique actually has two approaches such as individual CFA and pooled CFA. Those approaches are applied in the current study to determine the reliability and validity per construct.

The use of Pooled CFA is much efficient than individual CFA (Aimran & Ahmad, 2013) because it can avoid the model identification problem especially if some of the constructs have less than four measuring items per construct (Kashif et al., 2015; Awang, Afthanorhan, & Asri, 2015). Using this method, all constructs are pooled together and linked using the double-headed arrows to assess the correlation among the constructs. However, its usefulness could not reasonable for the high number of observed and unobserved variable (i.e., latent construct) due to convergence problem (Reinartz, Henseler, & Haehnlein, 2009). As a result, the individual CFA is carry out for each construct before testing their construct correlation. In this stage, the construct validity and reliability were assessed by inspecting their fitness indexes and factor loading. The recommended value for the factor loadings and construct reliability are 0.60 and 0.70 respectively (Brown, 2014; Raykov, 1997). Meanwhile, the recommended value for each fitness index (Hair, Babin, & Krey, 2017) is presented as follows.

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Name of category	Name of index	Level of acceptance
Absolute Fit Index	**RMSEA**	RMSEA < 0.08
	GFI	GFI > 0.90
Incremental Fit Index	AGFI	AGFI > 0.90
	CFI	CFI > 0.90
	TLI	TLI > 0.90
	NFI	NFI > 0.90
Parsimonious Fit Index	**Chisq/df**	Chi-Square/ df < 3.0

Once the individual CFA is performed for each construct, the items remained in each construct are computed using the transformation approach to get the value of means. Then, the Pooled CFA is conducted using the value of means to assess the construct correlation. This procedure could minimise the excessive number of items or construct when applying structural equation modelling (Bollen and Bainter, 2014).

In this study, there are five latent variables used for estimating the relationships between exogenous and endogenous constructs. Among of these latent variables, four out of five latent variables are considered as exogenous constructs which are socio-physical, economic, environment, and housing, meanwhile, QoL is considered as endogenous construct. Based on the framework previously, all latent variables are formed as second order construct or higher order model. Furthermore, neighbourhood satisfaction is treated as a mediator construct due to its potential to mediate the relations between neighbourhood attributes and QoL.

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4.6.3 Structural Equation Model (SEM)

Structural equation modelling (SEM) is a statistical method used for testing and estimating causal relations using a combination of statistical data and qualitative causal assumptions (Alavi and Ghaemi, 2011). The statistical package Analysis of Moment Structures (AMOS) is used to analyse for model fit (Goodness of fit index), predictive power (regression) and significance of paths for the specified model proposed. SEM is capable of estimating a series of inter-dependence among constructs simultaneously in a model. SEM is a more efficient method to analyse the correlation and causal relationship among latent construct as well as observed variables, estimating their variance and covariance, test hypothesis, modelling conventional regressions and running the CFA (Awang, 2012, pp.228). AMOS was adopted in this study because Amos produced the fitness indexes to access the goodness of the model.

There are some of the advantages of Structural Equation Model:

- CFA used to reduce measurement error
- Could assess the fitness of measurement model of latent for latent construct
- Could analyse the model with more than one dependent variables

4.6.4 Validation of Data Collection

This study adopted a quantitative method for data collection and validation. Validation on the data that was collected is important as it measures the thing that's we want to measure. It is also can be describe as an activity that verifying whether the combination of the values is a member of a set of acceptable combinations. The validation activity is referred to a single data item without any explicit mention to the verification of consistency among different data items. (Di Zio, Fursova et al., 2015). Simon (2013)

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defined data validation as a process that to ensures the correspondence of the final data has a number of quality characteristics.

This study aims to evaluate the satisfaction of the urban residence on socio/physical attributes, economic attributes, environment attributes and housing attributes towards QoL through neighbourhood satisfaction as a mediator which is all the items cannot be measures directly. Questionnaire were used to measure them indirectly. To avoid measuring the unwanted items to be measure in the study, the questionnaire provides a measurable weight on the variables. A questionnaire is a tool to obtain the information needed for the study and it can be obtained from the respondents. Questionnaire known as efficient ways to collect the data from the respondents and there must be a requirement on how to measure the variables that needed. To confirm the variables is the correct items to measure, validity is one of the process. There are three types of validity which are content validity and face validity, criterion- related validity, and construct validity (Kazim and Khalid, 2012).

Content validity and face validity are a process of assessment on the construct of interest. Content validity also is a part of face validity. These two validities are conducted between the researcher and the expert on the research subject where the expert of the subject will review the questionnaire (Kember and Leung, 2008; Bolarinwa, 2015). The reviewer or the subject expert will have to make sure that the questions were fully represent the instruments.

Face validity is about the expert will investigate the questionnaire and agreeing that the questions tested is a valid measure of the concept. This is to make sure that the items measure matches to the conceptual domain of the concept. For the content validity, the reviewers will review the questionnaire items for readability, clarity and comprehensiveness and come to some level of agreement as to which items should be included in the final questionnaire (Polit and Beck, 2006).

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All relevant concepts, theories and methods of neighbourhood attributes that can influence neighbourhood satisfaction and QoL were all reviewed by literature review and past studies to ensure the content validity. The research instruments were given to the professional expert for pre-testing and to validate the contents of the questionnaire to ensure the instruments were valid. This was to establish content and face validity of instrument of this study.

Criterion-related validity measure of how well questionnaire findings stack up against another instrument or predictor. There are two variants of this type of validity which are concurrence and predictive. Concurrent validity refers to the ability of a test to predict an event in the present form and predictive validity is to assess the ability of the questionnaire to forecast future events, behaviour attitudes or outcomes. For construct validity, it is referred to which instrument measures the attributes of the variables discussed in the study that is intended to measure. There are no criteria to do the comparison, but it is used hypothetical construct for comparison (Bolarinwa, 2015).

This study assesses the components of neighbourhood attributes such as socio/physical, economic, environment, and housing, neighbourhood satisfaction and QoL. All these variables were measured using absolute fit, incremental fit and parsimonious fit.

4.7 Summary

As demonstrated by the proposed conceptual model (Figure 2.7), this study proposes an empirical setting in which to investigate theories and concepts derived from the literature and placed it to the test through hypotheses. The conceptual framework attempts to quantify data to explain causal relationships. This investigation adopted a descriptive method that includes quantitative research tools and techniques. Quantitative approaches can measure specific variables using structured data collection procedures

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from a large representative sample and generalize the results to the entire population. The main aim of this study, as stated in section 4.2, is to examine the influence of neighbourhood attributes on neighbourhood satisfaction, which can contribute to urban QoL. The objective of this quantitative technique is to provide a clear answer to the research question by collecting and analysing information from survey data.

This chapter has discussed in depth on the research design and the development of questionnaire. Once the measurement of all the variables have been identified based on previous study, the next process is pre-testing on the questionnaire that involved on instrument measurement testing and get the feedback from the pre-testing. Data collection method also discussed in this chapter to explain the process and the methods of analysis that were used for the data analysis and to achieve the required results that will discuss for the next chapter.

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CHAPTER FIVE :

DESCRIPTIVE ANALYSIS AND RESULT DISCUSSION

5.1 Introduction

The aim of this chapter is to present the empirical results by presenting the descriptive analysis that contain socio demographic analysis, respondents housing profile and the level of satisfaction for each of the dependent and independent variables. This chapter focus on the result and discussion to address research objective 1, which refers to explore level of neighbourhood satisfaction and QoL perceived by urban residents. The data was analysed using SPSS. The analysis focuses on two types of housing: landed houses and high-rise apartments, to see how they perceive the level of neighbourhood satisfaction and quality of life. In this chapter, Skewness and Kurtosis are used to determine if a data set is well-modeled by a normal distribution and to quantify the possibility that a random variable underlying the data set is normally distributed.

5.2 Socio-Demographic Analysis

Socio demographic analysis were analysed using frequency distribution (Table 5.1). From the analysis, gender groups are fairly represented between male 55% with females 45%. The age group are between 21 years old to 59 years old where 58.9% are married. Education of the respondents are 16.2 % for postgraduates and 47.4 % are undergraduate. In terms of employment sectors, majority of the respondnets are from private sector (60.1%) where 28.8% of the respondents are working in public sector. With the respect to monthly income level, the most frequent group is between RM 1000-3000

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(53.8 %) and monthly income per month from RM9001 and above are the smallest group 5.9%.

Table 5.1: Socio-Demographic Analysis

Demogrphic	Percentage
Gender	
Male	55.0
Female	45.0
Age	
21-30	47.2
31-45	36.6
46-59	16.2
Education Level	
No formal education	1.2
Primary School	2.5
PMR/SRP	.8
SPM/SMPV	10.6
STPM/STAM/Matriculation	3.9
Certificate	2.0
Diploma	15.1
Degree	47.4
Tertiary education (Master, PHD)	16.2
Others	.2
Marital Status	
Single	39.9
Married	58.9
Divorced	1.2
Employment Sector	
Private sector	60.1
Public sector	28.8
Self employed	7.6
Others	3.5
Monthly Net Income	
1000-3000	53.8
3001-5000	31.9
5001-9000	8.4
90001 and above	5.9

Table 5.2 explains the context of housing types in which the respondents stay in. The highest percentage was double story terrace house with 35.6% and the lowest was

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0.8% for traditional house. 48.1% of the respondents were home owners of the home and were living with family, while 23.3% of the respondents were co-tenants.

Table 5.2: Respondents' Housing Profiles

Types of Housing	***Percentage(%)***
Landed Housing	
Single storey terrace	13.5
Double storey terrace	35.6
Single storey semi-detached	1.0
Double storey semi detached	3.5
Single storey detached	1.2
Double storey detached	2.2
Traditional house	.8
Apartment	
Low cost apartment	12.5
Medium cost apartment	29.6
Status of Homeowners	***Percentage(%)***
Home owner and living alone	4.5
Home owner and living with family	48.1
Co-tenant	23.3
Tenant and living with family	24.1

Based on the results from Tables 5.1 and 5.2, it shows that this study successfully achieved the target of respondents that involves all levels of ages from 21–59. All the respondents came from different levels of income that covered two types of housing, which were landed housing and high-rise apartments. The aim is to observe the different perceptions on neighbourhood satisfaction and QoL, which will be discussed in the next section.

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5.3 Assessment of Normality and Descriptive Analysis

In this section, mean scores are presented for the scale items for all the dependent variables and independent variables. Data also was assessed to determine normality of distribution as recommended for factor analysis (Hair et al., 1995; Tabachnick and Fidell, 2001). The general statistical measure of skewness ranges from -3.0 to 3.0. If the data perfectly normally distributed, the measure of skewness is 0.0. However, the measure between -1.0 and 1.0 is considered normally distributed and acceptable to proceed with parametric analysis procedure. Skewness and kurtosis were used which required that values should not be greater than +-2 if observed distribution is normal (George and Mallery, 2010).

5.3.1 Mean scores and Normality for Neighbourhood Attributes for High-Rise Building Housing

Table 5.3, for social/physical attributes, the means are between 3.11 and 3.63. All the means are high. This is to explain that all the items are all important in social/physical. The highest score mean is condition of worship (3.63) followed by accessible to public community space (3.41) and condition of public community space (3.41).

Result for normality test in table 5.3 for social/physical, all constructs indicated a normal distribution with skewness and kurtosis below +-2 as required in George and Mallery (2010).

Table 5.3: Descriptive and normality test of social/physical constructs

Features	Item	Mean	Skewness	Kurtosis
Social and Culture	Condition of worship	3.63	-.395	.038
	Condition of public community space	3.41	-.297	.209
	Accessible of public community space	3.41	-.092	-.110
	Condition of public library	3.15	-.531	-.018

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	Provision of barrier free for disabilities and elderly	3.11	-.433	-.300
	The location of public space in neighbourhood area are strategic	3.40	-.563	.093
Open Space and Recreational Area	Condition of playground	3.35	-.559	.081
	Condition of pedestrian walkway	3.33	-.372	-.437
	Landscape is beautiful and elegent	3.27	-.444	-.144
	Recreational area and urban public space is well maintained	3.29	-.448	.080
Public Facilites and Services	Education faciliies	3.53	-0.66	0.24
	Affordable health facilities	3.45	-0.57	0.32
	Public toilet within the neighbourhood	3.20	-0.51	-0.20
	Parking facilities	3.20	-0.54	0.09
	Post office	3.44	-0.74	0.92
	Police station	3.44	-0.84	0.92
	Location of public facilities and services are stategic and accessible	3.56	-0.90	1.32

5.3.2 Mean scores and Normality for Neighbourhood Attributes for Landed Housing

Table 5.4, for social/physical attributes for landed housing which contains social and culture, open space and recreational area and public facilities and services, the mean are between 2.97 to 3.70. All the means are high which mean, they are all important items in social/physical. The highest score mean is condition of worship (3.70) followed by accessible to public community space (3.44) and condition of public community space (3.44). Public toilet within neighbourhood found lowest mean (2.97) which mean, the participants needs the accessibility to the public toilet in their neighbourhood area.

Result for normality test in table 5.4 for social/physical, all constructs indicated a normal distribution with skewness and kurtosis below +-2 as required in George and Mallery (2010).

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Table 5.4: Descriptive and normality test of social/physical constructs

Features	Item	Mean	Skewness	Kurtosis
Social and Culture	Condition of worship	3.70	-.159	-.043
	Condition of public community space	3.44	-.244	-.109
	Accessible of public community space	3.44	-.229	-.065
	Condition of public library	3.09	-.331	-.357
	Provision of barrier free for disabilities and elderly	3.13	-.188	-.422
	The location of public space in neighbourhood area are strategic	3.32	-.250	.013
Open Space and Recreational Area	Condition of playground	3.32	-.362	-.035
	Condition of pedestrian walkway	3.30	-.036	-.567
	Landscape is beautiful and elegent	3.30	-.067	-.172
	Recreational area and urban public space is well maintained	3.28	-.280	-.193
Public Facilites and Services	Education facilities	3.42	-0.16	-0.05
	Affordable health facilities	3.34	-0.33	-0.03
	Public toilet within the neighbourhood	2.97	-0.17	-0.74
	Parking facilities	3.11	-0.22	-0.35
	Post office	3.27	-0.37	-0.17
	Police station	3.43	-0.47	0.31
	Location of public facilities and services are strategic and accessible	3.41	-0.40	0.31

5.3.3 Mean scores and Normality for Economic Attributes for High-Rise Building Housing

Table 5.5, for Economics attributes, the means are between 3.32 and 3.89. All the means are high which mean, they are all important items in economics attributes. The highest score mean is various shop and other services available in the neighbourhood area (3.89) followed by the location of shops and stores are strategic and nearby to living area (3.88) and Varieties mode of public transportation (Rapid KL Bus, Taxi, KTM, Monorail) with a mean of 3.51.

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The result for normality test is shown in Table 5.5 for economics, whereby all constructs indicated a normal distribution with skewness and kurtosis below +-2 as required in George and Mallery (2010).

Table 5.5: Descriptive and normality test of Economics constructs

Features	Item	Mean	Skewness	Kurtosis
Economics	Various shops and other services are available.	3.89	-0.03	-0.50
	The location of shops and stores are strategic and nearby with your living area	3.88	-0.07	-0.51
	Adequate job opportunities available	3.38	-0.25	-0.08
	Varieties mode of public transportation (Rapid KL Bus, Taxi, KTM, Monorail).	3.51	-0.22	-0.49
	Public transportation is efficient and reliable	3.32	-0.43	-0.14

5.3.4 Mean score and Normality for Economic Attributes for Landed Housing

Table 5.6, for Economics attributes, the means are between 3.13 to 3.70. All the means are high which mean, they are all important items in economics attributes. The highest score mean is the location of shops and stores are strategic and nearby with living area (3.70) followed by various shops and other services are available (3.68) and Adequate job opportunities available with mean 3.31.

All constructs suggested a normal distribution with skewness and kurtosis below +-2, as required in George & Mallery (2010), as a result of the normality test in table 5.6 for economic attributes.

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Table 5.6 : Descriptive and normality test of Economics constructs

Features	Item	Mean	Skewness	Kurtosis
Economics	Various shops and other services are available.	3.68	-0.49	0.63
	The location of shops and stores are strategic and nearby with your living area	3.70	-0.46	0.48
	Adequate job opportunities available	3.31	-0.31	0.09
	Varieties mode of public transportation (Rapid KL Bus, Taxi, KTM, Monorail).	3.29	-0.26	-0.62
	Public transportation is efficient and reliable	3.13	-0.25	-0.41

5.3.5 Mean scores and Normality for Environment Attributes for High-Rise Building Housing

Table 5.7, for Environment attributes, the means are between 3.03 and 3.26. The highest score mean is the speed of traffic flow (3.26) followed by alcoholism and public drinking (3.25) and drug activities with mean 3.23.

Result for normality test in table 5.7 for environment, all constructs indicated a normal distribution with skewness and kurtosis below +-2 as required in George and Mallery (2010).

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Table 5.7: Descriptive and normality test of environment constructs

Features	Item	Mean	Skewness	Kurtosis
Environment	The speed of traffic flow	3.26	-0.57	0.03
	The volume of traffic	3.08	-0.45	-0.27
	Noise (e.g. neighbours, traffic, etc.)	3.03	-0.37	-0.16
	Air pollution	3.08	-0.30	0.21
	Rubbish or litter lying around	3.17	-0.33	0.18
	Property crime. E.g. graffiti/vandalism	3.21	-0.10	-0.08
	Unemployed youth	3.21	0.08	0.16
	Drug activity	3.23	-0.01	-0.46
	Alcoholism and public drinking	3.25	-0.06	-0.70
	Homelessness	3.19	-0.10	-0.56

5.3.6 Mean scores and Normality for Environment Attributes for Landed Housing

Table 5.8, for Environment attributes, the means are between 3.06 to 3.14. The highest score mean is the speed of traffic flow, noise, and unemployed youth with 3.14 mean score. The lowest is rubbish or litter lying around the neighbourhood with 3.06 mean score.

Result for normality test in table 5.8 for environment, all constructs indicated a normal distribution with skewness and kurtosis below +-2 as required in George and Mallery (2010).

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Table 5.8: Descriptive and normality test of Environment construct

Features	Item	Mean	Skewness	Kurtosis
Environment	The speed of traffic flow	3.14	-0.37	-0.12
	The volume of traffic	3.07	-0.12	-0.50
	Noise (e.g. neighbours, traffic, etc.)	3.14	-0.13	-0.43
	Air pollution	3.09	-0.20	-0.22
	Rubbish or litter lying around	3.06	-0.21	-0.29
	Property crime. E.g. graffiti/vandalism	3.11	-0.15	-0.31
	Unemployed youth	3.14	-0.01	-0.17
	Drug activity	3.13	-0.10	-0.38
	Alcoholism and public drinking	3.08	-0.07	-0.59
	Homelessness	3.10	-0.12	-0.59

5.3.7 Mean Scores and Normality for Housing Satisfaction in High-Rise Building Housing

In Table 5.9, for housing satisfaction, the mean are between 3.22 and 3.55. The highest score mean was the location of the house that was near to various public facilities and services (3.55) and the lowest was housing in the neighbourhood area was relatively affordable (3.22).

The result for normality test is shown in Table 5.9 for housing satisfaction, whereby all constructs indicated a normal distribution with skewness and kurtosis below +-2 as required in George and Mallery (2010).

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Table 5.9: Descriptive and normality test of housing satisfaction constructs

Features	Item	Mean	Skewness	Kurtosis
Housing	Various choices of housing (from high end to low cost housing).	3.48	-0.41	0.60
	Housing in my neighborhood area is relatively affordable.	3.22	-0.34	0.02
	The location of my house nearby various public facilities and services	3.55	-0.54	0.16
	The physical condition of the house meets your need	3.52	-0.61	0.74
	Safety and security is good in my neighborhood area	3.43	-0.78	0.86

5.3.8 Mean score and Normality for Housing Satisfaction in Landed Housing

In Table 5.10, for housing satisfaction, the mean was between 3.08 and 3.52. The highest score mean was the location of the house was the physical condition of the house meets their need (3.52) and the lowest was housing in the neighbourhood area was relatively affordable (3.08).

The result for normality test is shown in Table 5.10 for housing satisfaction, whereby all constructs indicated a normal distribution with skewness and kurtosis below +-2 as required in George and Mallery (2010).

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Table 5.10: Descriptive and normality test of Housing Satisfaction constructs

Features	Item	Mean	Skewness	Kurtosis
Housing	Various choices of housing (from high end to low cost housing).	3.28	-0.28	-0.13
	Housing in my neighborhood area is relatively affordable.	3.08	-0.17	-0.36
	The location of my house nearby various public facilities and services	3.39	-0.36	-0.07
	The physical condition of the house meets your need	3.52	-0.29	0.28
	Safety and security is good in my neighborhood area	3.35	-0.32	0.07

5.3.9 Mean score and Normality for Neighbourhood Satisfaction for High-Rise Building Housing

In Table 5.11, for neighbourhood satisfaction, the mean was between 2.77 and 3.79. The highest score mean was the location of the neighbourhood was strategic and easily accessed from other areas (3.79) and the lowest was the neighbourhood adopted green technology for a sustainable lifestyle with 2.77.

The result for normality test is shown in Table 5.11 for neighbourhood satisfaction, whereby all constructs indicated a normal distribution with skewness and kurtosis below +-2 as required in George and Mallery (2010).

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Table 5.11: Descriptive and normality test of Neighbourhood Satisfaction constructs

Features	Item	Mean	Skewness	Kurtosis
Neighbourhood Satisfaction	My neighborhood has a good provisions of facilities and services that meet my needs.	3.63	-0.71	0.61
	My neighborhood is clean and well-maintained.	3.41	-0.34	-0.09
	Trust and confidence among each other (with other community)	3.47	-0.27	-0.23
	My neighborhood is safe and have low crime rate.	3.51	-0.40	-0.18
	My neighborhood has beautiful landscape and green area.	3.17	-0.15	-0.21
	The location of my neighborhood is strategic and easy access from other area.	3.79	-0.80	1.10
	My neighborhood adopted green technology for a sustainable lifestyle	2.77	0.03	-0.31
	Good place to raise kids	3.11	-0.60	-0.08
	Overall, I am satisfied with my neighbourhood	3.43	-0.81	0.54

5.3.10 Mean score and Normality for Neighbourhood Satisfaction for Landed Housing

Table 5.12, for Neighbourhhod Satisfaction, the mean are between 3.01 and 3.73. The highest score mean is Overall, I am satisfied with my neighbourhood (3.73) and the lowest is neighbourhood adopted green technology for a sustainable lifestyle with 3.01. Result for normality for normality test in table 5.12 for neighbourhood satisfaction, all constructs indicated a normal distribution with skewness and kurtosis below +-2 as required in George and Mallery (2010).

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Table 5.12 : Descriptive and normality test of Neighbourhood Satisfaction constructs

Features	Item	Mean	Skewness	Kurtosis
Neighbourhood Satisfaction	My neighborhood has a good provisions of facilities and services that meet my needs.	3.58	-0.62	0.49
	My neighborhood is clean and well-maintained.	3.63	-0.61	1.13
	Trust and confidence among each other (with other community)	3.68	-0.45	0.50
	My neighborhood is safe and have low crime rate.	3.42	-0.41	-0.20
	My neighborhood has beautiful landscape and green area.	3.41	-0.42	0.13
	The location of my neighborhood is strategic and easy access from other area.	3.72	-0.71	0.64
	My neighborhood adopted green technology for a sustainable lifestyle	3.01	-0.18	-0.28
	Good place to raise kids	3.60	-0.55	0.80
	Overall, I am satisfied with my neighbourhood	3.73	-0.53	1.05

5.3.11 Mean scores and Normality for QoL for High-Rise Building Housing

Table 5.13, for quality of life, the mean are between 2.66 to 4.27. I am satisfied with my health condition (4.27) and the lowest is the satisfaction towards health facilities provided (2.66). From this result, even though they have good health condition, but they feel that the health facilities still not insufficient in their neighbourhood area.

Result for normality, for normality test in Table 5.13 for QoL, all constructs indicated a normal distribution with skewness and kurtosis below +-2 as required in George and Mallery (2010).

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Table 5.13 : Descriptive and normality test of QoL constructs

Features	Item	Mean	Skewness	Kurtosis
Quality of Life	Low education level is linked with unemployment	3.09	-0.18	-0.54
	High level of education were associated with the better job opportunity	3.59	-0.58	0.59
	Academic knowledge/University degree is associated with better job opportunity	3.60	-0.70	0.54
	Lack of soft skill contributed towards unemployment	3.44	-0.42	0.14
	I am satisfied with my monthly current income	2.81	0.05	-0.20
	My current income is sufficient my own/ my family needs and expenses	2.95	-0.31	-0.05
	The Hospital Infrastructure provided sufficiently	3.43	-1.12	0.26
	The Clinic Infrastructure provided sufficiently	3.50	-1.31	1.45
	Are you satisfied with the health facilities	2.66	0.30	-0.28
	I am satisfied with my health condition	4.27	-0.56	0.23

5.3.12 Mean scores and Normality for QoL for Landed Housing

In Table 5.14, for QoL, the mean was between 2.83 and 3.70. Satisfaction with health condition was the highest satisfaction (3.70) and the lowest was the satisfaction towards health facilities provided (2.83). From this result, it showed that even though they had good health conditions, the respondents felt that the health facilities were still insufficient in their neighbourhood area.

The result for normality test is shown in Table 5.14 for QoL, whereby all constructs indicated a normal distribution with skewness and kurtosis below +-2 as required in George and Mallery (2010).

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Table 5.14: Descriptive and normality test of QoL constructs

Features	Item	Mean	Skewness	Kurtosis
Quality of Life	Low education level is linked with unemployment	3.01	0.08	-0.77
	High level of education were associated with the better job opportunity	3.61	-0.42	-0.10
	Academic knowledge/University degree is associated with better job opportunity	3.69	-0.41	0.04
	Lack of soft skill contributed towards unemployment	3.62	-0.42	-0.09
	I am satisfied with my monthly current income	3.16	-0.30	-0.44
	My current income is sufficient my own/ my family needs and expenses	3.13	-0.30	-0.61
	The Hospital Infrastructure provided sufficiently	3.22	-0.53	-1.29
	The Clinic Infrastructure provided sufficiently	3.45	-1.21	0.67
	Are you satisfied with the health facilities	2.83	-0.10	-0.35
	I am satisfied with my health condition	3.70	-0.91	0.92

Based on the above results, it can be concluded that all the items and constructs for all variables, namely neighbourhood characteristics, housing characteristics, neighbourhood satisfaction, and QoL, were typically normally distributed and appropriate for further analysis since they were based on the kurtosis and skewness of the data, which were closer to 0.0 and within the range of -1.0 to 1.0. The next section is a further discussion on the descriptive analysis of the satisfaction level of the neighbourhood and the QoL perceived by the respondents as this section responds to research objective 1.

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5.4 Discussions

Research Objective 1: To explore the level of neighbourhood satisfaction and the QoL perceived by urban residents

From the table 5.11, descriptive analysis was conducted to obtain research objective 1 to explore the level of neighbourhood satisfaction and urban QoL perceived by urban residence. For this result, the analysis divided into 2 categories which is to look the different experience from landed housing and high-rise apartments. From the result, it shows that level of neighbourhood satisfaction received from landed housing is 59% and 54% for high-rise apartments as overall. The lowest mean from neighbourhood satisfaction construct is the level of satisfaction towards adoption green technology for a sustainable lifestyle with 54% level of satisfaction for landed housing and 44% level of satisfaction from high-rise apartments. This result shows that the adoption of green technology needed by the by the residents from high-rise housing and landed housing as they aware on the importance of green technology for sustainability.

Green technology can be defined as development and application of natural environment and resource conservation products, equipment and systems which minimise and reduce the negative impact of human activities. This technology can meet society's needs in ways that can go on forever without destroying or depleting natural resources. In other words, green technology for sustainability can be described as the technology that meets present needs without sacrificing future generations' ability to fulfil their own needs (Shafiei et al., 2017). The result from this study is align with Laffta and Al-rawi (2018) stated that green technology is important factors in sustainable development especially in spatial planning. Green technology is important as it can help the urban cities to achieve high standard of living and to ensure the natural ecosystems and resources can be sustained. The adoption to green technology can reduce waste and contaminants,

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resource consumption and increase the efficiency of services in the city. Pollution can be reduced by promoting green transportation and it is also can reduce the health inequalities of the city's population. Other examples on the benefit of green technology is to reduce overall water consumption with the use of treated wastewater in public water.

The highest means score for high-rise housing is 69.75% that indicates satisfatcion with the location of neighbourhood, whereby the location is strategic and easy to be accessed by other areas. Meanwhile, the highest score for landed housing is 68.25%, which indicates satisfaction with their neighbourhood location. This can be concluded that the result showed the respondents expectation from the high-rise apartment and landed housing are different. Location of their neighbourhood is important due to strategic location of neighbourhood area makes people easy to access by other area. Location is important as the location is the place connect to each other's and connect to the living environment.

Neighbourhood location become personally meaningful if the neighbourhood is located near to the highway, near to the leisure place, near to public transport, public facilities, and near to workplace. As for the landed housing expectation on the neighbourhood as overall, they satisfied with everything that provided in the neighbourhood area such as the facilities provided, the trust among the community, lower crime rate, landscape and it is a good place to raise children.

Considering the QoL of urban residents, Table 5.13 shows that there are three categories under QoL, which are income, education and health. From the result shows that from both high-rise housing and landed housing, the satisfaction on their health facilities are incredibly low with 47.5% level of dissatisfaction from the high-rise housing and 41.5% level of dissatisfaction from landed housing with the health facilities provided in their neighbourhood area. It can be concluded that in the neighbourhood area, both

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high-rise housing and landed housing residents are dissatisfied with the health facilities in the neighbourhood area.

The highest score mean is the satisfaction for their health condition, in which both high-rise housing and landed housing scores are 81.7% and 67.5%, respectively. This proved that their QoL can be obtained through their good health condition that can affect their quality of life. There are two indicators that show low satisfaction in QoL from high-rise housing respondents, i.e. their satisfaction on income is 45.3% and current income sufficient for their own and family expenses is 48.5%. Compared to landed housing, the two indicators that show the lowest satisfaction are education that leads to employment with 50.1% and current income sufficient to meet their own need and family needs with 53.3%. From the different result from both high-rise housing and landed housing, their level of dissatisfaction are different where it shows that high-rise apartment households need to focus on income as most of the households have insufficient income to survive with their family needs. Meanwhile, landed housing households' problems are more on education, employment and income.

From the table according to the result, aspect in defining QoL is mostly about the satisfaction of income, education level and skills affect to unemployment, university degree and job opportunity, hospital and clinic infrastructure and health problems. This result for both neighbourhood satisfaction and QoL supported by the Housing Needs Theory stated that the satisfaction of the individuals will be higher if current living environment surrounding with the standards as what they perceived or what their family needs.

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5.5 Summary

This chapter has presented the descriptive analysis to answer the research objective 1 that aim to achieve objective one to explore the level of neighbourhood satisfaction and QoL perceived by urban residence. To proceed the further analysis, normality test has been conducted by assessing the skewness and kurtosis of all the dependent and independent variables of this research. The mean score is used for the descriptive analysis to assess the level of satisfaction for both neighbourhood and QoL of the urban residence. The next chapter will explain about the Structural Equation Model that will focus on the second and third objective of this research.

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CHAPTER SIX :

STRUCTURAL EQUATION MODEL

6.1 Introduction

Structural equation modelling (SEM) is a statistical analysis technique of the second generation that has been developed to analyse the interrelationships between multiple variables in a model. The integration of quantitative data and correlational or causal assumptions into the model is used by the Structural Equation Modelling Technique. The importance of this chapter is to explain the process of data analysis using SEM to obtain research objective 2 and research objective 3. Research objective 2 is to assess the influence of neighbourhood attributes and housing attributes in explaining neighbourhood satisfaction. Objective 3 is to examine the neighbourhood satisfaction as a mediator to mediate the relationship between neighbourhood satisfaction and QoL. Confirmatory Factor Analysis (CFA) were analyse before proceeding to the structural model where the CFA technique involve individual CFA and pooled CFA. AMOS 20 were used for this research. The objective of this structural model was to test the hypotheses H1 to H11 stated in Figure 2.10 in chapter two.

6.2 The Confirmatory Factor Analysis (CFA)

The Confirmatory Factor Analysis is required to validate the measurement model of all latent constructs involved in the study. The validation procedure in CFA will assess the unidimensionality, Validity, and Reliability of all constructs (Zainudin, 2015; Tabachnick & Fidell, 2007). Three types of validity will be assessed namely Construct Validity, Convergent Validity, and Discriminant Validity. Meanwhile, the reliability of the constructs will be assessed through the Composite Reliability. The CFA technique

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has two approaches such as individual CFA and pooled CFA. Those approaches are applied in the current study to determine the reliability and validity per construct.

The use of Pooled CFA is much efficient than individual CFA (Aimran and Ahmad, 2013) because it can avoid the model identification problem especially if some of the constructs have less than four measuring items per construct (Kashif et al., 2015; Awang, Afthanorhan, and Asri, 2015). Using this method, all constructs are pooled together and linked using the double-headed arrows to assess the correlation among the constructs. However, its usefulness could not reasonable for the high number of observed and unobserved variable (i.e., latent construct) due to convergence problem (Reinartz, Henseler, and Haehnlein, 2009). As a result, the individual CFA is carry out for each construct before testing their construct correlation. In this stage, the construct validity and reliability were assessed by inspecting their fitness indexes and factor loading. The recommended value for the factor loadings and construct reliability are 0.60 and 0.70 respectively (Brown, 2014; Raykov, 1997). Meanwhile, the recommended value for each fitness index (Hair, Babin, and Krey, 2017) is presented as follows:

Name of category	**Name of index**	**Level of acceptance**
Absolute Fit Index	**RMSEA**	RMSEA < 0.08
	GFI	GFI > 0.90
Incremental Fit Index	AGFI	AGFI > 0.90
	CFI	CFI > 0.90
	TLI	TLI > 0.90
	NFI	NFI > 0.90
Parsimonious Fit Index	**Chisq/df**	Chi-Square/ df < 3.0

Once the individual CFA is performed for each construct, the items remained in each construct are computed using the transformation approach to get the value of means. Then, the Pooled CFA is conducted using the value of means to assess the construct correlation. This procedure could minimise the excessive number of items or construct when applying structural equation modelling (Bollen and Bainter, 2014).

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In this study, there are four latent variables are used for estimating the relationships between exogenous and endogenous constructs. Among of these latent variables, four out of five variables are considered as exogenous constructs, which are socio/physical, economic, environment and housing, meanwhile, QoL is considered as an endogenous construct. Based on the framework previously, all latent variables are formed as second order construct or higher order model. Furthermore, neighbourhood satsfaction is treated as a mediator construct due to its potential to mediate the relation between neighbourhood attributes and QoL.

6.3 Individual CFA

6.3.1 Social/Physical

Figure 6.1 shows that the fitness indexes (RMSEA, CFI, TLI, and NFI) appeared in Social / Physical model is satisfied. However, some of the values of factor loadings are below than 0.60 which has potential to reduce the impact of construct reliability and validity. According to MacKinnon (2008) and Awang et al. (2015), the recommended value for the factor loading in the model is 0.60 and above. As a result, the factor loading below 0.60 should be dropped from the model in order to increase the impact of the construct reliability and validity. The factor loading show the strength relationship between indicator and construct.

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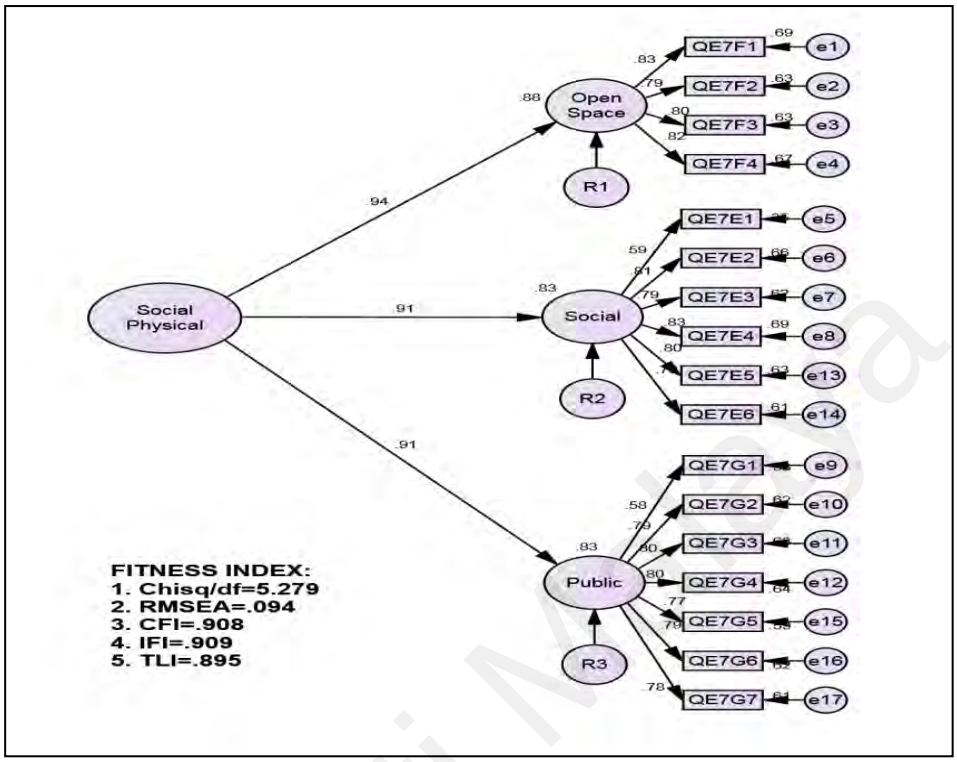
Figure 6.1 : Social / Physical Individual CFA



In this case, one subscales of Open Space did not have any low factor loading problem indicating that this construct could retained for the subsequent analysis. Meanwhile, subscales of Social and Public have two items below than 0.60 of factor loading. To follow the guidelines by the previous literatures, those two items are dropped simultaneous and re-run the same analysis. Figure 6.2 shows the final result for social physical after excluding items QE7E1 and QE7G1. The figure 6.2 also includes the results for factor loading and fitness indexes.

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Figure 6.2 : Social / Physical Individual CFA after items dropped

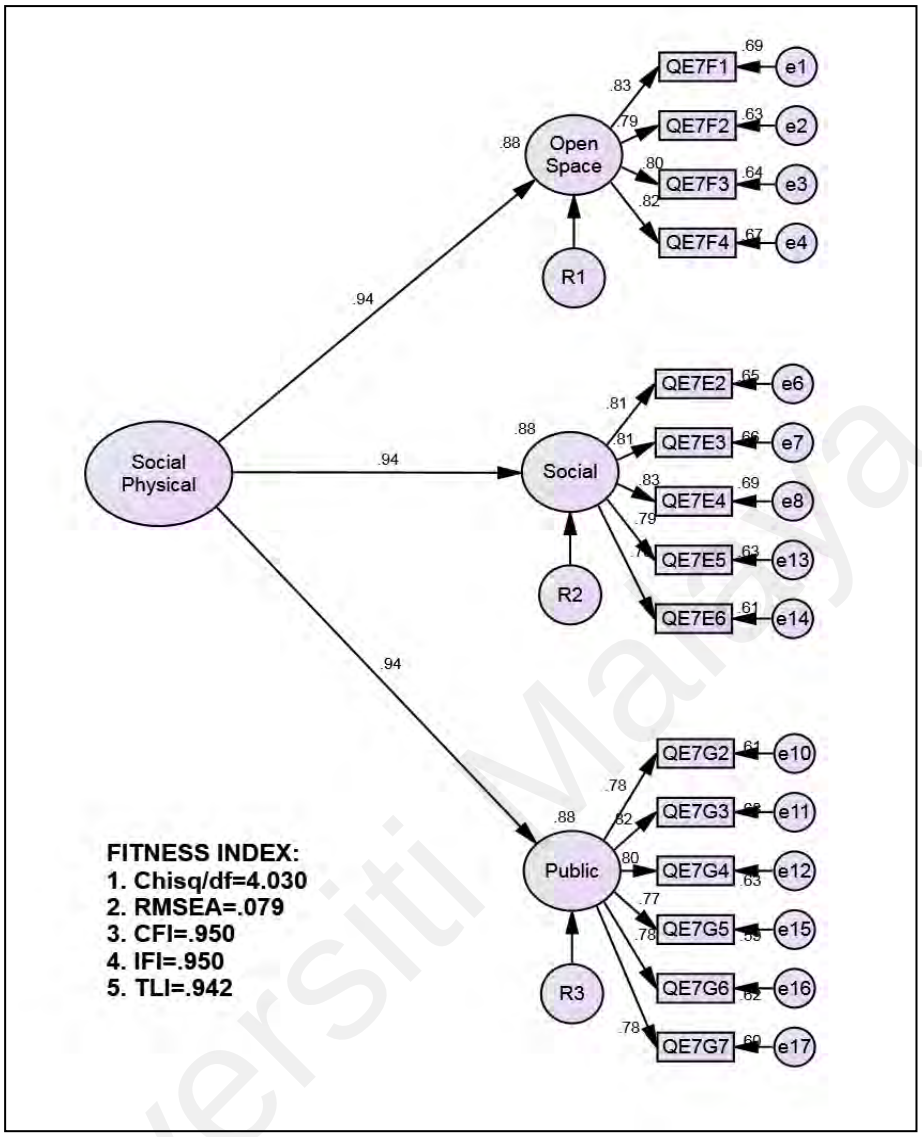

Table 6.1: The summary of Fitness Indexes for Social/Physical

Name of category	Name of index	Index value	Comments
Absolute fit	RMSEA	0.079	The required level is achieved
Incremental fit	CFI	0.950	The required level is achieved
	TLI	0.942	The required level is achieved
	IFI	0.950	The required level is achieved
Parsimonious fit	Chisq/df	4.030	The required level is achieved

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Hair, Babin and Krey (2017) suggest the study should report at least one index from each of the three-model fit namely Absolute Fit, Incremental Fit and Parsimonious Fit in order to prove construct validity. From this table, all fitness indexes have achieved the required level. Thus, the measurement model has achieved the construct validity (Zainudin, 2015). The study needs to report the Composite Reliability (CR) which indicate the reliability of the construct and the Average Variance Extracted (AVE) which indicate the convergent validity of the construct. The threshold value for CR is 0.6 or higher while the threshold value of AVE has to be 0.5 or higher.

	CR	**AVE**
Social/ Physical	0.958	0.884
Open Space	0.884	0.656
Social	0.903	0.650
Public	0.908	0.622

The results in this table shows all Composite Reliability (CR) and Average Variance Extracted (AVE) exceeds the threshold value of 0.6 and 0.5 respectively which indicate the convergent validity and composite reliability of all main constructs in the model (Zainudin, 2015).

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6.3.2 Environmental

Figure 6.3 : Environment Individual CFA

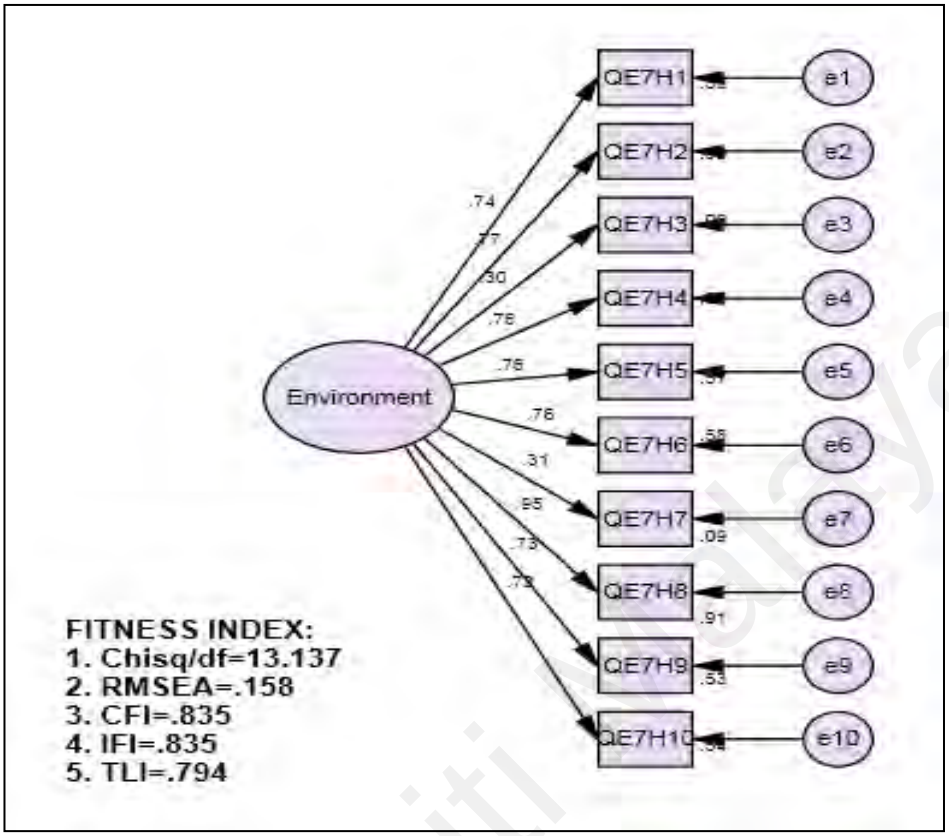

Figure 6.3 shows the fitness indexes and factor loading of items of Environment construct. As shown, the CFI, IFI and TLI fitness indexes do not achieve the minimum requirement of 0.9. Basically, items with low factor loading have caused the construct to be poor fit. This poor item needs to be deleted in order to achieve unidimensionality and improve the model fit of the construct. Based on the given results, the two items with poor loadings were detected.

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Figure 6.4 : Environment Individual CFA after items dropped

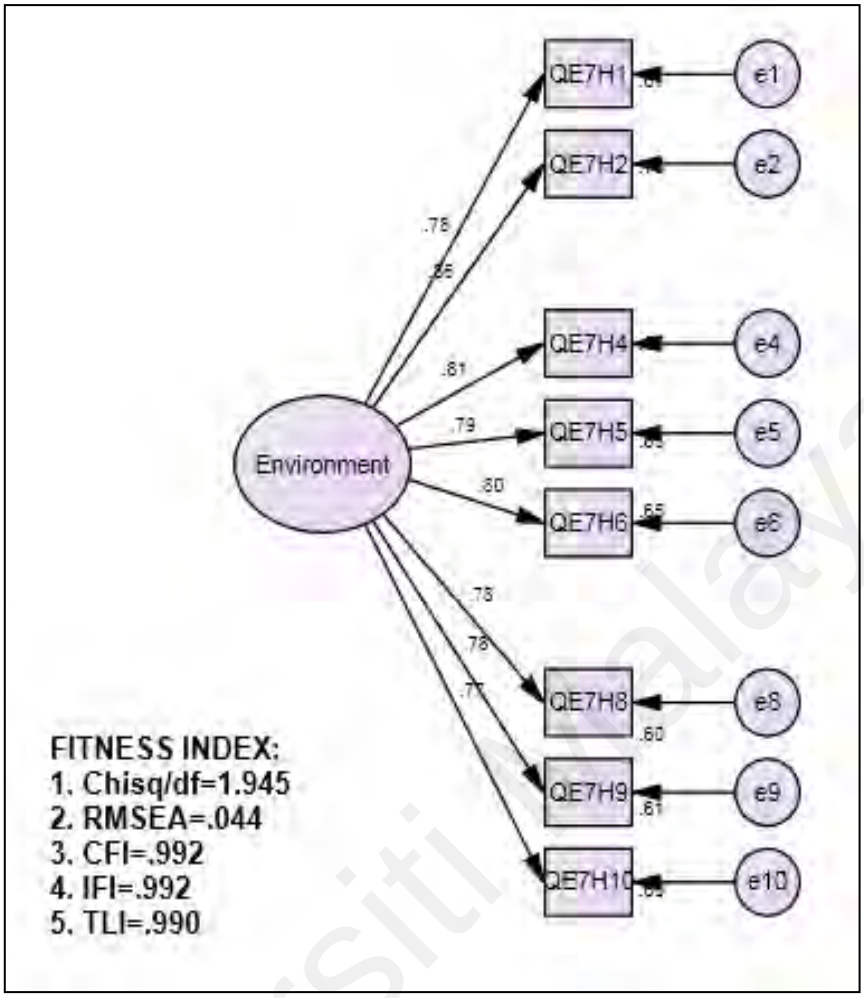

Figure 6.4 shows the new result for Environment constructs after two items (i.e., QE7H3 and QE7H4)) were removed from the construct. It should be noted that only one item was removed at a time and the fitness indexes were examined in each of the process. The unidimensionality of the construct is achieved as there is no item with factor loading of less than 0.6. Moreover, the CFI, IFI and TLI that represents each fitness indexes are achieved the required level.

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Table 6.2: The summary of Fitness Indexes for Environment

Name of category	Name of index	Index value	Comments
Absolute fit	RMSEA	0.044	The required level is achieved
Incremental fit	CFI	0.992	The required level is achieved
	TLI	0.990	The required level is achieved
	IFI	0.992	The required level is achieved
Parsimonious fit	Chisq/df	1.945	The required level is achieved

In order to demonstrate construct validity, Hair, Babin and Krey (2017) suggest that the study should report at least one index from each of the three-model fits, namely Absolute Fit, Incremental Fit and Parsimonious Fit. From this table, the required level was achieved by all fitness indexes. The measurement model thus achieved the validity of the structure (Zainudin, 2015).

6.3.3 Housing

The fitness indexes and factor loading of housing structure items are shown in Figure 6.4. As shown the minimum requirement is not achieved by the Chisq/df and RMSEA fitness indexes. Basically, the low factor loading or multicollinearity issue of the item caused the construction to fit poorly. Any items with low factor loading must be excluded in order to achieve unidimensionality and improve the model fit of the construct. It is imperative not to depend on incremental indexes to asses the model solely because each fitness index has its own method of assessing the model.

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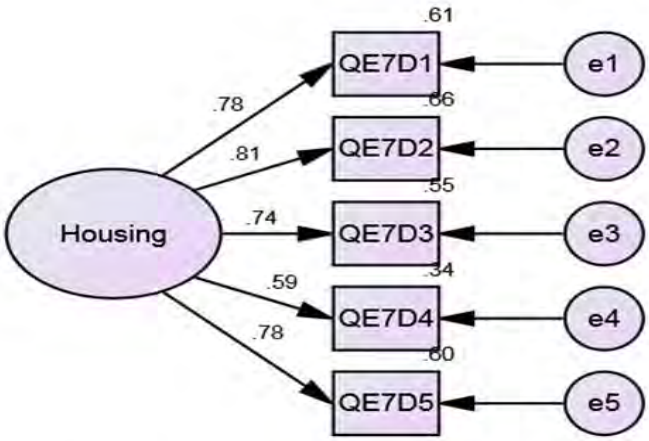
Figure 6.5 : Housing Individual CFA



FITNESS INDEX:
1. Chisq/df=15.880
2. RMSEA=.175
3. CFI=.924
4. IFI=.924
5. TLI=.873

Figure 6.6 shows the Housing construct after delete one item namely QE7D4 from the construct. The unidimensionality of the construct is achieved as there is no item with factor loading of less than 0.6. Besides, the Chisq/df, RMSEA, CFI, IFI and TLI fitness indexes are achieved the required level

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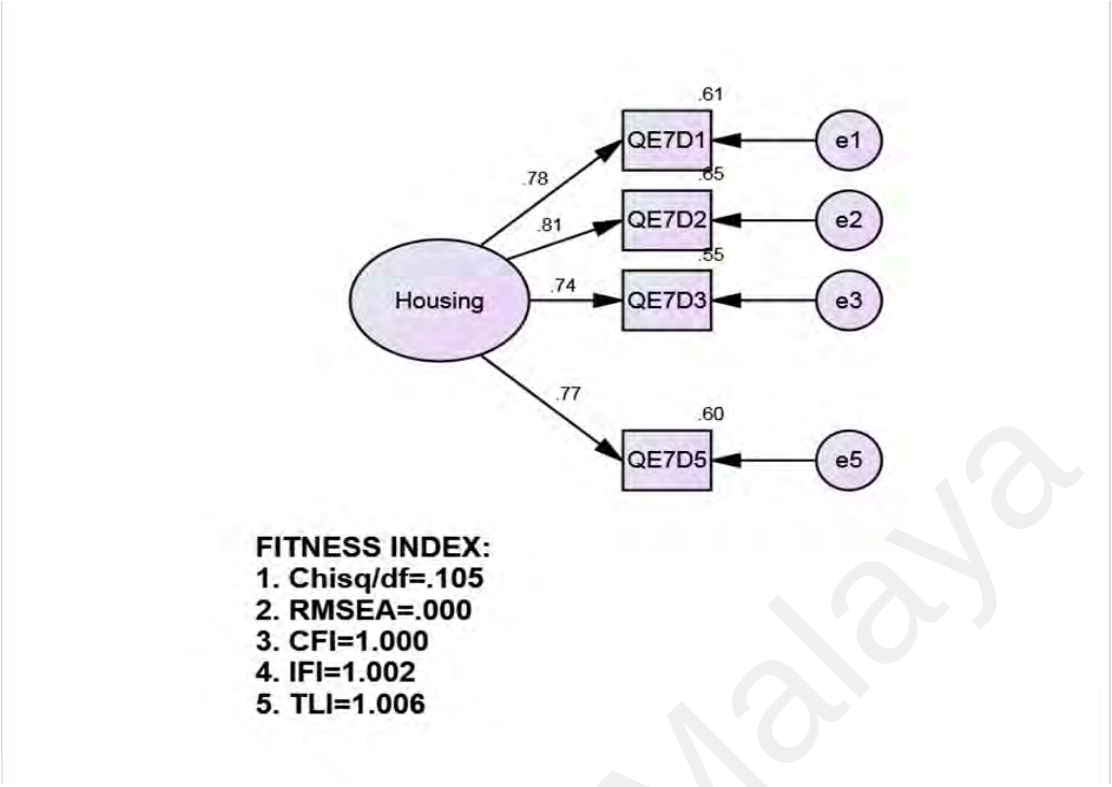
Figure 6.6 : Housing Individual CFA after items dropped



From this table, we can see all fitness indexes have achieved the required level. As suggested by Hair, Babin and Barry (2017), at least at least one index from each of the three model fit namely Absolute Fit, Incremental Fit and Parsimonious Fit, in order to prove construct validity. The measurement model thus achieved the validity of the construct.

Table 6.3: The summary of Fitness Indexes for Housing

Name of category	Name of index	Index value	Comments
Absolute fit	RMSEA	0.058	The required level is achieved
Incremental fit	CFI	0.994	The required level is achieved
	TLI	0.988	The required level is achieved
	IFI	0.994	The required level is achieved
Parsimonious fit	Chisq/df	2.664	The required level is achieved

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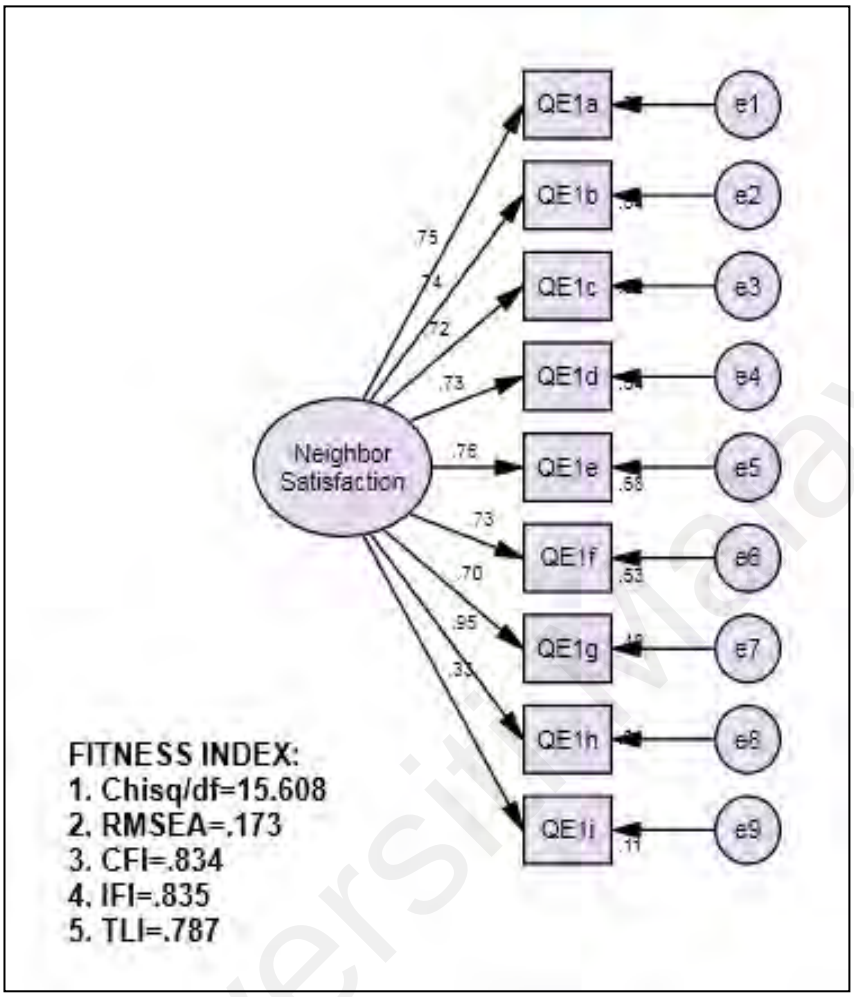
6.3.4 Neighbourhood Satisfaction

Figure 6.7 : Neighbourhood Satisfaction Individual CFA



The fitness indexes and factor loading of the Neighbour Satisfaction construct are shown in Figure 6.7. As shown the minimum requirement of 0.9 is not satisfied by the CFI, IFI and TLI fitness indexes. The issue concerned with here is due to poor loading. Therefore in order to achieve unidimensionality and improve the model fit of the construct, this item needs to be removed.

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Figure 6.8 : Neighbourhood Satisfaction Individual CFA after items dropped.

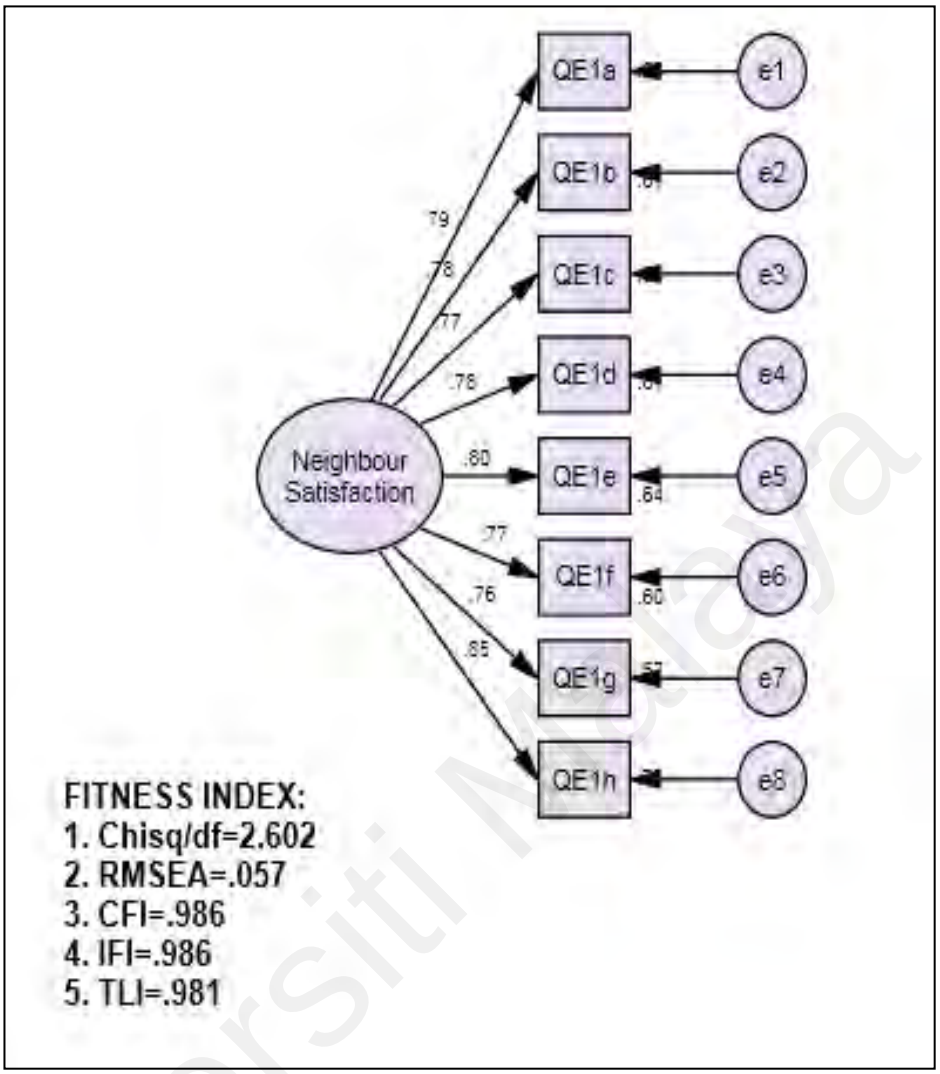

Figure 6.8 shows the Neighbour Satisfaction construct which all items carry factor loading above 0.60. Therefore, the unidimensionality of the construct is achieved as there is no item with factor loading of less than 0.6. Besides, CFI, IFI and TLI fitness indexes achieved the required level which one can stated that the measurement model is valid for the subsequent analysis.

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Table 6.4: The summary of Fitness Indexes for Neigbourhood Satisfaction

Name of category	Name of index	Index value	Comments
Absolute fit	RMSEA	0.057	The required level is achieved
Incremental fit	CFI	0.986	The required level is achieved
	TLI	0.981	The required level is achieved
	IFI	0.986	The required level is achieved
Parsimonious fit	Chisq/df	2.602	The required level is achieved

Hair, Babin and Barry (2017) proposed that the research should report at least one index of each of the three models fit, namely Absolute Fit, Incremental Fit and Parsimonious Fit, in order to demonstrate the validity of the model. From this table, all fitness indexes have reached the required level. The construct validity of the measurement model has thus been achieved (Awang, 2015).

6.3.5 Quality of Life

Figure 6.9: QoL individual CFA.

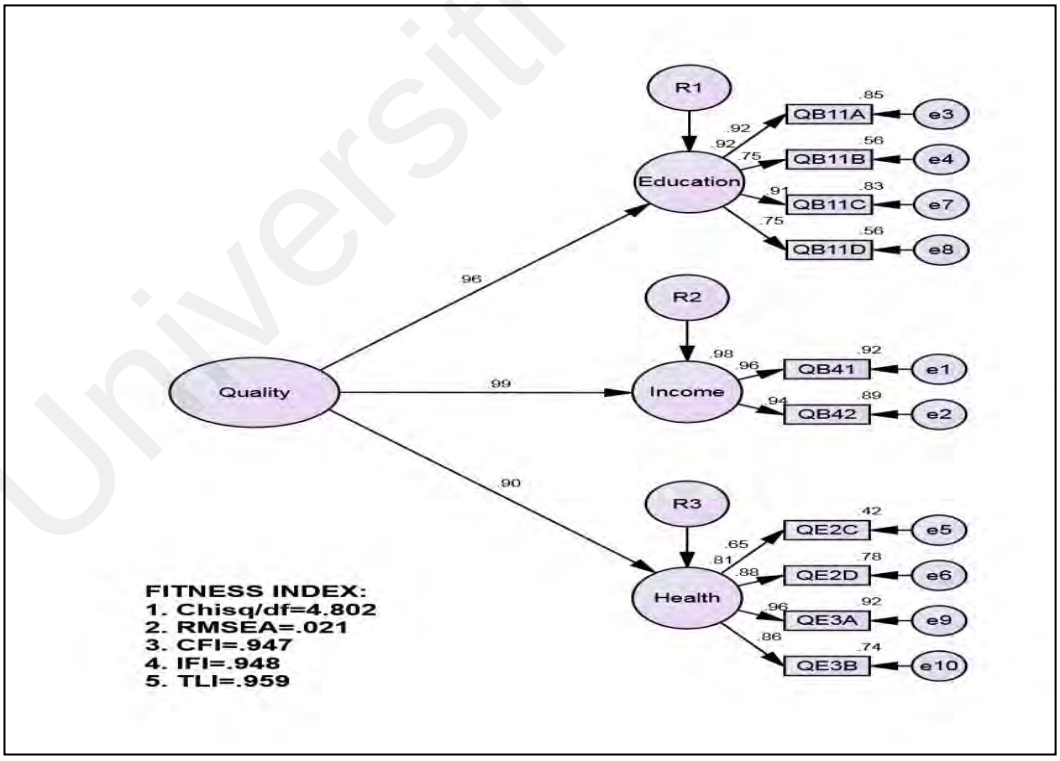

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Table 6.5: The summary of Fitness Indexes for QoL

Name of category	Name of index	Index value	Comments
Absolute fit	RMSEA	0.021	The required level is achieved
Incremental fit	CFI	0.947	The required level is achieved
	TLI	0.959	The required level is achieved
	IFI	0.948	The required level is achieved
Parsimonious fit	Chisq/df	4.802	The required level is achieved

Hair, Babin and Krey (2017) propose that in order to prove construct validity, the analysis should report at least one index from each of the three model fits, namely Absolute Fit, Incremental Fit and Parsimonious Fit. From this table, we can see the appropriate amount has been reached by all fitness indexes. The measurement model thus achieved the validity of the construct (Zainudin, 2015). Composite Reliability (CR) indicating the construct's reliability and the Average Variance Derived (AVE) indicating the construct's convergent validity must be stated in the analysis. The CR threshold value must be 0.6 or higher, while the AVE threshold value must be 0.5 or higher.

	CR	**AVE**
Quality of Lifee	0.966	0.904

The results in this table shows all Composite Reliability (CR) and Average Variance Extracted (AVE) exceeds the threshold value of 0.6 and 0.5 respectively which indicate the convergent validity and composite reliability of all main constructs in the model (Zainudin, 2015).

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6.4 Pooled Confirmatory Factor Analysis (PCFA)

As described above, for this research, the Pooled CFA analysis was carried out to test the correlations of constructs that were an important part of evaluating discriminant validity. Discriminant validity is used to evaluate how the position of each construct varies in contributing to the research project's effect. The comparison of square root AVE and construct correlation can be used to determine the discriminant validity, according to Fornell & Larcker (1981) and Voorhoes et al. (2016). For any empirical study it is important that the constructs employed are not redundant in the research project.

Figure 6.10: Standardised estimates

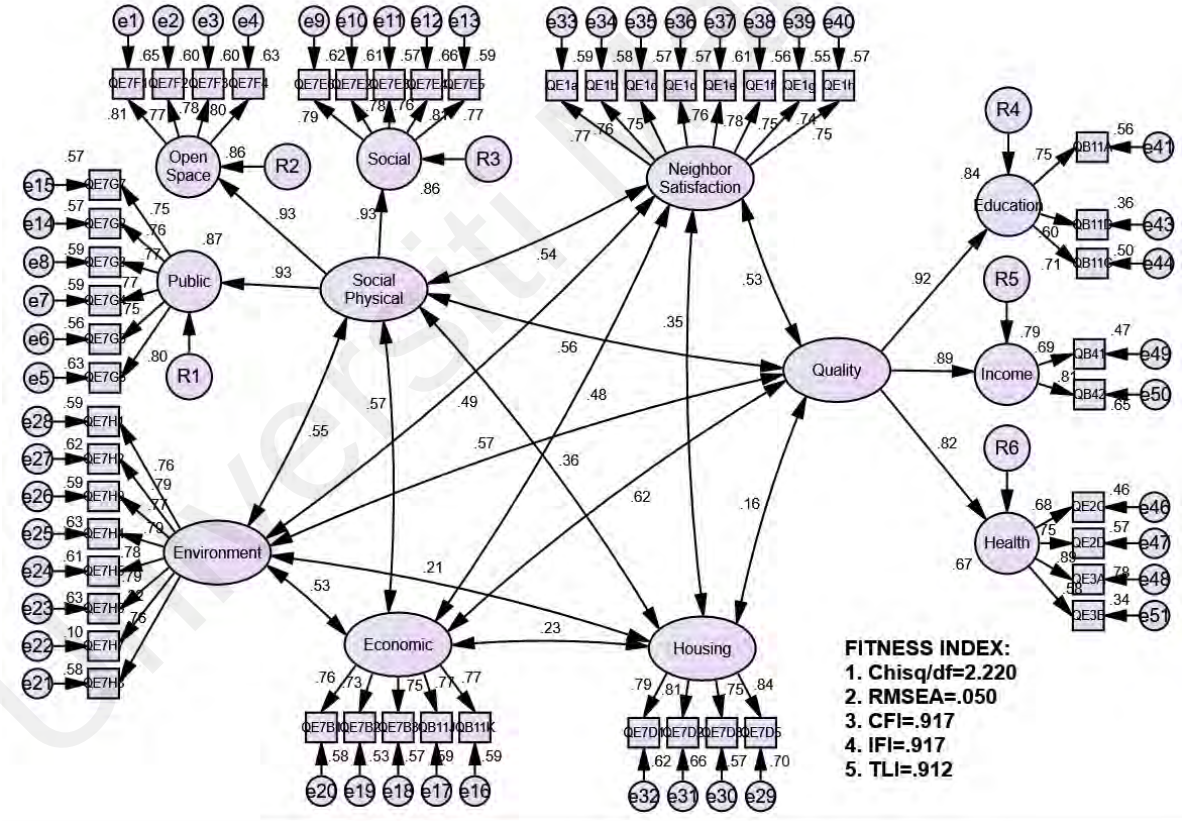

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Table 6.6: The summary of Fitness Indexes PCFA

Name of category	Name of index	Index value	Comments
Absolute fit	RMSEA	0.050	The required level is achieved
Incremental fit	CFI	0.917	The required level is achieved
	TLI	0.912	The required level is achieved
	IFI	0.917	The required level is achieved
Parsimonious fit	Chisq/df	2.220	The required level is achieved

Table 6.6 shows that all fitness indexes have achieved the required level. As Hair, Babin and Krey (2017) suggest the study should report at least one index from each of the three model fit namely Absolute Fit, Incremental Fit and Parsimonious Fit in order to prove construct validity. The measurement model has thus achieved the validity of the build (Zainudin,2015). The study needs to report the Composite Reliability (CR) which indicate the reliability of the construct and the Average Variance Extracted (AVE) which indicate the convergent validity of the construct. The threshold value for CR is 0.6 or higher while the threshold value of AVE has to be 0.5 or higher.

Table 6. 7: Composite Reliability (CR) and Average Variance Extracted (AVE)

	CR	**AVE**
Social / Physical	0.951	0.865
Environment	0.926	0.698
Economic	0.870	0.572
Neighbour		
Satisfaction	0.919	0.669
Housing	0.882	0.652
Quality	0.909	0.770

The findings in Table 6.7 show that both Composite Reliability (CR) and Average Variance Extracted (AVE) surpass the threshold values of 0.6 and 0.5, respectively indicating the convergent validity and the composite reliability of all the main constructs in the model (Zainudin, 2015).

In the last steps of CFA report, the study needs to assess the Discriminant Validity of the constructs in order to clarify that they are not redundant of each other. The

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Discriminant Validity for the construct is achieved if the correlation among the exogenous constructs in the model does not exceed 0.85 (Zainudin, 2015; Bakar and Afthanorhan, 2016). The study also needs to develop the Discriminant Validity Index Summary for all constructs involved in the model in order to ensure that they are discriminant among each other. The Discriminant Validity Index Summary is shown in Table 6.8.

Table 6.8: The Discriminant Validity Index Summary

	Social/ Physical	**Economic**	**Environment**	**Neighbour Satisfaction**	**Housing**	**Quality**
Social/Physical	**0.930**					
Economic	0.57	**0.756**				
Environment	0.55	0.53	**0.835**			
Neighbour Satisfaction	0.54	0.48	0.49	**0.818**		
Housing Affordability	0.36	0.23	0.21	0.35	**0.807**	
Quality	0.56	0.62	0.57	0.53	0.16	**0.875**

The Discriminant Validity Index Summary is presented in Table 6.8. The diagonal values in bold are the square root of the AVE of the respective constructs while other values are the correlation between the respective pair of constructs. The Discriminant Validity of the respective construct is achieved if the square root of its AVE exceeds its correlation value with other constructs in the model. In other words, the Discriminant Validity is achieved if the diagonal values (in bold) are higher than any other values in its row and column. The tabulated values in Table 3 meet the threshold of Discriminant Validity. Thus, the study concludes that the Discriminant Validity for all constructs is achieved.

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6.5 Structural Equation Model (SEM)

SEM procedure will produce two sets of output namely the standardised regression weight and the regression weight estimate of the model. The standardised regression output consists of standardised beta coefficient between construct, factor loading for items as well as factor loading for the component, R^2 for items as well as R^2 for the equation, and the R^2 for the model. Meanwhile, the unstandardised regression consists of unstandardised beta coefficients between construct, standard errors of path coefficients and critical ratio. Therefore, the unstandardised regression should be reported to determine the significant level for hypothesis testing.

The study proposed several hypotheses to be tested using Structural Equation Modelling (SEM). The following eight of the hypotheses are direct hypotheses (path analysis), which represent the effects of exogenous constructs on the respective endogenous constructs:

H1: Social / Physical has a significant effect on Neighbour Satisfaction

H2: Social / Physical has a significant effect on Quality

H3: Environment has a significant effect on Neighbour Satisfaction

H4: Environment has a significant effect on Quality

H5: Economic has a significant effect on Neighbour Satisfaction

H6: Economic has a significant effect on Quality

H7: Housing Affordability has a significant effect on Neighbour Satisfaction

H8: Neighbour Satisfaction has a significant on Quality

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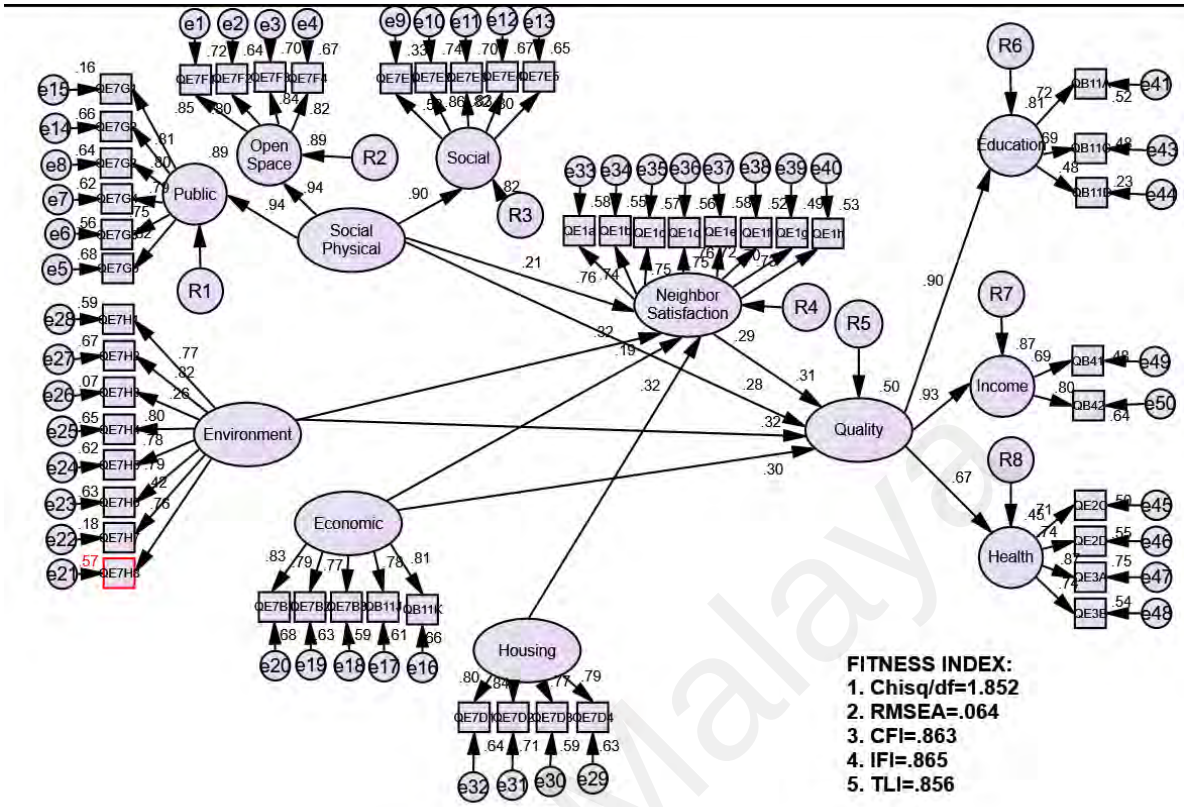
Figure 6.11: Standardised Estimates



The Figure 6.11 above showed the result of standardised estimates, which consists the proportion of variance explained in the model. As aforementioned, the endogenous construct for this study is Quality. The R^2 appeared in this study is 0.50 which indicates that 50.0 % of Quality is explained by Social / Physical, Economic, Housing and Environment.

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Figure 6.12: Unstandardised Estimate

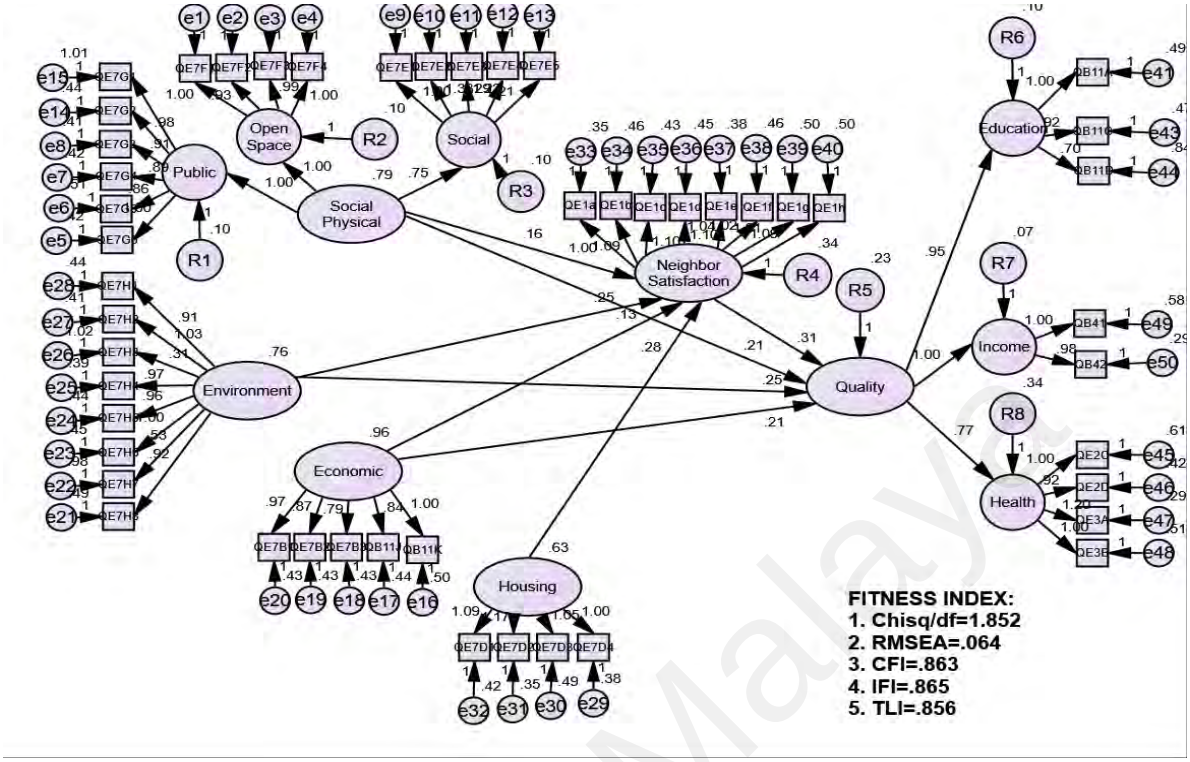

Table 6.9 : Regression Weights: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P
Neighbor_Satisfaction	<---	Social_Physical	.165	.053	3.109	.002
Neighbor_Satisfaction	<---	Environment	.250	.056	4.456	***
Neighbor_Satisfaction	<---	Economic	.133	.048	2.768	.006
Neighbor_Satisfaction	<---	Housing_Affordability	.277	.063	4.415	***
Quality	<---	Neighbor_Satisfaction	.308	.080	3.843	***
Quality	<---	Social_Physical	.210	.056	3.781	***
Quality	<---	Environment	.248	.060	4.123	***
Quality	<---	Economic	.210	.051	4.095	***

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			Estimate	S.E.	C.R.	P	Results
Neighbor_Satisfaction	<-- -	Social_ Physical	.165	.053	3.109	.002	Significant

The results of hypothesis testing for the causal effect Social/ Physical on Neighbourhood Satisfaction as expressed in H1. The path coefficient of Social/Physical to Neighbourhood Satisfaction is 0.165. This value indicates that for every one unit increase in Social/Physical, its effect would contribute 0.165 unit increase in Neighbourhood Satisfaction. The regression weight estimate of 0.165 has a standard error of 0.053. The critical ratio is shown as 3.109 standard errors above zero. The probability of getting a critical ratio of 3.109 in an absolute value is 0.002. This suggest that the regression weight for Social/Physical in the prediction of Neighbourhood Satisfaction is significant at the 0.002 level. To a great extend this support the hypothesis that Social/Physical has a significant effect on Neighbour Satisfaction.

	Estimate	S.E.	C.R.	P	Results
Neighbor_Satisfactionn <--- Environment	.250	.056	4.456	***	Significant

The results of hypothesis testing for the causal effect of Environment on Neighbourhood Satisfaction as expressed in H3. The path coefficient of Environment on Neighbourhood Satisfaction is 0.250. This value indicates that for every one unit increase in Environment, its effect would contribute 0.250 unit increase in Neighbourhood Satisfaction. The regression weight estimate of 0.250 has a standard error of 0.056. The critical ratio is shown as 4.456 standard errors above zero. The probability of getting a critical ratio of 4.456 in an absolute value is 0.000. What it means is that the regression weight for Environment in the prediction of Neighbourhood Satisfaction is significant at 0.000 level, hence, the hypothesis that Environment has a positive and significant effect on Neighbourhood Satisfaction is duly supported.

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	Estimate	S.E.	C.R.	P	Results
Neighbor_Satisfaction <--- Economic	.133	.048	2.768	.006	Significant

The results of hypothesis testing for the causal effect of Economic on Neighbour Satisfaction as expressed in H5. The path coefficient of Economic to Neighbour Satisfaction is 0.133. This value indicates that for every one unit increase in Economic, its effect would contribute 0.133 unit increase in Neighbour Satisfaction. The regression weight estimate of 0.133 has a standard error of 0.048. The critical ratio is shown as 2.768 standard errors above zero. The probability of getting a critical ratio of 2.768 in an absolute value is 0.006. This suggest that the regression weight for Economic in the prediction of Neighbour Satisfaction is significant at 0.006 level, hence, the hypothesis that Economic has a positive and significant effect on Neighbour Satisfaction is duly supported.

	Estimate	S.E.	C.R.	P	Results
Neighbor_Satisfaction <--- Housing_	.277	.063	4.415	***	Significant

The results of hypothesis testing for the causal effect of housing attributes on neighbourhood satisfaction as expressed in H7. The path coefficient of housing on neighbourhood satisfaction was 0.277. This value indicated that for every one unit increase in housing, its effect would contribute 0.277 unit increase in neighbourhood satisfaction. The regression weight estimate of 0.277 had a standard error of 0.063. The critical ratio was shown as 4.415 standard error above zero. The probability of getting a critical ratio of 4.415 in an absolute value was 0.000. This suggest that the regression weight for housing in the prediction of neighbourhood satisfaction was significant at

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0.000 level; thus, the hypothesis that housing attributes had a positive and significant effect on neighbourhood satisfaction was duly supported.

	Estimate	S.E.	C.R.	P	Results
Quality <--- Neighbor_Satisfaction	.308	.080	3.843	***	Significant

The results of hypothesis testing for the causal effect of Neighbourhood Satisfaction on Quality as expressed in H8. The path coefficient of Neighbourhood Satisfaction on Quality is 0.308. This value indicates that for every one unit increase in Neighbourhood Satisfaction, its effect would contribute 0.308 unit increase in Quality. The regression weight estimate of 0.308 has a standard error of 0.080. The critical ratio is shown as 3.843 standard errors above zero. The probability of getting a critical ratio of 3.843 in an absolute value is 0.000. This suggest that the regression weight for Neighbourhood Satisfaction in the prediction of Quality is significant at 0.000 level, hence, the hypothesis that Neighbourhood Satisfaction has a positive and significant effect on Quality is duly supported. The finding is in line with previous research (Mohit,2016 ; Sirgy et al., 2002 ; Howley et al., 2009 ; Mohanand Twigg, 2007), which mention that that neighbourhood satisaction has significant impact on quality of life.

	Estimate	S.E.	C.R.	P	Results
QoL <--- Social_Physical	.210	.056	3.781	***	Significant

The results of hypothesis testing for the causal effect of Social/Physical on QoL as expressed in H2. The path coefficient of Social/Physical to Quality is 0.210. This value indicates that for every one unit increase in Social/Physical, its effect would contribute 0.210 unit increase in QoL. The regression weight estimate of 0.210 has a standard error of 0.056. The critical ratio is shown as 3.781 standard errors above zero. The probability of getting a critical ratio of 3.781 in an absolute value is 0.000. This suggest that the

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regression weight for Social/Physical in the prediction of QoL is significant at 0.000 level, hence, the hypothesis that Social/Physical has a positive and significant effect on QoL is duly supported.

	Estimate	S.E.	C.R.	P	Results
QoL <--- Environment	.248	.060	4.123	***	Significant

The results of hypothesis testing for the causal effect of Environment on QoL as expressed in H4. The path coefficient of Environment on QoL is 0.248. This value indicates that for every one unit increase in Environment, its effect would contribute 0.248 unit increase in QoL. The regression weight estimate of 0.248 has a standard error of 0.060. The critical ratio is shown as 4.123 standard errors above zero. The probability of getting a critical ratio of 34.123 in an absolute value is 0.000. What it means is that the regression weight for Environment in the prediction of QoL is significant at 0.000 level, hence, the hypothesis that Environment has a positive and significant effect on QoL is duly supported.

	Estimate	S.E.	C.R.	P	Results
Quality <--- Economic	.210	.051	4.095	***	Significant

The results of hypothesis testing for the causal effect of Economic on QoL as expressed in H6. The path coefficient of Economic on QoL is 0.210. This value indicates that for every one unit increase in Economic, its effect would contribute 0.210 unit increase in QoL. The regression weight estimate of 0.210 has a standard error of 0.051. The critical ratio is shown as 4.095 standard errors above zero. The probability of getting a critical ratio of 4.095 in an absolute value is 0.000. What it means is that the regression weight for Economic in the prediction of QoL is significant at 0.000 level, hence, the

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hypothesis that Economic has a positive and significant effect on Quality is duly supported.

By using Structural Equation Model, there are eight hypotheses proposed to test the relationship of neighbourhood attributes and housing attributes towards neighbourhood satisfaction and QoL. Based on the above hypotheses results, all the dependent and independent variables are found positive and significant. Next section will discuss research objective 2 that will explain the roles of neighbourhood attributes and housing attributes in explaining neighbourhood satisfaction.

6.5.1 Discussion on the Roles of Neighbourhood Attributes and Housing Attributes in explaining neigbourhood satisfaction

Research Objective 2 :To assess the influence of neighbourhood attributes and housing attributes in explaining neigbourhood satisfaction

In explaining the roles of neigbourhood attributes, housing attributes and neighbourhood satisfaction, the results of hypothesis testing for the causal effect social/ physical attributes on neighbourhood satisfaction as expressed in H1. The path coefficient of Social/physical to neighbour satisfaction is 0.165. This value indicates that for every one unit increase in social/physical satisfaction, its effect would contribute 0.165 unit increase in neighbourhood satisfaction. This result supported previous research by Salleh (2012) and Hur and Morrow-Jones (2008), stated that satisfaction on physical attributes can affect neighbourhood satisfaction. The social/physical attributes that highlighted from their study are general appearance, density of housing, trees, cleanliness, local government and accessibility to recreational opportunities, religious facilities and pedestrian walkway.

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The results of hypothesis testing for the causal effect of environment attributes on neighbourhood satisfaction as expressed in H3. The path coefficient of environment on neighbourhood satisfaction is 0.250. This value indicates that for every one unit increase in environment satisfaction, its effect would contribute 0.250 unit increase in neighbourhood satisfaction. Previous research by Ozdamar (2016) and Wokekoro (2015) showed the same findings that water and air pollution can affect neighbourhood satisfaction. This study have a contrast findings with Leslie and Cerin (2008) where their research finding showed that traffic load and congestion have negative relationship with neighbourhood satisfaction.

The findings of the hypothesis tests for the causal influence of economic attributes on the satisfaction of the neighbourhood, as expressed in H5. The path coefficient of economic to neighbourhood satisfaction is 0.133. This value indicates that for every one unit increase in economic, its effect would contribute 0.133 unit increase in neighbourhood satisfaction. This study in line with Mohit (2016) stated that economic attributes have positive relationship to neighbourhood satisfaction. Balestra et al. (2013) stated that access to job opportunities and public transport facilities has significant impact to neighbourhood satisfaction. This study also in line with the study of De Vis et al. (2016) added that in urban areas the elements of proximity to shops, leisure activities, near to public transport and access to job opportunities are found important factors that can increase neighbourhood satisfaction in urban area.

The results of hypothesis testing for the causal effect of housing attributes on neighbourhood satisfaction as expressed in H7 shows that the path coefficient of housing attributes on neighbourhood satisfaction is 0.277. This value indicates that for every one unit increase in housing attributes satisfaction its effect would contribute 0.277 unit increase in neighbourhood satisfaction. This can be concluded that satisfaction on

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neighbourhood attributes and satisfaction on housing attributes have a significant effect towards neighbourhood satisfaction. As the housing issues are become common recently and focused by most of the researchers, the result is aligned with Baqutayan et al. (2015), the study stated place that the residents staying, the housing price can affect neighbourhood satisfaction. This study also in line with Kelly (2011) and Day (2000) stated that housing choice play an important role that can affect neighbourhood satisfaction in urban areas. From the findings, it can be concluded that housing attributes can affect neighbourhood satisfaction.

Social/physical, economic, environment and housing attributes discussed in this research are related to the Housing Demand Theory and Housing Needs Theory that developed this theory that concern on people's happiness and the true concept of human needs and shelter is part of the needs that need to be fulfil. Housing Needs Theory introduced the notion of housing needs to conceptualise residential/neighbourhood satisfaction. From this theory stated that when the household feel stress or dissatisfaction from current residence, they will migrate and looking for adjustment to better housing and neighbourhood needs. If the current housing situation meets their needs, then their satisfactions are higher. As the findings shows that there is positive relationship between neighbourhood attribute and neighbourhood satisfaction, it is important to focus to increase neighbourhood satisfaction especially in urban areas.

6.6 Testing Mediation

The current study contained one research hypothesis that need for the assessment of indirect effect. The mediator construct for this study is Neighbour Satisfaction. The previous chapter stated that the neighbourhood satisfaction mediates the relationships between Social/Physical, Economic, Environment and Quality. To do so, this study want to apply two approaches namely Step-Wise (Baron and Kenny, 1986) and Bootstrapping

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(Preacher and Hayes, 2008) approach. Both approaches are recognised as prominent tools for assessing the mediation effect. The use of the Bootstrapping approach is to prove the results obtained from the Step-Wise approach, which could be more convinced. The assessment for the mediating model began with the Step-Wise approach, followed by the Bootstrap approach.

Figure 6.13: Standardised Estimate

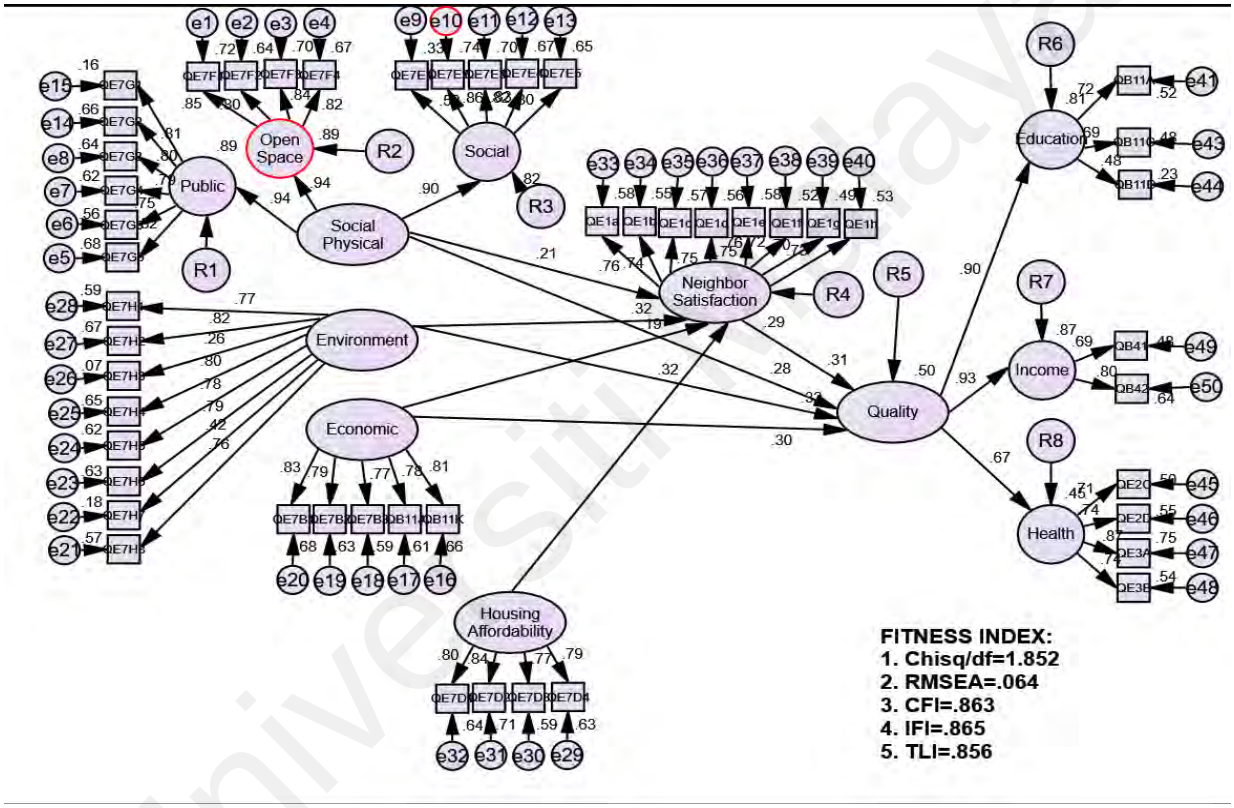

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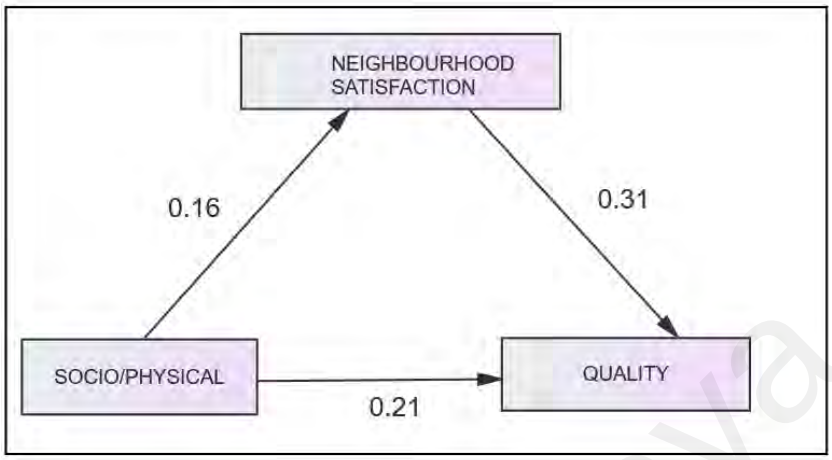
Figure 6.14: Social on QoL



INDIRECT EFFECT	DIRECT EFFECT
a = Social on Neighbour Satisfaction = 0.16*** b = Neighbour Satisfaction = 0.31*** a x b = 0.16 x 0.31 = 0.05***	c' = Social on Quality = 0.21***
TEST: The result showed that the mediation is occurred in the model due to significant indirect effect. In order to compute the z-test, the value of indirect effect (a x b) should be significant different from zero or must higher than the direct effect (c').	**TEST** a x b = 0.05 < 0.21. It shows that the value of indirect effect is smaller than the value of direct effect although the significant indirect are shown in the result.
CONCLUSION Therefore, this model needs to re-analyze by determining the value of direct effect when the mediator excluded from the model (Iacobucci, Saldanha, & Deng, 2007; Awang, 2015; Baron & Kenny, 1986). Accordingly, the partial mediation is said exist when the direct effect increased after the model is estimated without the presence of mediation construct (Neighbour Satisfaction). This step is only acceptable when the indirect effect significant (see Figure 17)	

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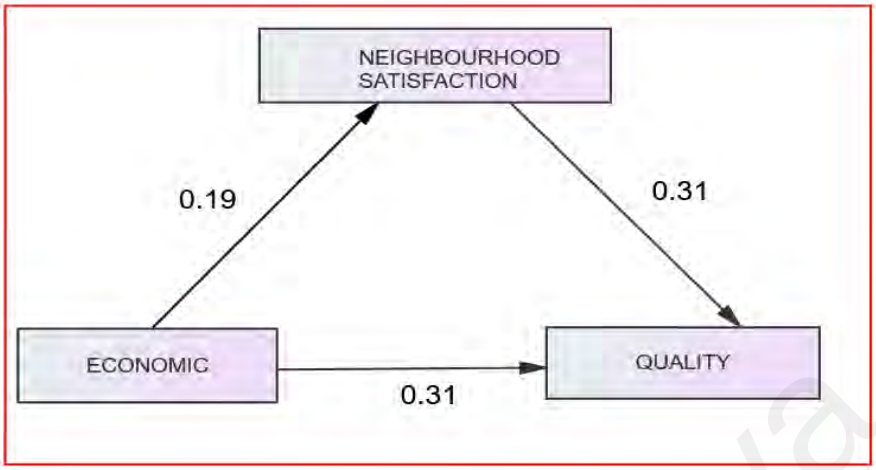
Figure 6.15: Economic on QoL



INDIRECT EFFECT	DIRECT EFFECT
a = Economic on Neighbour Satisfaction = 0.19*** b = Neighbour Satisfaction on Quality = 0.31*** a x b = 0.19 x 0.31 = 0.059***	c' = Neighbour Satisfaction on Quality = 0.31***
TEST: The result showed that the mediation is occurred in the model due to significant indirect effect. In order to compute the z-test, the value of indirect effect (a x b) should be significant different from zero or must higher than the direct effect (c').	TEST a x b = 0.046 < 0.31. It shows that the value of indirect effect is smaller than the value of direct effect although the significant indirect are shown in the result.
CONCLUSION Therefore, this model needs to re-analyze by determining the value of direct effect when the mediator excluded from the model (Iacobucci, Saldanha, & Deng, 2007; Awang, 2015; Baron & Kenny, 1986). Accordingly, the partial mediation is exist when the direct effect increased after the model is estimated without the presence of mediation construct (Neighbour Satisfaction). This step is only acceptable when the indirect effect significant (see Figure 17)	

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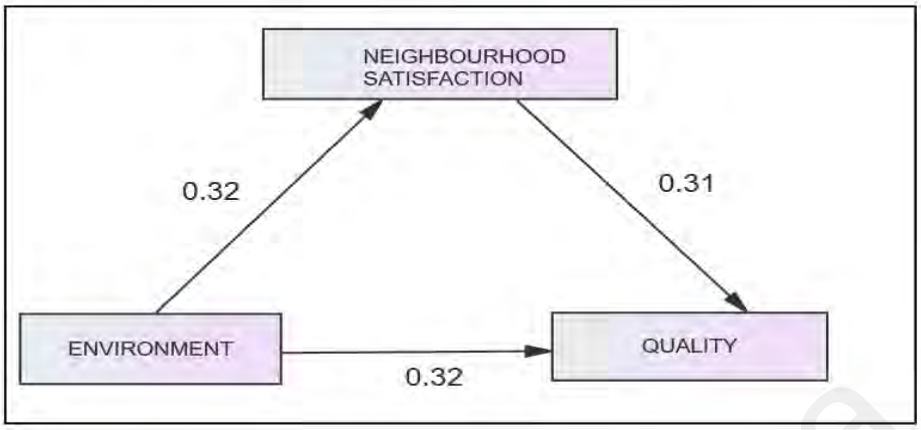
Figure 6.16: Environment on QoL



INDIRECT EFFECT	DIRECT EFFECT
a = Environment on Neighbour Satisfaction = 0.32*** b = Holistic Neighbour Satisfaction on Quality = 0.31*** a x b = 0.32 x 0.31 = 0.09***	c' = Environment on Quality = 0.32***
TEST: The result showed that the mediation is occurred in the model due to significant indirect effect. In order to compute the z-test, the value of indirect effect (a x b) should be significant different from zero or must higher than the direct effect (c').	TEST a x b = 0.09< 0.32. It shows that the value of indirect effect is smaller than the value of direct effect although the significant indirect are shown in the result.
CONCLUSION Therefore, this model needs to re-analyze by determining the value of direct effect when the mediator excluded from the model (Iacobucci, Saldanha, & Deng, 2007 ; Awang, 2015; Baron & Kenny, 1986). Accordingly, the partial mediation is exist when the direct effect increased after the model is estimated without the presence of mediation construct (Neighbour Satisfaction). This step is only acceptable when the indirect effect significant (see Figure 17)	

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Figure 6.17: Model without mediator construct

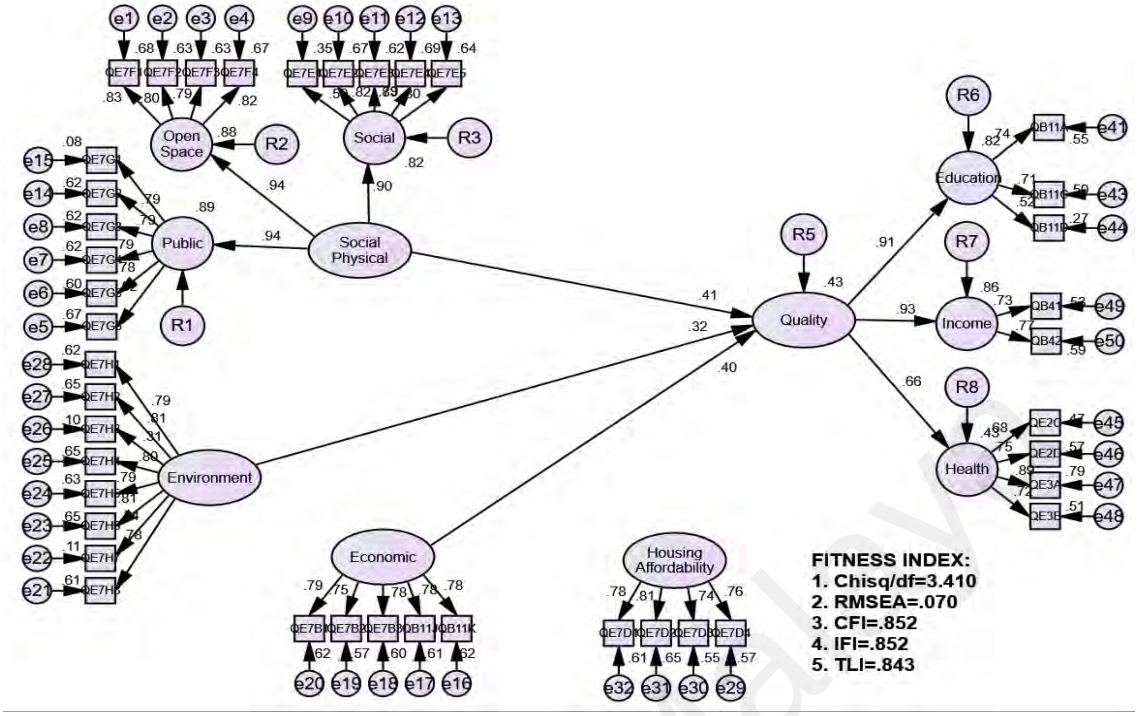

Figure 6.17 shows that the models without the presence of mediator construct for estimation purpose. It shows that the direct effect, Social / Physical, Environment, and Economic on Quality is increased to 0.41, 0.32, and 0.40. What it means is that the partial mediation is occurred in this model. In order to confirm the results of mediation, the bootstrap approach is applied for the subsequent analysis. According to Preacher and Hayes (200) and Nitzl et al. (2016), the mediation analysis with bootstrapping approach is much recommended than the Step-Wise approach due to high statistical power and meets the SEM properties.

6.6.1 Bootstrapping Approach

The analysis of mediation model with bootstrap is available in AMOS package. This study used bootstrap Maximum Likelihood Estimator due to its consistency and efficiency solutions. The results for the Standardised and Two-Tail between Direct and Indirect Effects are shown as follows.

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STANDARDISED DIRECT EFFECTS

	Social Physical	Housing	Environment	Economic	Neighbour Satisfaction	Quality
Neighbour Satisfaction	.244	.276	.177	.135	.000	.000
Quality	.259	.000	.175	.294	.251	.000

STANDARDISED DIRECT EFFECTS - TWO TAILED SIGNIFICANCE (BC)

	Social Physical	Housing	Environment	Economic	Neighbour Satisfaction	Quality
Neighbour Satisfaction	.002	.001	.002	.022	...	...
Quality	.002	...	.008	.003	.002	...

STANDARDISED INDIRECT EFFECTS

	Social Physical	Housing	Environment	Economic	Neighbour Satisfaction	Quality
Neighbour Satisfaction	.000	.000	.000	.000	.000	.000
Quality	.061	.069	.044	.034	.000	.000

STANDARDISED INDIRECT EFFECTS - TWO TAILED SIGNIFICANCE (BC)

	Social Physical	Housing	Environment	Economic	Neighbour Satisfaction	Quality
Neighbour Satisfaction	...	...	...	...	...	...
Quality	.001	.002	.001	.010	...	...

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Table 6.10: The summary of direct and Indirect Effect (Social / Physics on Quality of Life through Neighbourhood Satisfaction)

	Indirect Effect	**Direct Effect**
Bootstrapping Estimate	0.061	.259
Bootstrapping P-Value	.001	.002
Result	Significant	Significant
Type of Mediation	**Partial Mediation**	

Table 6.11: The summary of direct and Indirect Effect (Economic on Quality of Life through Neighbourhood Satisfaction)

	Indirect Effect	**Direct Effect**
Bootstrapping Estimate	.034	.294
Bootstrapping P-Value	.001	.03
Result	Significant	Significant
Type of Mediation	**Partial Mediation**	

Table 6.12: The summary of direct and Indirect Effect (Environment on Quality of Life through Neighbourhood Satisfaction)

	Indirect Effect	**Direct Effect**
Bootstrapping Estimate	.044	.175
Bootstrapping P-Value	.01	.008
Result	Significant	Significant
Type of Mediation	**Partial Mediation**	

This section is about to test the mediation effect of neighbourhood satisfaction as a mediator between neighbourhood attributes and QoL. Based on the finding revealed in Tables 6.10, 6.11, and 6.12, the result of mediation using the bootstrap approach is consistent with the previous one. Meaning that, the partial mediation truly exists in the model. It should be noted that the partial mediation can be defined when the indirect and direct effects are significant. Therefore, one can conclude that neighbourhood satisfaction mediates the relation between social/physical and quality, economic and quality, and environment and quality. From the results, it will help to discuss research objective 3 on

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examining neighbourhood satisfaction as a mediator to mediate the relation between neighbourhood attributes and urban QoL.

6.6.2 Discussion on the Effect of Mediation Analysis

Research Objective 3 : Does neighbourhood satisfaction mediate the relation between neighbourhood attrributes and urban quality of life?

The outcome of mediation using the bootstrap approach is consistent with the Step Wise approach based on the disclosed results. In other words, there is actually partial mediation in the model. It should be noted that when the indirect and direct effects are significant, partial mediation may be identified. It can therefore be found that the satisfaction of the neighbourhood mediates the relationship between social/physical satisfaction, economics and the environment, and QoL. This study contributes to the new knowledge where this study includes environment attributes as a new variable, examine the relationship between neighbourhood attributes and QoL by adopting neighbourhood satisfaction as a mediator. In a previous model developed by Sirgy (2002), the attributes involved physical, social, and economic in examining the relation between these attributes and QoL through neighbourhood satisfaction as a mediator. As this study focused on urban areas, the environment is an important factor that can affect neighbourhood satisfaction and QoL. Results from this study are supported by previous studies by Salleh (2012) and Mohit (2012), which showed that neighbourhood satisfaction mediates the relation between neighbourhood attributes and quality of life. This study also proved that neighbourhood satisfaction can influence the relation between neighbourhood attributes and QoL.

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As this study discusses how economic attributes affect neighbourhood satisfaction and urban quality of life, it can be concluded that the availability of various retail facilities and other services available, the strategic location of shops and stores, availability of job opportunities, accessibility to variety of public transport modes, and efficiency are crucial where more and more people move to urban areas. This is to ensure that all of the facilities and services that urban residents require are identified and have a significant impact on their quality of life.

This study is in line with De Vos et al. (2016) and Oner (2017), proximity to a shop is part of a measure of neighbourhood satisfaction and quality of life. Government should increase investment in providing more public transport and increase efficiency in access to public transport, in particular on buses that can access from the neighbourhood to the nearest LRT / Commuter Station, increase public awareness and campaign for more public transport use, and provide public transport users with apps and technology as they can plan their daily journey specially to work. Urban planners will accept the development of a residential area close to shopping malls, shops and restaurants (Białowolska, 2016 & Roslan, 2020).

As people who are most likely to go and shop to the place which is convenient and nearest to their living area. This also makes the array of shops more appealing to their neighbourhood. The result of this study aligned with Kim & Park (2018) stated that there is a need for small commercial spaces to create the neighbourhood that people want to live in. In order to build a resilient urban city, the government and the urban planner also focus not only on the design of a neighbourhood area, facilities and amenities, but also on the development of an urban area capable of providing employment opportunities for a residence (Balestra, 2013). A location that is strategic and capable of inviting investors to invest to create more job opportunities instead of having to travel from the urban area

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to work where there will be a high cost. As a result, job opportunities in the neighbourhood can have an impact on neighbourhood satisfaction and quality of life.

The dimensions of environment attributes that can influence residents' quality of life through neighbourhood satisfaction are the speed of traffic flow, volume of traffic, air pollution, rubbish or littering around the neighbourhood, drug-addicted problem, vandalism and property crime, alcoholism and drinking, and homelessness. According to the findings of this study, all environmental attribute dimensions have a positive impact on neighbourhood satisfaction and quality of life. This study's findings on air pollution are consistent with those of Streimikiene (2015) and Balestra et al. (2013), who found that air pollution has a direct impact on human wellbeing. As cities' populations continue to grow, they are exposed to massive amounts of gas emissions that can affect and harm people's health, as well as the way they consume energy in urban areas via transportation or heating and air conditioning systems. A clean environment free of litter, crime, violence, and pollution may also promote good health (Balestra et al., 2013). The dimensions of the environment are included in this study as a study by (Herrnstadt & Muehlegger,2015) indicates that higher pollution can lead to a higher disease rate. According to this study, which was also in line with Ozdamar (2016), there is a positive impact of air pollution and crime on people's well-being and quality of life.

Homelessness is a new dimension included in this study because there has been little research on the relationship between homelessness and neighbourhood satisfaction and quality of life. According to Hubley et al. (2014), more information on addressing homelessness issues and the relationship between homelessness people and quality of life is needed. The community's judgement in a neighbourhood with a high rate of homelessness can increase the conflict over the use of public facilities and community space, which is increasing in areas where these people do not have access to or

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opportunity to have their own private space. This conflict has the potential to bring to the surface negative associated perceptions of members of poor society, those who are vulnerable or marginalised. According to the findings of this study, homelessness is one of the environmental attribute dimensions that can affect neighbourhood satisfaction and quality of life.

As an overall conclusion, this objective supported the Housing Demand Theory and Housing Needs Theory, whereby people choose to stay at their preferred neighbourhood within their financial capability. Both theories explained that satisfaction will be higher if they received their desired good neighbourhood environment. The result showed that neighbourhhod satisfaction mediated the relation between neighbourhood attributes and QoL. To have a better QoL in urban areas, neighbourhood satisfaction is important in determining QoL.

6.7 SUMMARY

Table 6.13 : Research Hypotheses Result

RESEARCH HYPOTHESES	**RESULT**
H1: Social / Physical has a significant effect on Neighbour Satisfaction H2: Social / Physical has a significant effect on Quality H3: Environment has a significant effect on Neighbour Satisfaction H4: Environment has a significant effect on Quality H5: Economic has a significant effect on Neighbour Satisfaction H6: Economic has a significant effect on Quality H7: Housing has a significant effect on Neighbour Satisfaction	All are Significant

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H8: Neighbour Satisfaction has a significant on Quality H9: Neighbour Satisfaction mediates the relationships between Social /Physical and Quality H10: Neighbour Satisfaction mediates the relationships between Environment and Quality H11: Neighbour Satisfaction mediates the relationships between Economic and Quality of Life.	

From the CFA measurement testing, all the factor loading values that below than 0.6 was drop to increase the impact of the construct reliability and validity and once all the variables done with the CFA, next process will proceed to SEM to analyse the relationship among all the variables. From the above table, it shows that all the findings from this SEM analysis showed that the variables are significant. This section answered both research question 2 and research question 3. It can be concluded that neighbourhood attributes has significant attributes on neighbourhood satisfaction and neighbourhood satisfaction mediates the relationship between neighbourhood attributes and QoL.

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CHAPTER 7 :

CONCLUSIONS

7.1 Introduction

Several conclusions can be drawn from this research to fulfil the three research objectives mentioned in Chapter 1. The first section of this chapter will focus on the implication of findings that derived from this research analysis. The next section will discuss the contribution of study which will highlight some relevant contributions and recommendations based the findings of the study. Policy to enhance urban QoL were discussed in the section as to propose some improvement needed to enhance current policy that related to neighbourhood, housing and community. The last section of this research will address the limitation of the study and recommendation for future research.

7.2 Implication of Findings

The aim of the study was to evaluate the urban neighbourhood attributes that can contribute to the urban residents' QoL through neighbourhood satisfaction in Greater Kuala Lumpur. The variables of the neighbourhood attributes are socio/physical, economic, and environment and housing attributes and mediate by the neighbourhood satisfaction. There are three research objectives to obtain from this study. First, to explore the level of neighbourhood satisfaction perceived by the urban residents with the QoL. Second, to assess the roles of neighbourhood attributes and housing attributes in explaining neighbourhood satisfaction, and third is examine neighbourhood satisfaction as a mediator to mediate the relationship between neighbourhood attributes and urban QoL.

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According to the findings, a higher level of neighbourhood satisfaction can increase QoL, where the level of satisfaction with socio/physical attributes, economic attributes, environmental attributes, and housing attributes determines the level of neighbourhood satisfaction. As the minimum is achieved, the model is considered 'Fit'. The variables are categorised into two endogenous variables observed and exogenous variables observed. Endogenous variables are observed dependent variables that are satisfaction with socio/physical attributes, satisfaction with economic attributes, satisfaction with environmental attributes, and satisfaction with housing attributes, and exogenous variables are observed satisfaction with QoL. There are three implications derived from the study results. Firstly, housing attributes is most strongly influenced the neighbourhood satisfaction with regression weight 0.299 as compared influence by socio/physical with a regression weight of 0.240, environment value is 0.168 and the least regression weight is environments attributes with a regression weight of 0.128. However, these three attributes have a significant effect on neighbourhood satisfaction. Compared to the study by Mohit (2015), satisfaction with economic attributes is the most affected the satisfaction of the neighbourhood.

Secondly, QoL is strongly and directly influenced by neighbourhood satisfaction with a regression weight of 0.236. It also has an indirect effect through mediating effect of neighbourhood satisfaction by neighbourhood attributes which are socio/physical attibutes with a regression weight of 0.241, economics attributes with regression weight of 0.262 and environments attributes with regression weights of 0.156. Thirdly, housing attributes has a significant effect on neighbourhood satisfaction. Housing attributes explained the importance of housing attributes that found there are new things to cover and focus on the housing affordability and to provide various choice of housing in the neighbourhood area.

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Thus, from the findings of this research responds to the research questions and help to achieve its objectives of this study which are to assess on the relationship between neighbourhood attributes, neighbourhood satisfaction and QoL. This finding supported by housing demand theory where the affordability of housing based on their income and housing price and supported by housing need theory where the level of satisfaction will be higher if they satisfied with the neighbourhood attributes and neighbourhood surrounding. From the findings, it is important to the government, urban planner and developer to enhance more on housing problems as from the findings shows that housing is the most strongly influence the neighbourhood satisfaction compare to other neighbourhood attributes. As proposed by the earlier of this study to add housing attributes as a new variable from the existing model done by previous researches, as a new knowledge in examining the neighbourhood satisfaction. This is to show that concerning and solving the housing problems is a crucial part especially in urban neighbourhood.

7.3 Contribution of the Study

Generally, this study has contributed towards the assessment of neighbourhood attributes, neighbourhood satisfaction and urban QoL. Based on the research findings, some relevant contributions and recommendations were given in this chapter.

As research objective 2 to study the roles of neighbourhood attributes and housing attributes in explaining neighbourhood satisfaction, this study supporting the housing demand theory that household purchase or rent a housing unit because of the spatial fixity and a neighbourhood that provide with a set of public services. Housing price and income are the important factors in determining the housing demand as a housing demand is depending on housing price and household income. This is can be concluded that providing an affordable housing in the urban neighbourhood area with various choice of

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housing that comes from lower to high-cost housing can affect the neighboourhood satisfaction that can lead to QoL. Neighbourhood attributes such as socio/physical, economics, and environment also found important in determining neighbourhood satisfaction as this is supported the housing needs theory which emphasises the conceptualisation of residence satisfaction and dissatisfaction. When the residents do not meet their desired housing, it will create dissatisfaction to the residents that can led them to move out to other places.

Research objective 3 is to examine neighbourhood satisfaction as a mediator between neighbourhood attributes and QoLQoL. This study examined the relationship based on previous researchers that study on the neighbourhood satisfaction and QoL. Result from this study proved and supporting the previous researchers that neighbourhood satisfaction partially mediating the relationship between neighbourhood attributes (socio/physical, economic, and environment) and QoL. In addition, this study contributes into new literature on housing attributes and environment affect to the neighbourhood satisfaction. This new literature highlighting the importance of measuring the housing attributes and environment attributes that can influence the neighbourhood satisfaction. These two variables are added on in this study as it is found that most of previous literature ignore the importance of housing attributes and environment attributes in measuring the neighbourhood satisfaction. These two variables known as a new variable that important to measure the neighbourhood satisfaction as the housing issues found increasing especially in terms of affordable housing in urban areas. Environment attributes such as traffic flow, unemployment youth, air pollution, homeless are found critically discussed from previous study showing that it is important to study as it also will affect neighbourhood satisfaction and QoL. This study come out with new measurement that specifically touched on housing attributes and environment attributes. It can be concluded that, instead of focusing on economic and socio/physical in measuring neighbourhood

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satisfaction, the housing attributes and environment attributes should not be ignore as the issues are getting worse especially in urban areas.

Based on the current housing policy and new urbanisation policy, this study proposed a new policy that need to be enhance by the current policy maker. The proposed policy in this study is to add on new policy that we believe can enhance the QoL of urban residents as it is also found as an importance issue and has been discussed by SDGs that related to make cities and human settlements inclusive, safe, resilient and sustainable for future. This study proposed to have more variety of housing choices that can meet the demand of all different groups in the market. The current projects in GKL focus on middle-income and higher-income groups as the projects mostly provide condominiums and double storey houses in which the price is not affordable for lower-income groups. Second, this study proposed to have inclusive cohesiveness for all type of social groups where providing the recreation space that suitable for all types of people including elderly and disable people. This study also proposed to have a technology that can support people movement using public transport which this initiative is aligned to smart cities implementation. This study also proposed to implement a new policy that enhance on safe cities which the suggested strategies is to have designated public spaces to that foster gender and other forms of equity and considered safety aspects that have visible, clear, and have safe alternative route to reduce crime rate in cities area. All the proposed policy highlighted in this study is to enhance the current policy which is lacking.

From the practical of view, the research result suggests that resident's satisfaction towards their neighbourhood area is the most important factor that has a significant effect on QoL of urban people. This mean that urban planner and government sector should pay attention to residents' satisfaction by improving the facilities provided in the neighbourhood area, the transportation issue, job opportunities and environment issues

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that can affect to QoL in urban areas. Instead of focusing on income, education and other socioeconomic variables, neighbourhood attributes founds important in measuring urban QoL. This study highlighted the important of new variables called as a housing attributes and environment attributes that nowadays more important and have to add on in the model as to show some concern that related to housing and the environment in the neighbourhood area. Affordability is not only to provide low housing price, but also to make sure the surrounding and the neighbourhood area are sufficient with the facilities, providing with the job opportunities and easy access to public transport that needed by the residents regardless the landed housing or apartment housing.

Measuring the level of satisfaction on all the variables can help to improve resident's satisfaction on their neighbourhood and can increase their level of QoL. This study provides a guide for identifying related facilities that needed in urban neighbourhood area to maintain the QoL and harmony in the urban area. It may be varying compare to other areas on the neighbourhood features in measuring the satisfaction, but this study provide a guide for improving the policies on the providing the facilities specification that can meet the requirement by the people who stay in the urban areas. This study also further informed the importance of neighbourhood satisfaction in measuring the QoL as a mediator between neighbourhood attributes and QoL. This study showed how important neighbourhood satisfaction roles in measuring the QoL. Thus, based on the findings from the research objective obtain from this study, there are policy proposed to enhance urban QoL as it found important to improve the gap in the current policy.

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7.4 Policy Discussion to Enhance Urban QoL in Malaysia

There are various government agencies that work on to upgrade the people's QoL in those cities in Malaysia and there are many factors that contribute to the QoL and acquire appropriate budget and development project to upgrade the peoples' QoL. Economic Planning Unit, Federal Town and Country Planning Department and National Population and Family Development Board are the government agencies that responsible to make a development in cities to be more inclusive, safe, resilient and sustainable with different aim and objectives. This section will discuss on Malaysian current policy that can enhance urban QoL in Malaysia. This section also to cover what is needed for improvement from current Housing Policy, National Urbanisation Policy and National Community Policy.

Refer to the housing policy DRN 2, there are only focusing on leveraging on technology to improve supply and productivity, financing of housing scheme for low and medium income groups and tenure choice. As the result from the analysis showed that housing choice is one of the factors that can affect neighbourhood satisfaction, this study proposed to include variety of housing choice or option in neighbourhood area that affordable to the household. As currently, most of the housing project in urban area is focus more to high-rise apartments such as condominiums and double story houses for landed housing that mainly focus on higher-income groups. This additional strategy can enhance the satisfaction among all types of income level and they have their choice and option on the type of housing that they want to live instead of only staying in low-cost apartments that can cause more social problems. It might be most of the household dream to stay in landed housing; unfortunately, most of the housing projects in urban neighbourhood are built for higher-income households.

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Social cohesion in urban residents and neighbourhood is crucial as it can influence to the neighbourhood quality and focuses on sustainable neighbourhood and communities. In DRN 2, under the focus 3 which is ensuring quality and cohesive neighbourhoods, there is lacking on the policy that enhanced on the features that can be focus on inclusiveness of the cohesiveness for all types of social groups and this study proposed to focus in policy on social cohesion that include the sustainable communities policy agenda. To foster quality neighbourhood, instead of just emphasis on the aspects of facilities provision, it also important to emphasise the implementation on the inclusiveness for all the facilities features that provided in the neighbourhood are meet the needs of the communities including elderly and disable people. This is such as providing the recreation space in the neighbourhood area that are suitable and specific for elderly and disabilities people to have their own leisure place. Government also should put on the strategies on the policy to increase the maintenance schedule to all playground in the neighbourhood area as all the children can enjoy playing at the playground.

There is lacking on the enhancement of the public buildings that focus on the places of worship. From the result of this study, the condition of worship places can affect to neighbourhood satisfaction and QoL. As in Malaysia, we lived in different groups of religious and races. There is should be having different types of worship places. Government should include the policy strategies and actions that enhanced on the designed or adapted and managed places of worship that accessible for a range of needs in urban area. Based on Vitorino et al. (2015), spiritual and religious beliefs are important components of QoL (QOL) at any age. Heydari-Fard, Bagheri-Nesami, Shirvani, & Mohammadpour (2014) also stated that QoL can be enhanced through religious among older Muslims in terms of their mental health and social functioning.

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Cities known as hubs for ideas, commerce, culture, science, productivity and social development. To enhance people QoL in urban areas, efficient urban planning and management practices is important. Based on the urban policy (NUP2), there are FIVE (5) principles formulated and supported by 36 objectives through 62 strategies to be implemented. Principles 2 focuses on liveable city and objective 3 under principle 2 is about strengthening the public transportation system to be comprehensive, sustainable, integrated, efficient, and affordable. One of the strategies is to provide incentives to encourage citizens to use public transport especially during peak hours. Due to this, government should add in on the policy that strengthening and enhance the accessibility to the public transport where the people can easily transit to other places using different types of public transport. This implementation also includes as one of the initiatives of the implementation of smart cities where people are connecting from one place to another.

Instead of focusing more to LRT, train, and MRT, government and state government should invest to provide more busses with efficient schedule on the buses route and increase real time information. Using the technology, people can connect with the public transportation apps and technology and secure and planning their journey especially during peak hours.

This study also proposes to have a campaign to encourage the people to used public transport and introduce the apps and technology that we can use for public transport. Also, government should work with state government and private sector agent to increase the maintenance of public transport and monitor and upgrade the maintenance of bus stop in the neighbourhood area where some bus stop station is not provided with proper bus stop station with roof and some of the bus stop area is neglected. It will cause a problem to the passenger during raining season and cause people not to use public

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transport. This strategy can increase and encourage people to use more public transport especially in urban city, reduce private car and reduce air pollution.

To increase urban QoL, safe city environment and is important as to enhance community safety. Urban safety can be defined as a right to the city, freedom from violence and fear, enabling opportunities, address needs of vulnerable groups and providing with good physical and social infrastructure. From the NUP2 under liveable city principles, there is lacking information on the strategies implementing for safe city. This study propose good access to basic services, attractive and safe spaces for play and leisure, good road infrastructure, walkability distance, good lighting, safe market and shopping areas, and last mile connectivity is elements of safe city. This study also propose the policy to enhance safe city and inclusive public spaces where the public spaces need to be designed to foster gender and other forms of equity and promote people's engagement and inclusion, especially the more vulnerable groups. Safety city and inclusive public spaces also need to be considered on some of spatial factors that influence safety perceptions that visible, clear and have safe alternative route, variety of uses and activities and the presence of diverse groups of people so the crime rate in the city will be less and reduced.

For National Community Policy, it is found lacking on the implementation of the strategies in the policy. Generally, the policy touched on housing environment itself as overall. Providing housing is not a guarantee to have a better QoL especially for the lower-income group. To have a better QoL, it is about building a healthy and safe community for children and youth to develop and be nurtured into a generation with the confidence and awareness to follow their dreams. There is a challenge to set and change the mindset of the community especially those who reside in PPR housing area as in Malaysia mostly the social problems are came from PPR housing. National

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Community Policy must enhance their current policy to ensure healthy and safe environment in the community especially the future of the younger ones which is not highlighted in the current National Community Policy. It is suggested to encourage youth participation in any programmes provided in the community. This is making them as a part of the community development. As highlighted in the environment attributes, youth unemployment is part of the measurement that can affect neighbourhood satisfaction and QoL. To avoid high unemployment among the youth, such programmes that involved youth will eventually help to increase youth skills and knowledge. This study suggested to provide 'Youth Friendly Space' for the youth at least they have a place to have an activity and feel they have investment in their community. This is to be concluded that the policy has to encourage the involvement the whole community especially the young people as to show them also part of the community. The involvement of young people in the community could really influence future urban planners and community leaders.

In conclusion, this study focused more on enhancing the accessibility to the variety of choices on affordable housing, increased accessibility of public transport and a safe city inclusive of public spaces as the major part that can contribute towards urban QoL as it was not discussed in the current policy. Dynamic and diverse urban migration flows put pressure on cities to integrate accessibility at the core of strategies, policies, and development programming. Investing in accessible and inclusive of public spaces enables human interaction, access to employment, education and civic engagement and access to public spaces for person with disabilities holds the potential to lessen discrimination, stigmatization, and exclusion. Accessibility is not only about enabling access for people with disabilities but for all on equal terms of physical and digital usability of space and information. Last but not least, the engagement among the whole community, especially the youth, is important to have a better urban place to live in the future.

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7.5 Conclusions

The result of this study revealed that neighbourhood attributes and housing attributes had a significant effect to neighbourhood satisfaction and indirectly affected QoL through the mediation of neighbourhood satisfaction. The findings showed that the construct that had the biggest effect on neighbourhood satisfaction and QoL could help the government and urban developers to focus more on the aspect in developing such neighbourhood areas. Even though most of the factors are satisfied by the respondents, there were still factors that showed very low satisfaction on the neighbourhood. Some improvements are needed from the government and urban developers to ensure the people's QoL are sustained and not further deteriorate.

This study contributes to the new findings and factors that affect neighbourhood satisfaction and QoL. Housing attributes is a new finding and it is found as the most significant and biggest effect to neighbourhood satisfaction. It is important for the government to study on the housing price and affordability provided in each of the neighbourhood area to ensure everyone have choices and could afford to own their house. Assessment on QoL especially in urban area has to be made from time to time by the local authority to ensure the well-being of the people continuously increase.

As a conclusion, since the findings have proved that there is a positive relationship between neighbourhood attributes and QoL, and based on the new policy that was proposed by this study to enhance urban QoL, there are steps of improvements that can be taken by the government and policy makers. The recommendations for the improvement are as per below:

a. To provide more convenient public space and facilities for residents with disabilities and the elderly.

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b. The government must upgrade the maintenance of the public amenities in the neighbourhood

c. To provide more affordable health facilities and more parking space in the public facilities area in the neighbourhood.

d. To maintain the satisfaction among the residents and QoL of the people especially in urban areas; the residents and public involvement are important for better future planning and development.

e. To upgrade and increase buses in urban cities as this can increase accessibility to public transport such as LRT, MRT, and trains.

f. To develop new technology and applications for public transport users as this technology can help users plan their daily journey and can also encourage more people to use public transport and reduce private car users.

g. The assessment on QoL among urban residents should be implemented continuously by the local authorities as the needs by the residents might change.

7.6 Limitations of the Study

There are several limitations highlighted in this study that should be considered before generalising the findings. Firstly, the samples of the respondents used in this study was 500 and adequate for the purpose of the study, but it cannot be considered to represent the population in general. All the variable scales were employed quantitatively to assess residents' satisfaction towards their neighbourhood and QoL in urban Malaysia that focused in GKL. This might have a different context as compared other states such as Johor Bharu and Seremban. This study was ideally received by the qualitative frame that was employed to identify the possible expectation and evaluation that contributed towards neighbourhood satisfaction and QoL in urban Malaysia. Secondly, the samples do not

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take into account on the different perspectives between low-cost housing and high-cost housing in urban neighbourhood.

7.7 Recommendation for Future Research

Future studies could extend the current study's conceptual model that indicated the effect of satisfaction of neighbourhood attributes towards QoL in urban areas that used neighbourhood satisfaction as a mediator between the two. Future studies could extend this conceptual model to more profitable areas for future research. There are several recommendations for future research in QoL that resulted from this study. Firstly, future study could extend this study to other geographical coverage within other states in Malaysia as the current study sample was only limited to GKL with some criteria onlanded housing and high-rise apartment housing due to the limitation to access condominium areas. Future study can extend the study to include high-cost housing such as condominiums and high-cost apartments. Secondly, this conceptual model may be applied for rural area studies to observe the expectation of rural residents in measuring their QoL.

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