



INTERNATIONAL JOURNAL OF ACADEMIC RESEARCH IN BUSINESS & SOCIAL SCIENCES



www.hrmar.com

ISSN: 2222-6990

The Psychological Aspect of Dwellers Living in Affordable Housing: The Criteria of Housing in Malaysia

Shadiya Mohamed Ba Qutayan

Perdana Centre of Science, Technology and Innovation Policy Studies, Razak Faculty of Technology and Informatics, Universiti Teknologi Malaysia

Email: shadiya.kl@utm.my

Abstract

Housing is a major concern for all people in every corner of the world as the wellbeing of any society is reflected in their housing characteristics and living standard. The Malaysian housing policy has developed since its independence from the British in 1957 with some colonial influence, however, the emphasis has changed in the 60s and 70s from merely providing access to housing to increasing affordability and better quality housing. These policies pledged to improve housing quality for all citizens, despite the ambitious nature of these commitments, public policies have paid little attention to how to bridge the gap between livable and affordable housing. This research aims to investigate the characteristics of the livable affordable home that meet the needs of Malaysian society and to facilitate the way to understand the livable affordable home standard that suits the needs of all citizens. Data were gathered from three hundred and ninety (390) respondents, using Measurement of "Affordable Livable Housing 2014". The accumulated data were then analyzed; descriptive statistics were used to interpret the outcomes. The findings signified that although the government has shown great improvements in the housing environment, educational choice, economic development, community and neighborhood, and public amenities, the main affordable livable housing gaps are housing price, safety and security, and transportation cost that have an impact on the psychological wellbeing of middle-income in Malaysia. Thus, the outcomes of this paper can help researchers, planners, architects, policymakers, and others in formulating a guideline for housing quality so that they will include these features in any new housing projects.

Keywords: Housing Criteria, Psychological Aspect, Livable Home, Affordable Housing, Quality of House in Malaysia

Introduction

Since the past few years, housing in Malaysia has improved for many people; homeowners have seen the value of their properties increase and the tenants have seen massive improvements in the quality of their homes. But several challenges exist, and the major challenge that almost all dwellers are facing is the housing price that has grown faster than

the wages. It is becoming increasingly difficult for the young citizen in Malaysia to get a step on the housing ladder. Although, it is stated in the Various Five-Year Malaysia Plan and the Second Outline Perspective Plan (1991-2000), that the government put its focus on providing suitable and affordable housing for the citizen, and to ensure that all Malaysians have greater access to adequate and affordable shelter and related facilities, the citizens are still complaining (Mahamud & Hasbullah, 2011). The other challenge is the establishment of adequate, affordable and livable home standards that suit the income of middle-income group. According to Baqutayan et al (2015), developers in Malaysia need to provide more good quality, livable and better-designed housing for the future. So, how to get a livable and good quality house with affordable price?

Housing affordability has become the main issue in housing sector as the houses price and living cost continue to increase especially in urban area. Much effort has been made by the government to address issue related to housing affordability, however, the livability of the affordable homes have not been attended. All this while the focus was only on the affordable housing with little concern on the livability aspect. Therefore, this research focuses on bridging the gap between affordable and livable housing. The factors taken into account are not only physical aspect of livable housing but also the psychological aspect of dwellers living in affordable house, which do not meet the criteria of livable homes.

Housing affordability is not a character feature; it describes the relationship between people and their living space. According to Maclennan and Williams (1990, P-9) "affordability is the way of securing some given standard of housing at a price or a rent which does not impose an unreasonable burden on household incomes." Goh (1992), described it as a housing unit which is within the reach or capability of people in the various income groups. Affordability is not a fix characteristic of housing, but it is a relationship between income and relative prices of the house (Stone, 1994). Overall, affordability focuses on the ability to pay without facing any pressure.

In Malaysia the government was keen to provide adequate affordable housing for the citizen, particularly, the low and middle-income groups. The government also pledged to improve the quality of house for all citizens (KPKT, 2013). Quality of housing in this context refers to the livability one. Livability has been defined as "a statement of desires related to the contentment with life in a particular location..." (Chazal, 2010), and also described as "a place that is safe, attractive, socially cohesive and inclusive, and environmentally able; with affordable and diverse housing linked to employment, education, public open space, local shops, health and community services, and leisure and cultural opportunities; via convenient public transport, walking and cycling infrastructure" (Lowe et al., 2013). The question out of this discussion is how to measure the livable house? And what principle needs to be taken into account for the measurement of affordable livable housing?

It is indeed a tough task to define one measurement and/or principle that suite all housing projects, different cultures, and every income group. The best is to benchmark the main and major principle, and in this research the focus is on those houses that are in good conditions, safe and secure, located at clean environments, access to different transportation, schools, public amenities, consist of good communities and great neighborhoods, and contribute to the psychological well-being of middle income groups. The opposite of these characteristics are considered "poor housing conditions" as indicated by Harker (2006), that poor housing condition is the one that is in need of substantial repairs; structurally unsafe; damp, cold, or infested; or/and lacking in modern facilities.

Affordable livable home standards and characteristics are grouped in the following diagram:

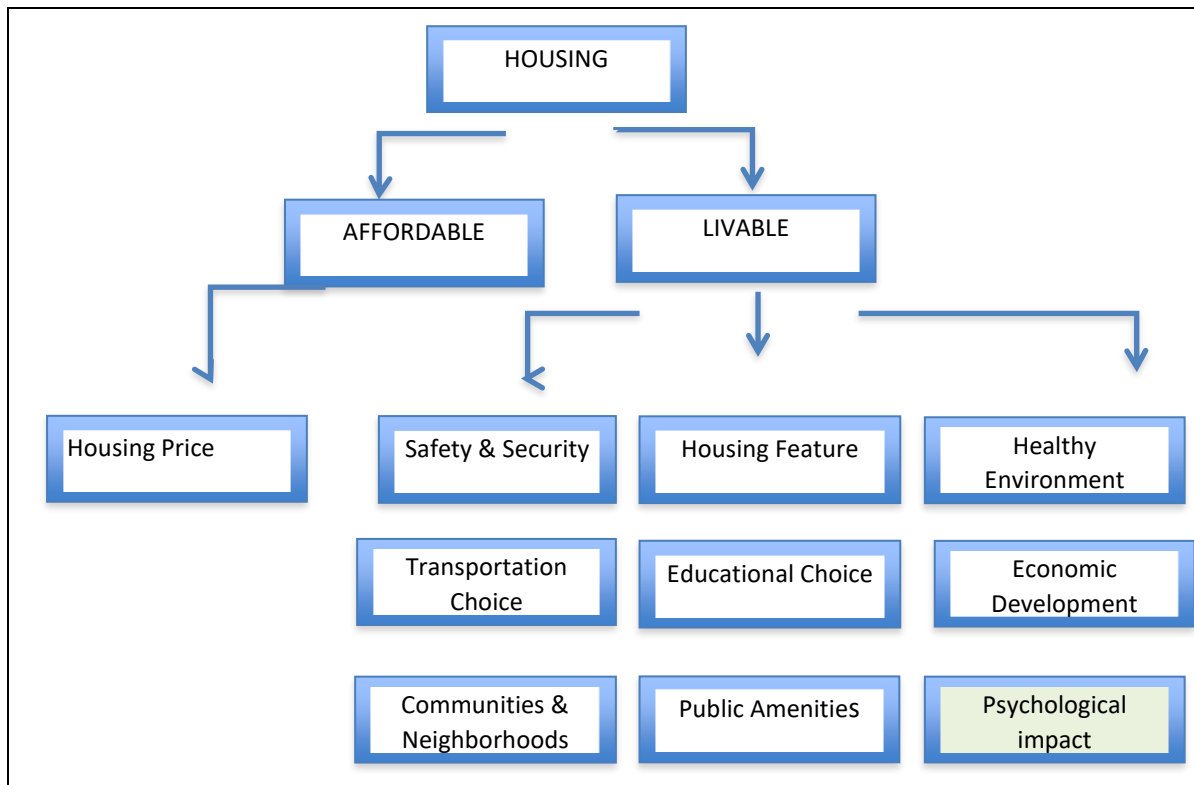


Diagram 1: Affordable livable housing principle

Research Methodology

The study of 390 respondents was mainly quantitative in nature. Data collection was carried through a survey of the middle-income residents located in various parts of Klang Valley and Johor Bahru, Malaysia. The findings presented in this paper were analyzed using descriptive statistical analysis aided by the computer software SPSS and the results displayed in frequency and percentile forms.

There was no statistical sampling frame to select the participants as knocking the doors and seeking assistance from maintenance office and chief of the community at middle-income housing areas to distribute the survey of this research were used for practical reasons. This was the most suitable method to select a sample whose nature was confined to particular restricted research requirements, i.e. respondents from middle-income groups who were trapped in the middle; not able to afford high cost housing and not allowed to stay in low-cost housing.

The middle-income group was selected because of two reasons. Firstly, statistics revealed that approximately 66.7% per cent of Kuala Lumpur populations are middle-income group. And they only afford to buy a house between RM180,000 and RM200,000 (Wan et al, 2010). However, the housing prices these days are far above the affordability level of this group of people, especially those who stay in the capital city (Kuala Lumpur).

Secondly, In the Tenth Malaysia Plan (10MP), the government focused on building houses in a suitable location and more conducive environment only for low-income group. Thus, many households may not be covered by the housing assistance program, because there are many people who are stuck in the middle-income trap, they do not qualify for low-cost housing and yet, cannot afford to buy even the “medium cost” residential projects. The middle-income

groups were left on their own to face the challenge in getting their own houses (Chiali & Choon, 2014).

Furthermore, male and female, Malay and non-Malay, Muslim and non-Muslim respondents were randomly selected from those group of people to see how they are all are responding to the measure of affordable housing. Measurement of "Affordable Livable Housing 2014" was used to measure respondents concern on housing price, safety and security, healthy environment, transportation choice, educational choice, economic development, community and neighborhood, public amenities and the psychological impact of housing on dwellers' wellbeing. "National Translate Institute" translated the questionnaires into Malay for those who preferred to answer in Malay. Overall reliability coefficient of this measurement was found to be alpha .756. And the reliability of each sub-scale is reported in the following table:

Table 1
Alpha Reliability of the measurement Scale

Measurements	Scale	Number Of items	Alpha coefficient
Affordable Housing	Housing Price	3	.51
Livable Housing	1. Housing quality/feature	15	.45
	2. Safety and security	14	.48
	3. Healthy environment	8	.27
	4. Transportation choice	9	.59
	5. Educational choice	3	.79
	6. Economic development	6	.78
	7. Community and neighborhood	8	.77
	8. Public amenities	9	.70
	9. Psychological impact of housing	15	.79

Note: N=20

The above indicated that the reliabilities were high for majority of the above scales, it is almost 0.7 and above. According to DeVellis (2003), ideally the Cronbach Alpha coefficient of a scale should be above 0.7. However, with short scales (e.g. scales with fewer than ten items), it is common to find quite low Cronbach Values (e.g. less than .5), therefore, in short scale, it is more appropriate to report the mean inter-item correlation. Briggs & Cheek (1986) recommended an optimal range for the inter-item correlation of .2 to .4. And in the current research, the mean for the inter-item correlations of those scales with low Cronbach Values are between: 0.2 to 0.4.

Four hundred questionnaires were distributed to middle-income groups and only 390 were collected back. The results of the questionnaires were distributed within two weeks, and the outcomes were discussed further in the coming sections.

Literature Review

Everyone have the right to live in house that meets his/her needs. Essentially to achieve this standard is through accessing adequate housing. Housing is a basic human need that Maslow explained in the hierarchy of needs; similar to food and drink (Manitoba, 2012); People must have food to eat, water to drink and a place to call home before they can think about anything else (Martin & Joomis, 2007). Maslow's theory demonstrates how important adequate

housing is for the security and positive development, and this is the second level of need; people must possess the security of a home and family in order to achieve the higher stage of need that is called "self-actualization" (Martin & Joomis, 2007). The important questions in this context are how many of us own a house? How many of these houses are affordable? What does affordable in first place mean? And how significant is that affordable housing is livable?

Several challenges exist for the terms affordability and livability, one of this is the lack of consensus concepts to define, classify or expand the term affordable livable home. According to Bhatta (2009) "affordable housing is housing deemed affordable to those with a median household income". Milligan et al (2007) identified it as "housing that is appropriate for the needs of a range of low to moderate income households and priced so that low and moderate income groups are able to meet their other essential basic living costs". More recent definitions are broader, and introduced by Maribyrnong City Council (2008), as "The well-located energy efficient housing, appropriate to the needs of a given household, (including access to transport, goods and services and employment) where the cost is no more than 30% of that household's income. Housing costs exceeding this per cent creates 'housing issues and stress'".

Furthermore, the Canada Mortgage & Housing Corporation (2008), identify 'affordable housing' as shelter which costs no more than 30% of one's total income. Affordable housing is broadly defined as housing that can be provided at a reasonable cost when compared to income, typically that which can be provided at no more than 30% per cent of gross household income for households with very low to moderate incomes. Based on these definitions, the low-and-middle income group does not have the alternatives to choose for a quality house, and they do not have many options to rent or buy an affordable house in the location that they like due to financial constraints.

The ratio of house prices to income is a key indicator of the relative affordability of the owner occupation. It is stated by HIA Economics Group (2010), that the ratio is used as one measure of trends in housing affordability over time. Bogdon and Can (1997) criticized the affordability literature that is only focusing on house prices rather than the condition, location and neighborhood characteristics of the housing. However, even today the majority of tools used to assess affordability have little or no regard for housing quality, conditions, location and neighborhood characteristics, i.e. what households get in return for what they spend on housing. But the question out of this discussion is how much these houses that deems affordable to be livable? What are the criteria of hose livable home? What does livable at first place means?

Lowe et al (2013), conceive a livable house as a place to be one that is safe, attractive, socially cohesive and inclusive, and environmentally sustainable; with affordable and diverse housing linked to employment, education, public open space, local shops, health and community services, and leisure and cultural opportunities; via convenient public transport, walking and cycling infrastructure. However, there is an argument that an area is not truly livable unless it can be sustained over the long term (Chazal, 2010).

For families living with leaking roofs and roaches, for those who have to choose between paying for rent or for food, or for families who repeatedly move in search of higher quality or more affordable housing, one's place of refuge may not be very homey. Home/Housing is much more than just bricks and mortars; it is always being considered the family's haven. Housing plays an important role in Family's well-being, contributing to the physical and psychological health, safety and security outcomes, and love and belongingness need.

Accessing to appropriate, affordable and secure housing is an important component of individual and family wellbeing. It provides a base from which people can develop their capabilities, gain a sense of social connection through their community, and raise a family (Dockery, 2008).

Housing plays an important role in people's wellbeing, contributing to the physical and psychological health, safety and security outcomes, and love and belongingness need. In this context, the factors taken into account are not only physical aspect of livable housing but also the psychological aspect of dwellers living in affordable house, which do not meet the criteria of livable homes. The major challenge is the establishment of adequate, affordable livable housing standards and characteristics for the nation.

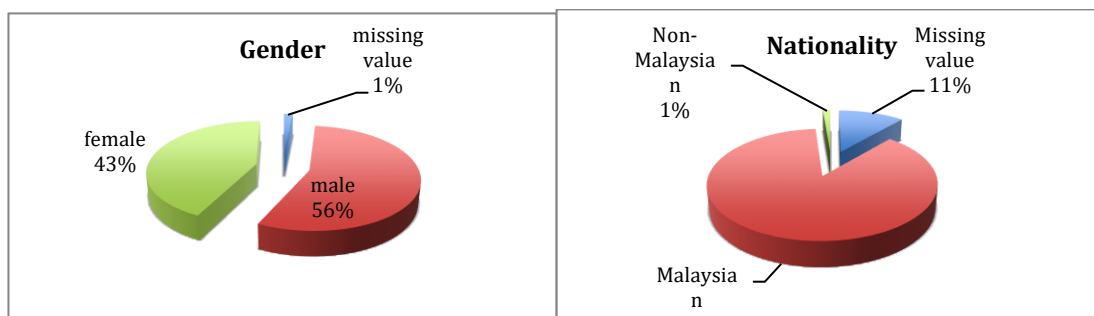
Essentially, it is important to explain how housing quality can affect the psychological wellbeing of the middle-income group. According to Noll & Weick (2005) that the individual quality of life in a home depends not only on one's household status, but also on the type, size and condition of the building they live in, as well as the infrastructural standards of the apartment or house, and the quality of the area of residence. It is also acknowledged that housing conditions, housing size, pollution and surrounding environment safety raise issues can affect the health and wellbeing of dwellers. Thus, the aim of this paper is to bridge the gap between affordable and livable housing, whilst taking into account Maslow's theory.

Findings

This study divided the findings into different sections; firstly, personal profile of the respondents. Secondly, determining the characteristic of affordable housing by measuring respondents' perspective toward affordability. Next is determining the characteristic of livable housing by evaluating respondents' perspective toward house feature, safety and security, healthy environments, transportation choice, educational choice, economic development, community and neighborhood and public amenities. Furthermore, examining the psychological effect of the situation in Malaysia for the affordable housing which does not meet the criteria of livable housing. Finally, bridging the gap between affordable and livable housing by examining how livable is affordable housing in Malaysia.

Personal Profile

Particular aspects of the personal profile, which were the focus of the study, include gender, age, nationality, race, marital status, educational level, job sector and monthly income. This profile encompassed some personality traits and aspects of socio-economic background. The following paragraphs and figures describe and discuss the findings.



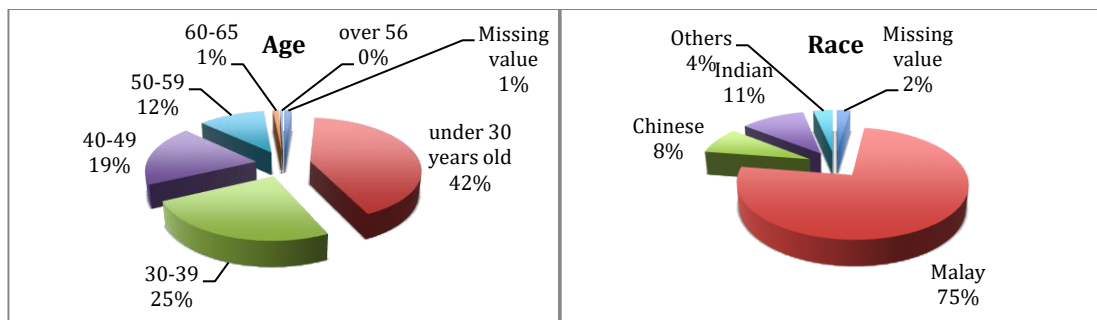


Figure: 1

Around 56% (n=217) of the sample consist of male, and 43% (n=167) consisted of female. Figure 1 reveals this findings, and the average age of respondents cover below 30 (42%) years, 30-39 (25%), 40-49 (19%), 50-59 (12%) and 60-65 (1%). The respondents studied were mainly local Malays. A very large majority (75%, n=293) of the selected respondents were of Malay ethnicity while the remaining (8%, n=32) were of Chinese ethnicity followed by the Indians (11%, n=43).

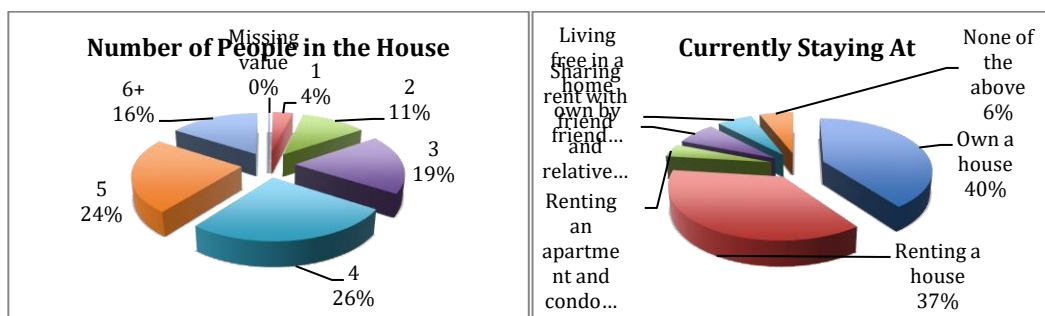


Figure: 2

Figure (2) indicated that around 37% of the samples are renting house and 40% own houses. Furthermore, majority 26% and 24% have 4 and 5 people in the house, respectively.

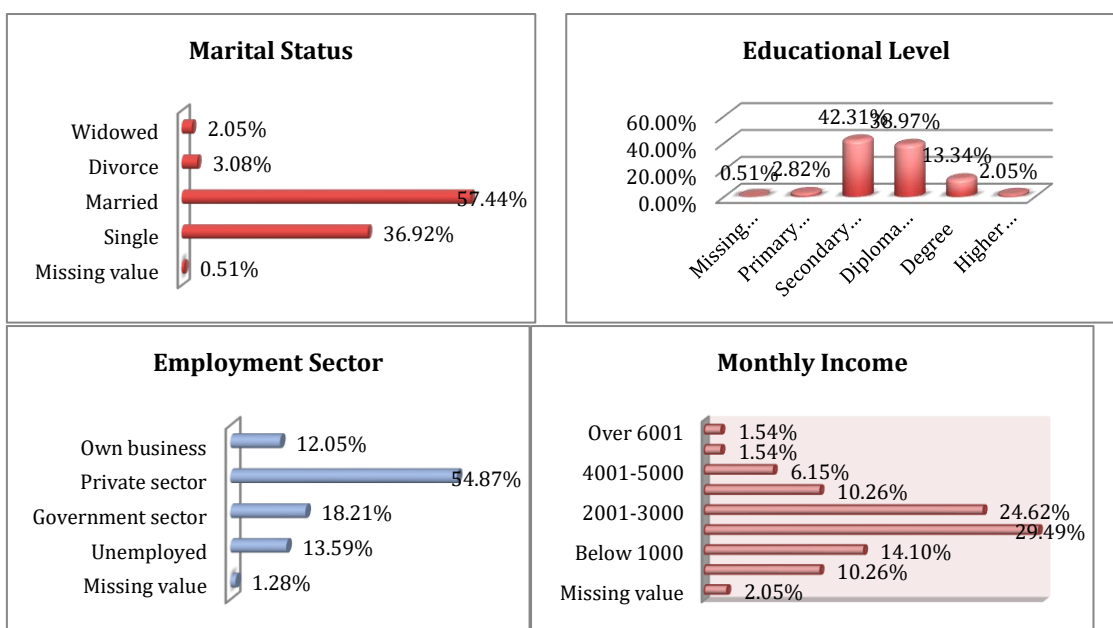


Figure: 3

The level of education was high among the respondents, majority of them were literate with only about 2.82% (n=11) of the respondents ONLY completing primary (year 6) school education. About 42.31% completed secondary education while 38.97% completed their Diploma level. Thirteen percent (n=52) and 2.05% (n=8) of the respondents have Degree (university education) and higher education, respectively. Nearly 54.44% of the respondents were married, 36.92% were single and the rest were either divorced or widowed. Furthermore, the income distribution/level was very low, majority of respondents 24.36% had income below RM1000 or no income at all. To a certain degree, this suggests a general feature of poor families in Malaysia. Nevertheless, almost 29.49% had a total income between RM1001-2000; a further 24.62% had a total income of between RM2001-3000, and 10.26% had a total income between RM3001-4000. Thus, this category formed the majority of the households; the remaining 9.23% had income above RM4001 per month (see Figure 3).

Table 2

Cross Tabulation Between Monthly Income and other indicators

		Monthly Income								
		Missin g Value	No Incom e	Belo w 1000	1001 - 2000	2001 - 3000	3001 - 4000	4001 - 5000	5001 - 6000	Ove r 600 1
Marital Status	Missing Value	0	0	1	0	1	0	0	0	0
	Single	0	28	24	52	28	6	6	0	0
	Married	8	11	24	58	64	32	16	5	6
	Divorce	0	1	3	4	2	0	2	0	0
	Widowed	0	0	3	1	1	2	0	1	0
Total		8	40	55	115	96	40	24	6	6
Number of people in	Missing value	0	0	0	1	0	0	0	0	0
	1	0	0	3	5	4	2	0	0	0
	2	0	2	15	11	10	4	2	0	1
	3	1	8	5	22	27	6	3	1	0
	4	2	12	4	35	25	11	9	4	1
	5	3	9	15	28	22	7	6	1	1
	6+	2	9	13	13	8	10	4	0	3
Total		8	40	55	115	96	40	24	6	6

Table 2 shows that married respondents had the greatest financial difficulties; they are the majority who have income less than RM 3000 per month; out of 390 people almost 122 of them earn between RM1001-3000 per month. In 2009, the government has announced that RM 3,000 is poverty line for the urban poor. This means if you have three children and your household income is RM3000 or below, you are almost on the poverty line (National Economic Advisory Council, 2010).

Determining The Characteristic Of Affordable Housing Housing Price

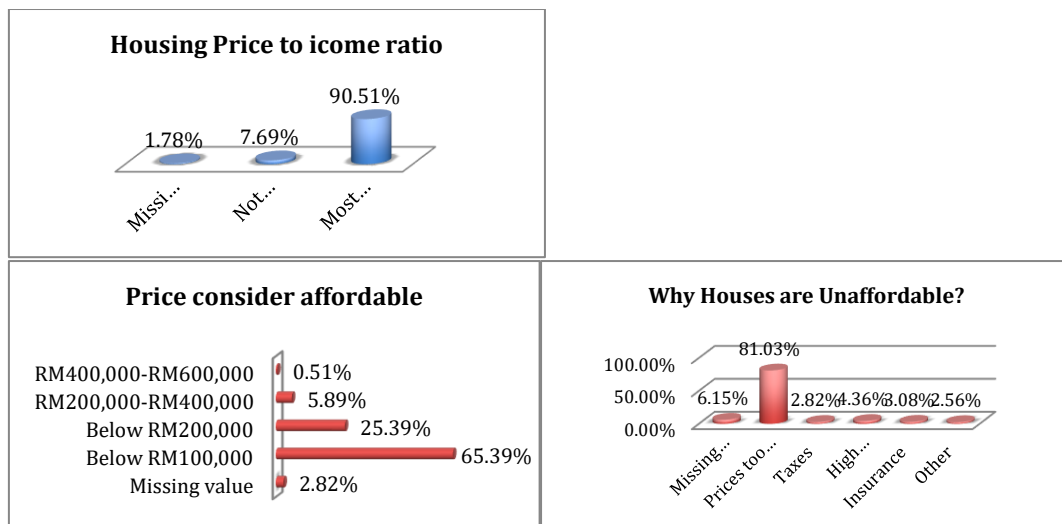


Figure: 4

The above figure (4) indicated that the majority complains about house price, they considered it as the most important issue these days. The Malay respondents reported that they can only afford to pay house price between RM100,000-200,000. The current house prices are beyond this amount, as it keeps increasing yearly. Chang Kim Loong, the HBA secretary-general, says just six years ago it was still possible for a single middle level manager earning RM5,000 a month to buy a new double-storey link house in areas like Kajang (Kuala Lumpur) for less than RM250,000, and for a single executive earning RM3,000 a month to buy a new condominium in the Old Klang Road area for about RM200,000. “Today, a new house are in excess of RM700,000 but a middle level manager is just earning RM6,000 or thereabout a month. Recent launches of condominiums around Old Klang Road area are in excess of RM600,000, while the average salaries of executives are still around RM3,500 a month” (Angie Ng, 2014). This in short, signifies that the house price in Kuala Lumpur is very expensive and not affordable at all.

Table 3

Cross Tabulation Between reasons house not affordable and other variables

		The Reasons Why Houses are Not Affordable					
		Missing value	Prices too high	Taxes	High labor and material cost	Insurance	Other
Gende	Missing value	3	3	0	0	0	0
	Male	7	183	5	10	7	5
	Female	14	130	6	7	5	5
Employment	Missing value	2	2	1	0	0	0
	Unemployed	6	39	2	3	1	2
	Government sector	5	52	2	7	4	1
	Private sector	7	184	5	5	7	6
	Own business	4	39	1	2	0	1
Age	Missing value	2	3	0	0	0	0
	Under 30 years old	10	133	5	8	2	5

	30-39	6	79	4	4	2	2
	40-49	4	58	1	4	6	1
	50-59	2	38	1	0	2	2
	60-65	0	3	0	1	0	0
	Over 56	0	2	0	0	0	0
Marital Status	Missing value	0	2	0	0	0	0
	Single	9	117	4	9	2	3
	Married	13	183	5	7	9	7
	Divorce	1	8	2	0	1	0
	Widowed	1	6	0	1	0	0
Monthly Income	Missing value	2	6	0	0	0	0
	No income	5	31	1	3	0	0
	Below 1000	6	35	4	4	1	5
	1001-2000	6	98	1	4	5	1
	2001-3000	3	81	3	2	5	2
	3001-4000	0	33	2	3	1	1
	4001-5000	0	23	0	1	0	0
	5001-6000	1	4	0	0	0	1
	Over 6001	1	5	0	0	0	0

Measuring the reasons “why houses are not affordable”; majority reported, “Prices are too high”. Similar result was found by Salfarina et al (2011), that the main issue faced by the Malaysia citizen is housing prices, which are too high, and beyond their affordability. The above table (3) also revealed that male respondents complain more about housing price than female respondents. Married respondents, staff in private sectors, respondents below 30-years old, and those income levels are between RM1001-3000 per month complain more about housing price than non-married, government staff, above 30 years old, and those income is more than RM3000, respectively.

Determining The Characteristic Of Livable Housing

1. Housing Features

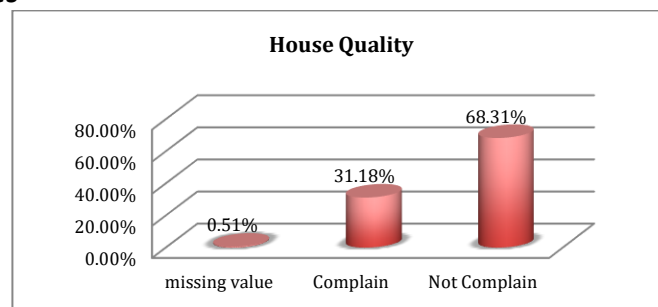


Figure: 5

The above figure 5 shows that majorities of 68.31% did not complain about housing quality and feature. This might conclude that either the house is in a good condition or participants have no choice but to accept the house as it is.

To be more detailed, the entire home quality was measured in order to see what are the things that respondents did not like at their current place, and the details are as follows:

Table 4

Housing Quality and Criteria

	HOUSING QUALITY AND FEATURE		Frequency	Percent
1	Do you live in the city/town?	Yes	333	85.38%
		No	57	14.62%
2	Is your home crowded?	Missing Value	3	0.77%
		Yes	148	37.95%
		No	239	61.28%
3	Is your house too small in size?	Missing Value	3	0.77%
		Yes	192	49.23%
		No	195	50%
4	Are you living in a share house?	Missing Value	4	1.03%
		Yes	104	26.67%
		No	282	72.31%
5	Would you like to keep living there?	Missing Value	7	1.79%
		Yes	179	45.89%
		No	204	52.31%
6	Is the quality of your house acceptable to you?	Missing Value	7	1.79%
		Yes	218	55.89%
		No	165	42.31%
7	If you live in an apartment is there lifts provided?	Missing Value	58	14.87%
		Yes	193	49.49%
		No	139	35.63%
8	Do you have enough parking?	Missing Value	9	2.31%

		Yes	147	37.6 7%
		No	234	60.0 2%
9	Are you living somewhere, which is poor repair?	Missing Value	8	2.10 %
		Yes	100	25.6 0%
		No	282	72.3 0%
10	Is there any clinic nearby your home?	Missing Value	6	1.54 %
		Yes	289	74.1 0%
		No	95	24.3 6%
11	Is your house enough for the number of people who stay?	Missing Value	1	0.26 %
		Yes	190	48.7 2%
		No	199	51.0 3%
12	Are you living too far from your family or other supports?	Missing Value	9	2.31 %
		Yes	191	48.9 7%
		No	190	48.7 2%
13	Do you have Swimming pool, football field or/and playground near your place?	Missing Value	3	0.77 %
		Yes	219	56.1 5%
		No	168	43.0 8%
14	Does your house near to the shops, laundries, and food courts?	Missing Value	1	0.26 %
		Yes	319	81.7 9%
		No	70	17.9 5%
15	Does your house is suitable for the disability of the person you care for or for you when you get older?	Missing Value	4	1.03 %
		Yes	173	44.3 6%
		No	213	54.6 2%

With regards to the home conditions of middle-income group, table 4 illustrates that the majority declared their homes do not have sufficient parking (60.02), the home size is too small (49.23%), the space does not fit the number of people who stay in (51.03%), and the design does not suit disabled people (54.62), therefore, they do not like to continue living there (52.31%).

Safety and Security

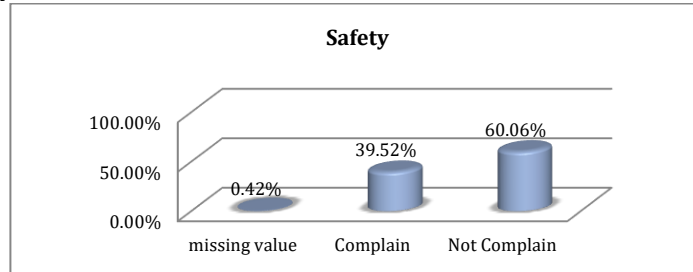


Figure: 6

In terms of safety, figure 6 showed that only 39.52% of the respondents complained about home safety, but the other 60.06% did not complain.

Table 5

Home Safety and Security

	SAFETY AND SECURITY		Frequency	Percentage
1	Do you have guards at your place?	Missing Value	2	0.51%
		Yes	137	35.13%
		No	251	64.36%
2	Is it safe walking at night in your area?	Missing Value	1	0.26%
		Yes	212	54.36%
		No	177	45.38%
3	Are you living somewhere, which is noisy?	Missing Value	3	0.77%
		Yes	180	46.15%
		No	207	53.08%
4	Do you trust the neighbors in your place?	Missing Value	6	1.54%
		Yes	304	77.95%
		No	80	20.51%

5	Do the people in your place involve in crime?	Missing Value	6	1.54%
		Yes	122	31.28 %
		No	262	67.18 %
6	Are you living somewhere where you feel safe?	Missing Value	3	0.77%
		Yes	207	53.08 %
		No	180	46.15 %
7	Do the guards keep awake at night in your condominium?	Missing Value	49	12.56 %
		Yes	106	27.17 9%
		No	235	60.26 %
8	Is the fire hose available at your place?	Missing Value	1	0.26%
		Yes	271	69.49 %
		No	118	30.26 %
9	Are you living someplace where their residents involve in drugs?	Missing Value	9	2.31%
		Yes	109	27.95 %
		No	272	69.74 %
10	Are you living someplace where their residents involve in petty crimes?	Missing Value	2	0.51%
		Yes	186	47.69 %
		No	202	51.79 %
11	Are you living someplace where their residents involve in house robbing?	Missing Value	1	0.26%
		Yes	158	40.51 %
		No	231	59.23 %
12	Are you living someplace where their residents involve in bag snatching?	Missing Value	3	0.77%
		Yes	146	37.44 %

		No	241	61.79 %
1 3	Is there any kidnapping cases ever reported around your place?	Missing Value	1	0.26%
		Yes	88	22.56 %
		No	301	77.18 %
1 4	Is there police posts/patrol near/around your place?	Missing Value	6	1.54%
		Yes	208	53.33 %
		No	176	45.13 %

With regards to the house safety and security, table 5 shows that although almost half of the respondents live somewhere that is not safe walking at night (45.38%), the residents involve in petty crimes (47.69%) and robbing (40.51%), the houses either have no guards at all (64.36%) or the guards hardly keep awake at night (60.26%).

Healthy Environment

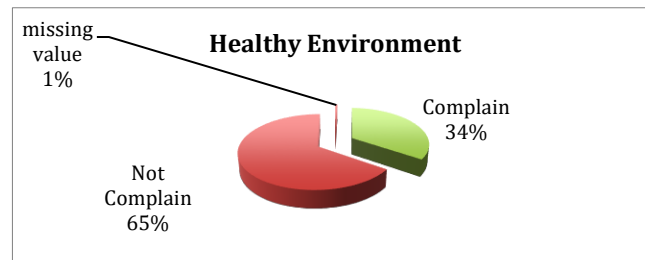


Figure: 7

In terms of healthy environment, figure 7 shows that only 34% of the respondents complained, however, the other 65% did not complain. And for those who complained, the details as follows

Table 6

Home Environments

	HEALTHY ENVIRONMENT		Frequency	Percent
1	Is the rubbish being taken care frequently in your area?	Missing Value	2	0.51 %
		Yes	326	83.59 %
		No	62	15.89 %
2	Do you complain about mosquitos or flies?	Missing Value	4	1.03 %
		Yes	168	43.08 %
		No	218	55.89 %
3	Do you have a clean air quality at your area?	Missing Value	2	0.51 %
		Yes	231	59.23 %
		No	157	40.26 %
4	Are you living somewhere that is too dirty?	Missing Value	4	1.03 %
		Yes	70	17.95 %
		No	316	81.03 %
5	Are you living somewhere that costs a lot to heat and/or cool?	Missing Value	4	1.03 %
		Yes	192	49.23 %
		No	194	49.74 %
6	Are you satisfied with electromagnetic (power lines, cell phones, etc.)?	Missing Value	2	0.51 %
		Yes	255	65.38 %
		No	133	34.10 %
7	Are you satisfied with the quality of drinking water supply in your home?	Missing Value	2	0.51 %
		Yes	265	67.95 %
		No	123	31.54 %

8	Are you disturbed with vehicle pollution, Industrial or any other pollution?	Missing Value	6	1.54 %
		Yes	178	45.64 %
		No	206	52.82 %

With regards to the environment of the middle-income group areas, table 6 illustrates that the majority complained about mosquitos (43.08%), air pollution (40.26%), hot location (49.23%), and vehicle disturbance (45.64%).

Education Choice

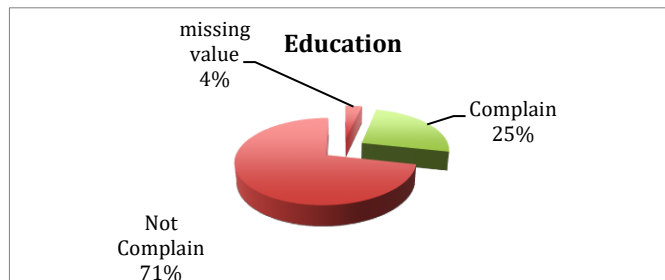


Figure: 8

Figure 8 show that only 25% of the respondents complained about educational choices, whereas, the other 71% did not complain at all.

Table 7

Educational Choices

	EDUCATIONAL CHOICE		Frequency	Percent
1	Do you have a childcare at your place?	Missing Value	16	4.10 %
		Yes	249	63.85 %
		No	125	32.05 %
2	Do you live near to your child s pre-school/primary school/secondary school?	Missing Value	17	4.36 %
		Yes	294	75.38 %
		No	79	20.26 %
3	Is there any tuition centre nearby?	Missing Value	16	4.10 %
		Yes	250	64.10 %
		No	124	31.79 %

With regards to educational choice, Table 7 shows that only small numbers of respondents illustrated that no childcare facilities (32.05%) and tuition centers (31.79%) near their home, and 20.26% of respondent’s children travel daily to schools that are located far from their house.

Transportation Choice

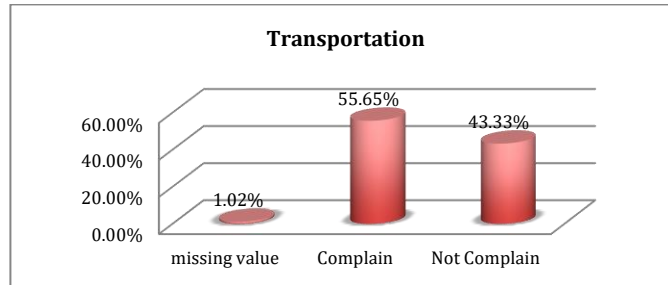


Figure: 9

Figure 9 illustrates the transportation issue for middle-income group, the majority 55.65% declared that transportation is a big issue, whereas, only 43.33% did not complain.

Table 8

Transportation Choices

	TRANSPORTATION CHOICE		Freque ncy	Perce nt
1	Does your child use school bus to go into the school?	Missing Value	42	10.77 %
		Yes	203	52.05 %
		No	145	37.18 %
2	Do your children have transportations problems when they go to schools?	Missing Value	46	11.79 %
		Yes	139	35.64 %
		No	205	52.56 %
3	Do you use private transportation?	Missing Value	9	2.31 %
		Yes	271	69.49 %
		No	110	28.21 %
4	Do you have more than two cars?	Missing Value	9	2.31 %
		Yes	99	25.38 %
		No	282	72.31 %

5	Do you often use public transportation?	Missing Value	5	1.28 %
		Yes	157	40.26 %
		No	228	58.46 %
6	Is your house near to the bus station?	Missing Value	2	0.51 %
		Yes	268	68.72 %
		No	120	30.77 %
7	Do taxis easily come to your place?	Missing Value	3	0.77 %
		Yes	283	72.56 %
		No	104	26.67 %
8	Is your house near to the LRT/MRT station?	Missing Value	5	1.28 %
		Yes	116	29.74 %
		No	269	68.97 %
9	Do you spend more money on transportation?	Missing Value	6	1.54 %
		Yes	212	54.36 %
		No	172	44.10 %

With regards to the transportation choice, table 8 shows that although 40.26% of respondents often use public transportations, 54.36% complained about it's cost; they spend more money on transportations than other things. And 68.97% complained about the distance; they stay far from LRT/MRT stations.

Community and Neighborhood

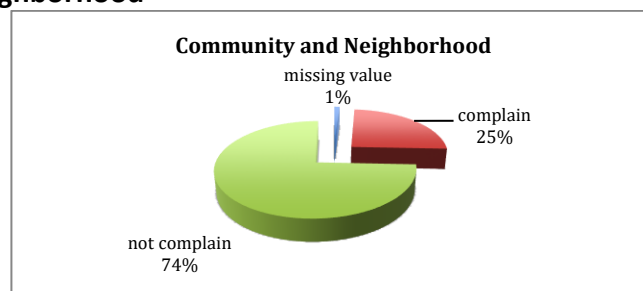


Figure: 10

The above figure 10 shows that only 25% of the respondents complained about community and neighborhoods issue, whereas, the other 74% did not complain.

Table 9

Community and Neighborhood

	COMMUNITY AND NEIGHBORHOOD		Frequency	Percent
1	Are your neighbors friendly?	Missing Value	7	1.79%
		Yes	320	82.05%
		No	63	16.15%
2	Are your neighbors helpful?	Missing Value	5	1.28%
		Yes	315	80.77%
		No	70	17.95%
3	Do you like your neighbors?	Missing Value	4	1.03%
		Yes	317	81.28%
		No	69	17.69%
4	Do you trust your neighbors?	Missing Value	6	1.54%
		Yes	295	75.64%
		No	89	22.82%
5	Do you stay in a close community?	Missing Value	5	1.28%
		Yes	262	67.18%
		No	123	31.54%
6	Did you face any problems with neighbors?	Missing Value	6	1.54%
		Yes	107	27.44%
		No	277	71.03%
7	Do your place has a community club/association?	Missing Value	4	1.03%
		Yes	223	57.18%
		No	163	41.79%
8	Are you a member of any of the association?	Missing Value	5	1.28%
		Yes	142	36.41%
		No	243	62.31%

With regards to community and neighborhood types, table 9 illustrates that the majority 81.28% of the respondents were happy, satisfied and likes their neighbors, because they believe that they are friendly (82.05%), helpful (80.77%), trustworthy (75.64%), close community (67.18%) and have no problem with them (71.03%).

Economic Development

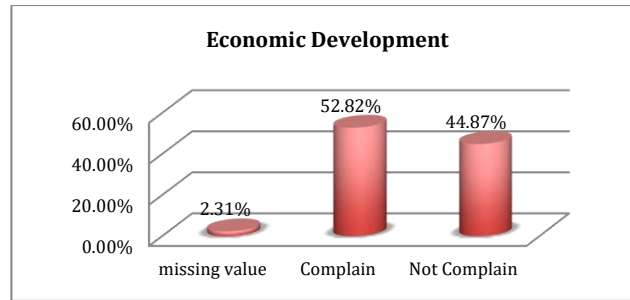


Figure: 11

The above figure 11 shows that majority 52.82% respondents complained about the economic development, whereas, the other 44.87% did not complain.

Table 10

Economic Development

	ECONOMIC DEVELOPMENT		Frequenc y	Percen t
1	Is your office near to your house?	Missing Value	15	3.85%
		Yes	124	31.79 %
		No	251	64.36 %
2	Do you afford living near to your work?	Missing Value	14	3.59%
		Yes	161	41.28 %
		No	215	55.13 %
3	Do you like to move nearer to your office?	Missing Value	15	3.85%
		Yes	248	63.59 %
		No	127	32.56 %
4	Does your house price suite your incomes?	Missing Value	14	3.33%
		Yes	208	53.33 %
		No	169	43.33 %
5	Do you work in the same city where you live?	Missing Value	19	4.87%
		Yes	232	59.49 %

		No	139	35.64 %
6	Is your home near to any commercial/industrial zone?	Missing Value	20	5.13%
		Yes	190	48.72 %
		No	180	46.15 %

In terms of economic development, table 10 shows that majority 64.36% respondents complained about the distance; they stay far from the workplace. Although 63.59% respondents like to stay near the office, 55.13% not afford the living cost of being near to the workplace.

Public Amenities

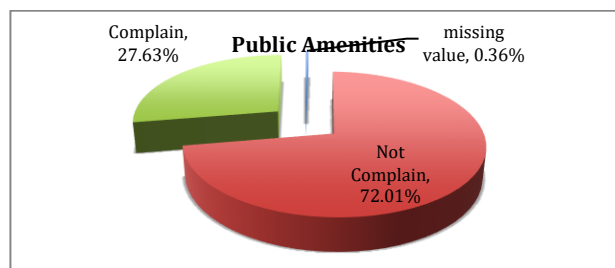


Figure: 12

The above figure 12 shows that the majority 72.01% respondents did not complain about public amenities and only 27.63% respondents complained. More detail in table 11

Table 11

Public Amenities

	PUBLIC AMENITIES		Frequen cy	Perce nt
1	Do you stay near to the wet markets?	Missing Value	4	1.03%
		Yes	259	66.41 %
		No	127	32.56 %
2	Is the grocery near to your house?	Yes	334	85.64 %
		No	56	14.36 %
3	Is there a public library near to your house?	Missing Value	5	1.28%
		Yes	82	21.03 %
		No	303	77.69 %

4	Is there a playground near to your home?	Missing Value	2	0.51%
		Yes	272	69.74 %
		No	116	29.74 %
5	Is there shopping complex near to your house?	Missing Value	1	0.26%
		Yes	200	51.28 %
		No	189	48.46 %
6	Is there any sports facilities near to your house?	Missing Value	2	0.51%
		Yes	220	56.41 %
		No	168	43.08 %
7	Is the coverage of internet/broadband access good at your place?	Missing Value	1	0.26%
		Yes	256	65.64 %
		No	133	34.10 %
8	Is there a mosque near your place?	Yes	309	79.23 %
		No	81	20.77 %
9	Is the drainage system being taken care in your place?	Missing Value	3	0.77%
		Yes	260	66.67 %
		No	127	32.56 %

With regards to public amenities, table 11 shows that 66.41% respondents stay near to the wet market, 85.54% respondents are closed to the grocery shops, 69.74% respondents have playground in their areas, 56.41% respondents have sports facilities nearby their place, 51.28% respondents stay close to the shopping complex, and 79.23% respondents have mosque near their house. And the only thing respondents complained was the public library; 77.69% respondents indicated that they do not have public library at their area.

The Psychological Effect Of Housing Conditions

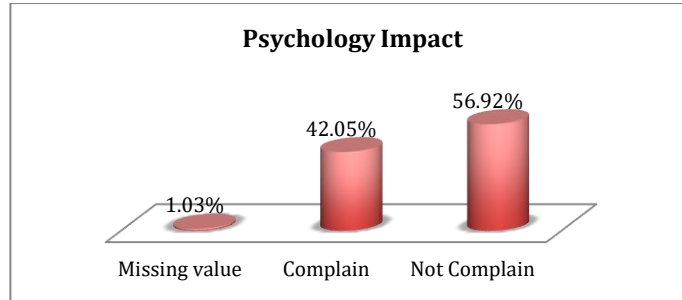


Figure: 13

The situation in Malaysia is not optimistic for the affordable housing, which does not meet the criteria of livable home. About 42.05% of respondents complained that their house have an impact on their psychological wellbeing, and the details are as follows:

Table 12
Psychological Impact

	PSYCHOLOGICAL IMPACT		Frequency	Perc ent
1	Are you happy where you are staying?	Missing Value	4	1.03 %
		Yes	275	70.5 1%
		No	111	28.4 6%
2	Are you stressed where you are staying?	Missing Value	6	1.54 %
		Yes	113	28.9 7%
		No	271	69.4 9%
3	Is your place is affecting your child s behavior?	Missing Value	30	7.69 %
		Yes	143	36.6 7%
		No	217	55.6 4%
4	Are you shame of inviting friends at your place?	Missing Value	5	1.28 %
		Yes	136	34.8 7%
		No	249	63.8 5%
5	Are you tense thinking of your house condition?	Missing Value	9	2.31 %
		Yes	179	45.8 9%

		No	202	51.7 9%
6	Is your child spending most of the time outside the house?	Missing Value	36	9.23 %
		Yes	140	35.8 9%
		No	214	54.8 7%
7	Is your house size affecting your child s growth and well-being?	Missing Value	35	8.97 %
		Yes	162	41.5 4%
		No	193	49.4 9%
8	Do you feel tense and can not breath because of your house size?	Missing Value	5	1.28 %
		Yes	102	26.1 5%
		No	283	72.5 6%
9	Have you ever worried over the possibility of robbery at your house?	Missing Value	4	1.03 %
		Yes	260	66.6 7%
		No	126	32.3 1%
10	Do you feel jittery because of the noises and pollutions at your place?	Missing Value	10	2.56 %
		Yes	212	54.3 6%
		No	168	43.0 8%
11	Are there any changes on your child's attitude as an outcome of the place you are staying?	Missing Value	35	8.97 %
		Yes	131	33.5 9%
		No	224	57.4 4%
12	Do you feel depressed when you heard about the cases of crimes at your place?	Missing Value	4	1.03 %
		Yes	257	65.8 9%
		No	129	33.0 8%
	Do you find it difficult to live in that kind of house but you have no other choice?	Missing Value	4	1.03 %

1 3		Yes	217	55.6 4%
		No	169	43.3 3%
1 4	Did you ever worry about your family because of the unsafe house environment?	Missing Value	6	1.54 %
		Yes	266	68.2 1%
		No	118	30.2 6%
1 5	Do you feel indecisive when you are out, and think whether to go back home or stay outside all the time?	Missing Value	5	1.28 %
		Yes	153	39.2 3%
		No	232	59.4 9%

With regards to the psychological wellbeing table 12 illustrates that more than 30% of respondents are ashamed to invite their friends in their house, and that the size of the home affect their child's attitude and behavior. Due to the lack of space, their children are always spending most of their time outside the house. Furthermore, more than 40% of the respondents complained about the tension of thinking about their home conditions that is affecting the growth and wellbeing of the entire family. In addition to that, more than 50% of respondents are jittery because of the noises and pollutions that they face almost daily; respondents find it difficult to live in that kind of house but they have no other choice. Altogether, more than 60% of respondents were worried about the unsafe home environment and the possibility of robbery at their home.

Conclusion

Housing circumstances often have a direct impact on the family wellbeing. The issue of affordable livable housing is of a major concern to many families these days. In the past, housing was not a big issue as the populations were less and the houses were sufficient and cheap. But now the issue is just the opposite, the population is getting bigger and the houses are becoming more expensive. In the future, this issue will become worse and ever more important in promoting the health and well being of the middle-income groups. The significance of this study is that affordable housing is not sufficient if the house is not livable. Thus, any affordable house must be psychologically livable so the dwellers can feel safe and have peace of the living.

The purpose of this research was to measure the criteria of livable and affordable houses that contributed to well being of the middle-income group in Malaysia. According to Baqutayan et al (2015), due to the existing gaps between affordable and livable home; those affordable homes might not be livable or/and sustainable at all. Therefore, the focus was mainly on criteria as: home price (affordability); feature (size, spacing, lifts, parking and other needs); safety and security (area with low crime, caring neighbors); quality of life (proximately to education, health care center, and sports facilities); access to transportation (bus, LRT station, trains, and other transportation); social participation and connection (community facilities, meeting places, neighbors communication place); access to public amenities (shops, wet

market, supermarket, playground, mosque); access to services (offices, work, police, ambulance, fire and rescue and other government services); and open spaces (parks, trees, nature reserves).

The outcomes showed that there is a gap existed between affordable and livable home. Furthermore, the finding of the study detailed the followings: (a) majority of the respondents were Malays middle-income household, they monthly earn between RM1000-3000; (b) inconsistency between housing price, living cost and income ratio; (c) the majority were complaining about housing price that is beyond the affordability; (d) the housing affordability is the main issue in Malaysia; (e) the other issues were transportation cost, safety and security as well as economic development; (f) parking and home size is an issue to some respondents; (g) public library is not available at middle-income house areas.

Several conclusions can be drawn from this discussions and outcomes, which can clearly contribute to both theoretical and contextual research. First, housing affordability is a complex issue that is difficult to describe, because it involves individual judgments and different evaluations. Second, affordable livable home characteristic mentioned in this research is not the only one; there are many more characteristics need to be considered in future research. Third, government must work hard to understand affordable housing conditions in order to improve the quality of houses for all citizens without too much of burden to those in the low and middle-income groups. Therefore, affordable housing should be in an excellent location just few minutes to the garden, supermarket, playground and public library. The home should offers a range of lifestyle spaces such as room for parent, rooms for children, space for them to play and study, a hall for the family to sit, and kitchen with dining space. The property should be a walking distance to children's schools, an array of cafes and boutique shopping as well as public transport. The area should also be easily renowned for it is friendly neighborhoods, parks, tree lined streets and transformation with newly constructed homes.

Acknowledgment

I would like to thank the Universiti Teknologi Malaysia (UTM) for funding through Fundamental Research Grant Scheme (PY/2014/01393) that supported my research writing.

Conflict of Interest

The authors hereby declare that they have no conflict of interests.

References

- Angie, N. (2014). Demographia: Malaysia's residential housing market 'severely unaffordable'. Retrieved August 18, 2015, from: <http://www.thestar.com.my/Business/Business-News/2014/10/25/A-house-too-far-Demographia-Malaysias-residential-housing-market-severely-unaffordable/?style=biz>
- Bhatta, B. (2009). Analysis of urban growth pattern using remote sensing and GIS: A case study of Kolkata. *India International Journal of Remote Sensing*, 4733-4746
- Bogdon, A. S., & Can, A. (1997). Indicators of local housing affordability: Comparative and spatial approaches. *Real Estate Economics* 1997, 25(1), 43-80.
- Briggs, S. R., & Cheek, J. M. (1986). The role of factor analysis in the development and evaluation of personality scales. *Journal of personality*, 54, 106-148.
- Canada Mortgage and Housing Corporation. (2008). Affordable Housing. Retrieved June 20, 2015, from: <http://www.bcnpha.ca/media/Research/affordable%20housing%20backgroundunder09.pdf>
- Chazal, J. (2010). A systems approach to livability and sustainability: Defining terms and mapping relationships to link desires with ecological opportunities and constraints. *Systems Research and Behavioral Science*, 27(5) 585-597.
- Chiali, K. C., & Choon, A. (2014). People's perception of affordable housing. Retrieved June 12, 2015, from: <http://www.starproperty.my/index.php/articles/property-news/peoples-perception-of-affordable-housing/>
- DeVellis, R. F. (2003). *Scale development: theory and applications* (2nd edn). Thousand Oaks, California: Sage.
- Goh, B. L. (1992), A Critical Review of Government Policies On Affordable Housing In Malaysia. Conference Of Affordable Housing – New Concepts, Approaches and Challenges Towards The Year 2000. Centre for Policy Research. Kuala Lumpur.
- Harker, L. (2006). Chance of life time: the impact of bad housing on children's lives. Shelter, 2006. Retrieved June 12, 2015, from: https://england.shelter.org.uk/__data/assets/pdf_file/0016/39202/Chance_of_a_Lifetime.pdf
- HIA Economics Group.(2010). House price to income ratios in Australia. Retrieved on June, 12, 2015,from: <http://economics.hia.com.au/media/House%20price%20to%20income%20ratio%20-%20FINAL.pdf>
- Kidder, L. H., Judd, C. M., & Smith, E. R. (1986). *Research methods in social relations*. New York: Rinehart and Winston.
- Maclennan, D., & Williams, R. (1990). *Affordable Housing in Britain and America*. York: Joseph Rowntree Foundation. 2009, P. 9.
- Mahamud, N. A., & Hasbullah, A. (2011). Housing Policy for the poor in Malaysia and Indonesia. Retrieved 27 May 2015, from: http://eres.scix.net/data/works/att/eres2011_329.content.pdf
- Manitoba. (2012). All aboard: Manitoba's poverty reduction & social inclusion strategy. Retrieved June 10, 2015, from: http://www.gov.mb.ca/fs/allaboard/pubs/strategy_paper.pdf
- Maribyrnong City Council (2008). *REAL Housing Affordability Strategy 2008-2012* Footscray.
- Martin, D., & Joomis, K. (2007). *Building Teachers: A Constructivist Approach to Introducing Education* (pp. 72–75). Belmont, CA: Wadsworth.

- Milligan, V., Phibbs, P., Gurrán, N., & Fagan, K. (2007). Approaches to Evaluation of Affordable Housing Initiatives in Australia, National Research Venture 3: Housing affordability for lower income. Australians Research Paper No. 7, Australian Housing and Urban Research Institute.
- Noll, Heinz-H. (2005) 'Social Indicators and Quality of Life Research: Background, Achievements and Current Trends', pp. 185-212 in Genov, Nikolai (ed.), Advances in Sociological Knowledge Over Half a Century. Wiesbaden: VS Verlag für Sozialwissenschaften.
- Stone, M. E. (1994). Shelter poverty: New idea on housing affordability. Philadelphia: Temple University Press.
- Wan, N. A., Hanif, N. R., & Singaravello, K. (2010). Housing affordability issues for middle-income households: The Malaysian perspective. Paper presented at the 22nd International Housing Research Conference, Istanbul.