

Residents' Level of Satisfaction about Retirement Home Facilities Based on the Happiness Index Measures

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Happiness index is determined by the key factors of economic variables (income and employment), social factors (education and family life), and health (mental and physical). The satisfaction level affects the happiness index, which is crucial for sustaining the quality of life in any given environment. The surrounding environment includes the management of the facilities offered by the retirement home. Since facility management is a significant indicator of the satisfaction level among retirees, this study aims to focus on the satisfaction level of senior citizens regarding the characteristics of retirement village housing. A questionnaire-based Likert-scale approach was designed to capture the demographic profile, satisfaction regarding the internal and external facilities of the retirement home, as well as the other services provided. A total of 116 questionnaires using a face-to-face survey were analyzed using factor analysis. The KMO test was more than 0.5, and Bartlett's test was $p < 0.5$, indicating that the factor analysis is considered appropriate for further analysis using the factoring technique. The results indicate that the bedroom and washroom of the retirement home need improvement in terms of space area, while the characteristics of the internal and external space of the house should focus on cleanliness and illumination. The management of the internal facilities needs to be enhanced, while the transport services offered require adjustments to increase access to other places. The design, layout, and finishes of the retirement home highly affect the emotional state of the senior citizen, especially in terms of their feelings towards their previous home as well as their families and friends. The lack of privacy, loss of independence, and insecurity are other factors that reduced their satisfaction with the services and facilities offered at the retirement home. This study also contributes valuable references to policymakers, developers and retirement homes providers in developing retirement homes that cater to the unique requirements of the elderly people in Malaysia and to ensure that their happiness and well-being are given priorities.

Keywords: *retirement home, satisfaction, happiness index*

1. INTRODUCTION

Happiness index (HI) is an important tool to measure human satisfaction regarding a particular matter. Apart from Lindenberg (1990), Lindenberg and Frey (1993) also stated that there are two ultimate goals that human beings seek to optimize and they are physical well-being and social well-being. Besides that there are five instrumental goals that they would like to achieve, which include stimulation, comfort, status, behavioral confirmation, and affection. The debate surrounding HI continued to be deliberated by various scholars. Some scholars consider that responsibility, self-directedness, and loyalty to

other people as important to HI (Lane, 2000; Ryff, 1989). Others regard long-term happiness depends on the level of higher-order goods, such as health, entertainment or nutrition (Kimball and Willis, 2006). Frey and Stutzer (2000) argued personality with demographic factors, micro-and macroeconomic factors, and the institutional factors are some of the elements that HI involves various elements in determining an individual's sense of happiness. Therefore, happiness is not only based on a static goal that aspires individuals but also a by-product of a 'good-life' (or civil happiness, as claimed by Aristotle) to produce long-term satisfaction (Frey, 2008).

Literature Review

Various research on happiness studies have come up with various indicators in relation to the economic perspective, which is based on different measurement techniques (Kahneman et al., 1999; Diener and Biswas-Diener, 2009; Kahneman and Krueger, 2006). The examples include Individual Life Satisfaction method based on representative surveys, Experience Sampling method which involves collecting data about individuals' actual experiences in their natural environments in real time, Day Reconstruction method which involves people reflecting their feelings during the day at a particular area; and U (unpleasant)-Index that involves individuals spending time in an unpleasant state. Nevertheless, the study of happiness experienced a long philosophical tradition, from a biological aspect that has a connection with economics to the psychological perspective, sociological standing, and a political interception. Currently, further research into various other fields is continuous. Hence, there is no coincidence that researchers in various areas contribute to the 'new science of happiness' (Layard, 2005) and unlocking the mysteries of 'psychological wealth' (Diener and Biswas-Diener, 2009). Even Frey's (2008) research which concentrates on the state of happiness linked to the economy has yet to acquire more database to support their references in measuring the well-being of individuals.

Generally, the characteristics of the happiness index can be measured in nine domains, which are the psychological well-being, health, education, time use, cultural diversity and resilience, good governance, community vitality, ecological diversity and resilience, and living standards (Gross National Happiness Report, 2016). The concept of GNH has often been explained according to its four pillars; good governance, sustainable socio-economic development, cultural preservation, and environmental conservation. The four pillars have been further classified into nine domains in order to create a widespread understanding of GNH and to reflect the holistic range of GNH values (Gross National Happiness Report, 2016). Based on the report, the higher the happiness value using the GNH measures, the higher the satisfaction. This can be proven through research conducted by Bhutan Country, indicating that majority of the residents have high opportunities in sustaining their wellbeing and health, as well as education, making the residents very satisfied with their living standards. These

measures will increase their satisfaction level. In these research, the study has also highlighted a minor perspective on the home villages which becomes an important issue that should be a concern for the senior citizen to help them in maintaining their level of satisfaction.

Previous studies from the perspective of the retirement home show that the happiness index among senior citizens will indirectly sustain the satisfaction level of the GNH in a country (Kutney-Lee et al., 2009; Veenhoven, 2008; Tseng, & Wang, 2001; Kehn, 1995). For instance, a majority of 90% senior citizens preferred to live in a retirement home than living alone or living with their children (Kehn, 1995). The link between happiness and the physical characteristics of the retirement house that they are provided with resulted in the senior citizens enjoying the thought of relocating and residing in a particular area (Costa-Font, 2013). Thus, the main purpose of conducting this study is to strengthen the findings and determine the characteristic of the retirement homes in terms of the design, layout, and finishes to sustain the happiness index through the measurement of the satisfaction level of the senior citizens.

The retirement village is one of the viable housing options that can accommodate and care for the growing aging population in Malaysia. Based on the history, Sri Seronok Retirement Village was the first retirement village that was established in 1988 by Soter Fernandez, a former Roman Catholic Archbishop of Kuala Lumpur (Aini et al., 2015). The village offered comfortable and self-contained units in a pleasant and safe environment. Simultaneously, each house comprised a bedroom, kitchen and living/dining area that offers full freedom, privacy, and spaces compared to rooms in an elderly care home. Since the retirement home brings various benefits, the development of retirement homes continue to mushroom to this date, in Malaysia. Some of the retirement home developments include luxurious retirement homes like Greenleaf Retirement Home, Aragreens Residence, Green Acres; to more affordable retirement villages like Iskandar Retirement Home, Sri Seronok Retirement Village, to name a few. The newly established retirement village in Pahang, namely 'Pondok Darul Maab' which has the ages approximately in within 5 years; has been providing better facilities and services to the retired residents. Nevertheless, satisfaction led to happiness index plays an important role to determine the retired residents' satisfaction of the

retirement village that they have stayed in for a period of time. Therefore, this study is carried out to identify the suitable characteristics of a retirement home and to determine the comfort level of 'Pondok Darul Maab' residents about the modern sustainable concept of a retirement home in Pahang, Malaysia.

2. METHODS AND MATERIALS

The research employed the quantitative method which involved the use of questionnaires. The study was conducted face-to-face with residents of Pondok Darul Maab, Darul Izzah, Temerloh, Pahang. The questionnaire design did not only involve the experiences of the respondents throughout their lifetime but also the in-depth investigation of their comfort satisfaction about the characteristics of the retirement home. The questionnaire was designed in two sections, where the first section was divided into the demographic profile as well as questions about the respondent's specific satisfaction of the retirement home; while the second section only concentrated on the internal and external of facilities in the retirement home, as well as general services provided (etc. transportation, hospitality) provided. The 0 to 10 scale was applied in collecting the data, as well as 7 or 5 or even 3 scales that are likely to be used in research (Chua, 2011). This study used 5 numerical answers in collecting the information; such as 'strongly disagree', 'disagree', 'neutral', 'agree', and 'strongly agree'. Clearly, the coarser the scale, the less information will be supplied by the respondents (Van Praag and Ferrer-i-

Carbonell, 2011). Therefore, a better way to avoid confusion in the questions and the responsive of accuracy, the question will be repeatedly asked to the same person.

The research study was carried out in Temerloh, Pahang, Malaysia (Figure 1). A 'living-lab' study method was employed, whereby the researcher stayed in the retirement home and mingled with the respondents for a month. Researcher joined all the day-to-day activities of the residents. This was to gain the trust of the respondents so that they will look forward to contributing towards the interviews without hesitations. Generally, the data was collected using simple random sampling at the retirement home as shown in Figure 3(a) and 3(b). The study only covered Phase 2 of the development which consisted of Block A and B (Figure 2), which had approximately 110 to 128 respondents living in the retirement home. The research study targeted 120 respondents with face-to-face questionnaires, and only succeeded to interview 116 respondents who completely answered the questionnaires without errors or missing values. The majority of the residents were willing to participate in providing the information to ensure that the research aims are successfully achieved. The completed questionnaires were initially processed using the Statistical Package for Social Science (SPSS) version 23 in order to undergo further descriptive and factor analysis.

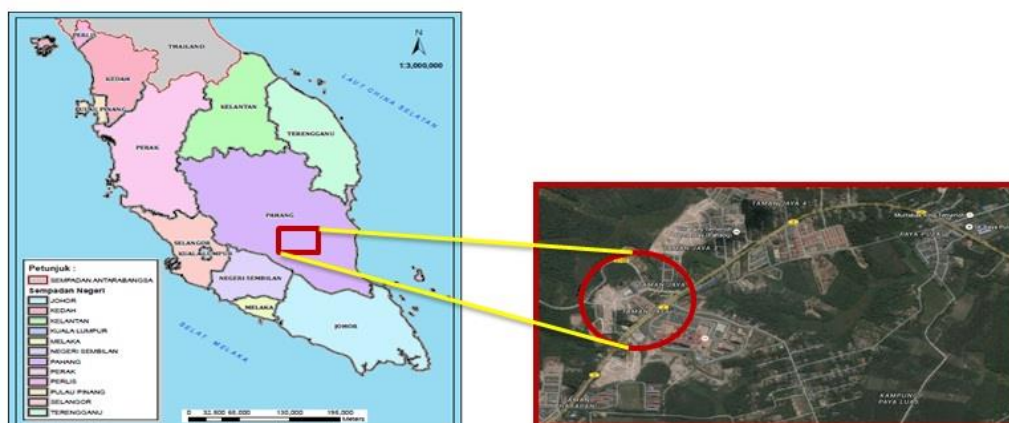


Figure 1: Study area in Temerloh, Pahang



Figure 2: The vertical layout of a retirement home

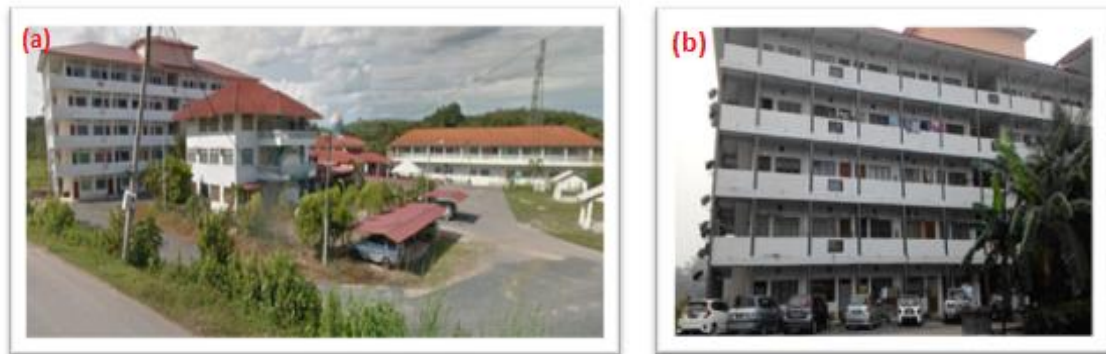


Figure 3: (a) Overview of the retirement home; (b) Phase 2 of block A and B

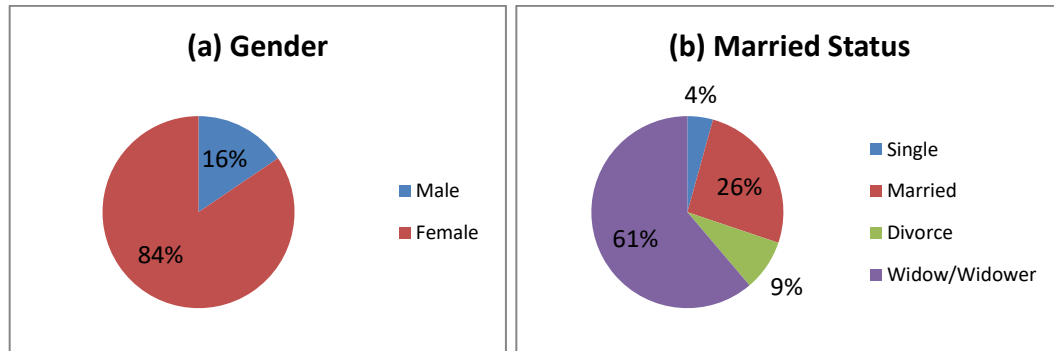
3. RESULT AND DISCUSSIONS

According to Table 1, the result indicates that the majority of the respondents are females, there are 98 female residents (84.5%) in total while 18 residents (15.5%) of the residents are males, which proves that the women life expectancy is higher (Pinkhasov et al., 2010; Barford et al., 2006). The majority of the residents are widowers (61.2%), followed by those who are married (25.9%), divorced (8.6%), and the rest are single status (4.3%). Most of the respondents which consist of 58 residents (50%) only have primary education followed by 19 residents (16.4%) without proper education, 17 residents (14.7%) have SPM, and 10 residents (8.6%) have PMR. Since most of the

respondents are retirees, 97 people (83.6%) of them have a monthly pension of RM 2000 or less, 12 people (10.3) earn RM 2001 to RM 3000 monthly pension, and 7 people (6%) of the respondents have RM 3001 to RM 5000 monthly pension. Overall, a majority of the female respondents obtain proper education or only a few studied until the primary level of education. The main reason that hindered them from pursuing further education was financial constraints that forced many respondents to leave the school at an early age. This situation becomes more difficult when most residents do not have enough savings during when they were younger. Therefore, the respondents choose to stay at this retirement home because it is affordable and is suitable for a single person who wishes to stay alone.

Table 1: Respondents of the retirement home's profile

Category	Frequency
Gender	
1. Male	18
2. Female	98
Married Status	
1. Single	5
2. Married	30
3. Divorce	10
4. Widow/Widower	71
5. Others	-
Education Level	
1. No Proper Education	19
2. Primary Education	58
3. PMR/SRP/LCE	10
4. SPM/SPMV/MCE	17
5. STPM/STAM	3
6. Certificate	4
7. Diploma	2
8. Bachelor Degree	3
9. Master	-
10. PHD	-
11. Others	-
Net Income or Pension	
1. <RM 2000	97
2. RM 2001 – RM 3000	12
3. RM 3001 – RM 5000	7
4. RM 5001 – RM 7000	-
5. RM 7000 – RM 10000	-
6. >RM 10001	-



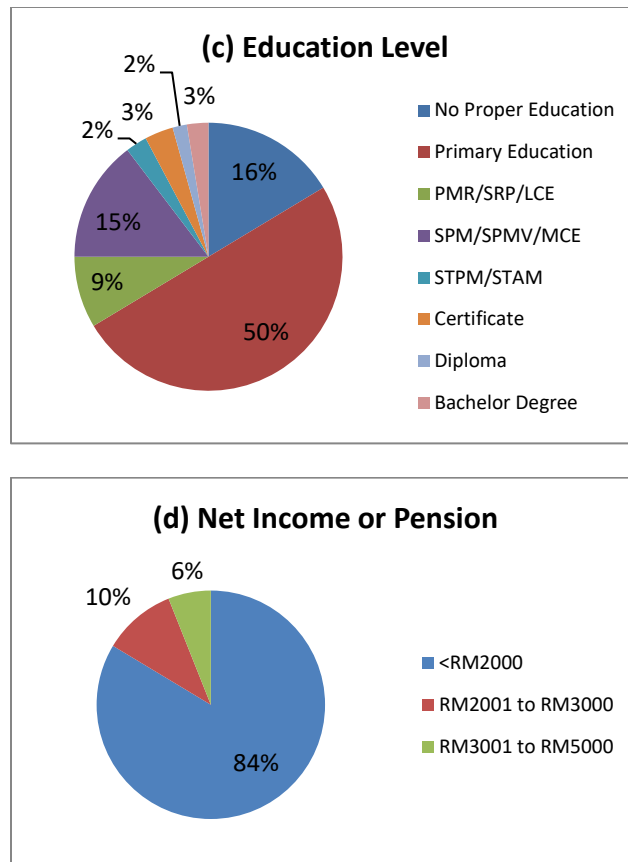


Figure 4: Respondents of retirement home's profile (in percentage) for (a) gender; (b) married status; (c) education level; and (d) net income or pension

General satisfaction about the retirement home

The internal and external finishes of retirement home form important values in the satisfaction level of the residents who live there. Among the facilities that were evaluated for satisfaction are the unit size per home, kitchen area, bedroom area, washroom area, floor finishes, internal mobility, plug points, window, entrance, flooring and finishes, and wall color; which have the highest satisfied by residents who choose to settled in the retirement home (Table 2). In other words, the majority of the residents are happy with the internal layout of the unit. The locations of washroom and kitchen facilities ensure that the senior citizens achieve comfort. Only one out of six respondents give negative feedback about the washroom. The unit referred to as a negative value is the aid tools in the washroom (for emergency cases only) which is considered as 'zero' application. Meanwhile, other units like total pipes (74.1%), pipe placement (82.8%), hand wash basin (85.3%), and cleanliness of washroom (51.7%)

receive positive feedback from the residents. According to the findings, the kitchen area is considered as sufficient in size (76.7%), total plug points (52.6%), the height of the plug points (86.2%), and storage area (75.9%) received positive answers from respondents in the form of agreement to the statement.

Nevertheless, the situation is radically different when it involves services offered such as the health care services (44%) and car parking bay (96.6%). In other words, the respondents are unsatisfied with the services provided. Other services like food and services (94%), facilities (97.4%), indoor activities (87.9%), cleaning service (84.5%), education or training (83.6%), as well as security services (39.7%) obtain positive results from the respondents. Next, responses about the external part of the house (e.g., corridor, stairs, lift, floor cleanliness, car or motorcycle parking) and outdoor activities area (e.g., gardening area, safety, comfort, risk, field surrounding area) indicate that the majority of the units receive positive feedbacks from the residents,

except for the car or motorcycle parking bays. The total number of respondents who do not agree with the parking bays issues are 61 people (52.6%), while 48 people (41.4%) find the area risky for outdoor activities. On the other hand, since access to public transportation become an issues (65.5% strongly disagree with the level of service offered), the residents have limited to access to the social activities center (80.2%) and library (81%); but they are still able to have access to the hospital (79.3%) and shopping malls (75%). The mosque area for religious activities and classes are regarded by the majority of the respondents as having sufficient size area for prayer (76.7%), clean (87.9%), comfortable (83.6%). Apart from that the respondents' satisfaction with the washroom facilities (70.7%), with the tidiness (79.3%) and cleanliness (79.3%) and sufficient area for the kitchen (80.2%). Their level of satisfaction with the facilities at the mosque

(88.8%) with tidiness (75%) and cleanliness (90.5%), and their involvement with the mosque's religious activities (81.9%).

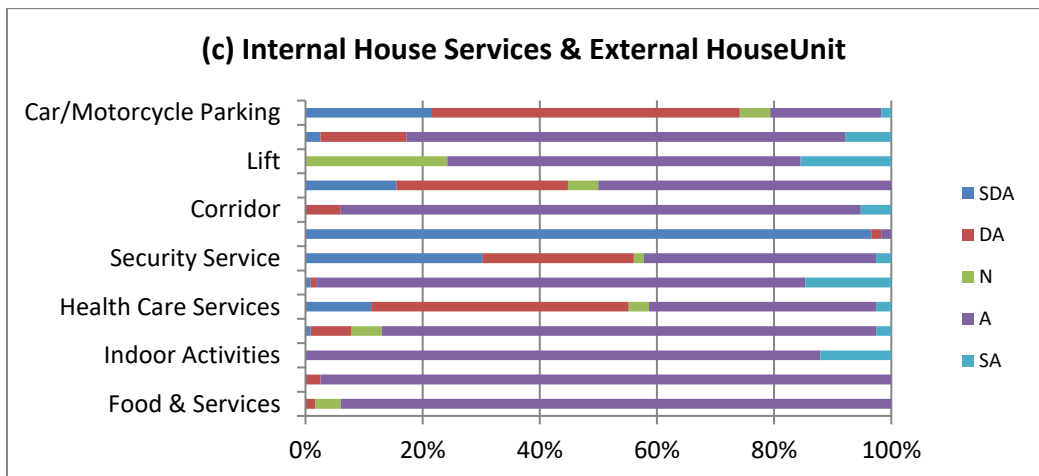
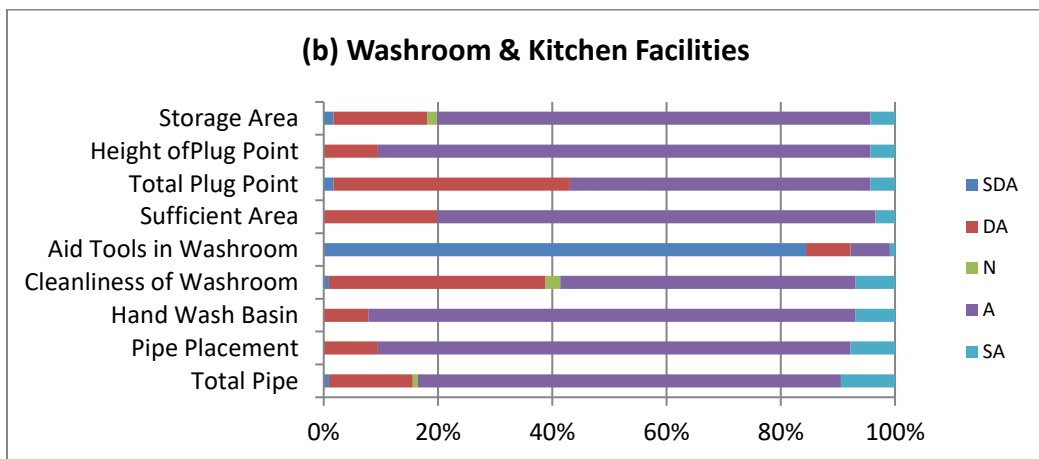
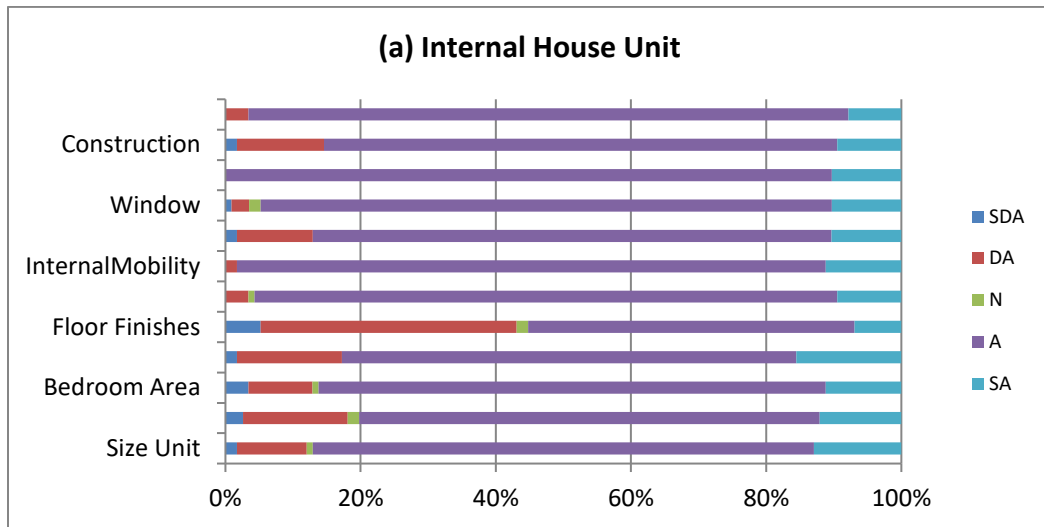
Lastly, many respondents agree that improvement of retirement home is required with regard to the floor size (52.6%), layout and design of the house unit (76.7%), mobility within the house (81%), the aesthetic value (81.9%), healthy aspect (78.4%), safety and security aspect (75%), barrier-free and elderly-friendly spaces (73.3%), as well as how affordable is the living cost (67.2%). However, the existing recreational facilities and amenities (32.8%) are considered sufficient. In sum, they do not agree that the management fees are too expensive (61.2%), nor the rental is too expensive (60.3%), loss of independence (75.9%), lack of privacy (73.3%), feel insecure (56.9%), and isolated from family and friends (64.7%), as well as missing their previous homes (45.7%).

Table 2: Respondent satisfaction on retirement home

Retirement Home		Frequency				
		SDA	DA	N	A	SA
<i>Internal House Unit</i>	Size unit	2	12	1	86	15
	Kitchen area	3	18	2	79	14
	Bedroom area	4	11	1	87	13
	Washroom	2	18	-	78	18
	Floor finishes	6	44	2	56	8
	Illumination	-	4	1	100	11
	Internal mobility	-	2	-	101	13
	Plug point	2	13	-	89	12
	Window	1	3	2	98	12
	Entrance	-	-	-	104	12
	Construction	2	15	-	88	11
	Wall color	-	4	-	103	9
<i>Washroom Facilities</i>	Total pipe	1	17	1	86	11
	Pipe placement	-	11	-	96	9
	Hand wash basin	-	9	-	99	8
	Cleanliness of washroom	1	44	3	60	8
	Aid tools in washroom (for emergency cases)	99	9	-	8	1
<i>Kitchen Facilities</i>	Sufficient area	-	23	-	89	4
	Total plug point	2	48	-	61	5
	Height of plug point	-	11	-	100	5
	Storage area	2	19	2	88	5
<i>Internal House Services</i>	Food and services	-	2	5	109	-
	Facilities	-	3	-	113	-
	Indoor activities	-	-	-	102	14
	Cleaning service	1	8	6	98	3
	Health care service	13	51	4	45	3
	Education/training	1	1	-	97	17
	Security service	35	30	2	46	3
	Park	112	2	-	2	-
<i>Exterior</i>	Corridor	-	7	-	103	6
	Stairs	18	34	6	58	-

	Lift	-	-	28	70	18
	Floor Cleanliness	3	17	-	87	9
	Car/motorcycle parking	25	61	6	22	2
<i>Outdoor Activities Area</i>	Gardening area	1	25	9	77	4
	Safety	2	15	3	94	2
	Comfortable	-	4	3	106	3
	Risk	42	48	-	23	3
	Field surrounding area	12	25	5	72	2
		Sufficient area for male/female to pray	-	14	2	89
<i>Mosque Area</i>	In/External cleanliness	-	4	-	102	10
	Color	-	1	-	107	8
	Storage area	1	14	-	90	11
	Illumination of mosque	-	5	-	101	10
	Cleanliness of mosque	-	-	3	102	11
	Comfortable of mosque	-	7	2	97	10
	Wash room facilities	5	18	1	82	10
	Tidiness of washroom	4	13	1	92	6
	Illumination of washroom	-	-	1	106	9
	Cleanliness of toilet	2	7	6	92	9
	Dining facilities	1	14	4	89	8
	Sufficient tables & chairs in dining area	-	12	2	94	8
	Illumination in dining area	-	3	2	103	8
	Kitchen area in mosque	-	13	3	93	7
	Sufficient of the kitchen area	-	12	4	92	8
	Tidiness of the kitchen area	-	17	5	87	7
	Facilities of the kitchen area	-	3	3	103	7
	Illumination of kitchen area	-	2	1	105	8
	Involvement with mosque activities	-	2	-	95	19
	<i>Outdoor Access Facilities</i>	General transport	80	24	5	7
Medical services		35	46	6	28	1
Access to hospital		6	7	2	92	9
Access to shopping malls		6	11	5	87	7
Access to public transport		76	21	4	15	-
Access to library		94	20	1	1	-
Access to social activities center		93	21	-	2	-
<i>Improvement of Retirement Houses</i>	Spaciousness	2	29	3	61	21
	Function layout and design of the unit	2	3	-	89	22
	Easy access to other parts of the house	1	-	-	94	21
	Aesthetical value	1	-	1	95	19
	Healthy aspect	2	1	-	91	22
	Safety and security aspect	2	2	-	87	25
	Barrier free and elder friendly spaces	2	-	-	85	29
	Elderly-friendly recreational facilities and amenities	13	38	6	37	22
Affordable living cost	5	2	5	78	26	
<i>Opinion on Retirement House</i>	Loss of independence	88	23	1	4	-
	Management fees is too expensive	71	12	6	10	17
	Rent is too expensive	70	14	6	9	17
	Lack of privacy	85	26	1	3	1

Feel insecure	66	14	7	27	2
Isolated from family and friends	75	22	6	12	1
Missing your previous home	53	12	11	34	6



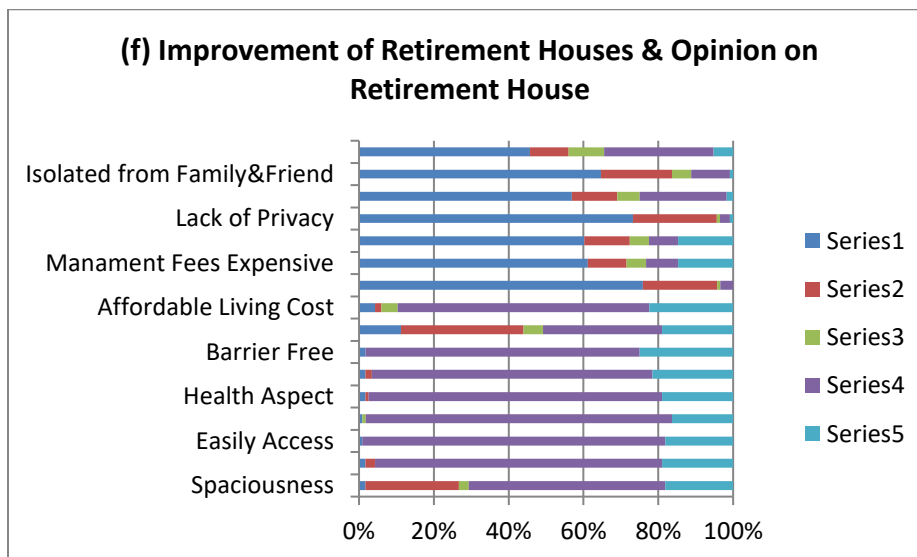
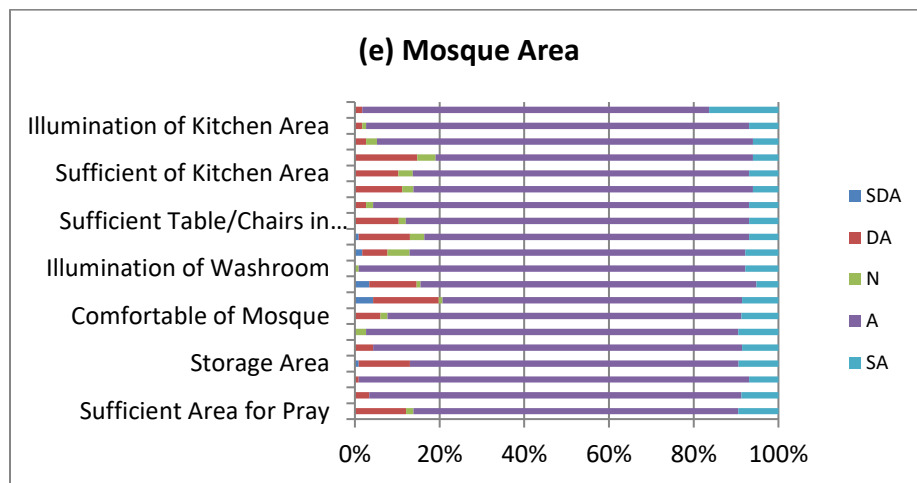
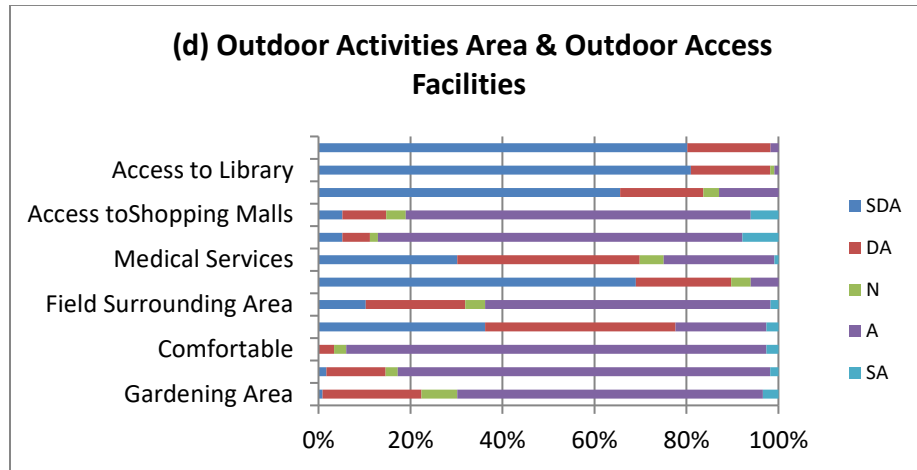


Figure 5: Respondents' satisfaction about the retirement home (in percentage) for (a) internal house unit; (b) washroom & kitchen facilities; (c) internal house services & external house unit; (d) outdoor activities area & outdoor access facilities; (e) mosque area; and (f) improvement of retirement house & opinion on retirement house.

Factor analysis on satisfaction/ Happiness level living retirement home

Before factor analysis can be performed, the determination on the reliability test of a factor has to be carried out. This test is based on Kaiser-Meyer-Olkin's (KMO) test and Bartlett's test (Table 3). The conditions are such that when the value is greater than 0.5 in KMO, it is considered appropriate for further analysis in factor technique to be conducted; while the Bartlett's test depends on whether the value of p is less than 0.5 ($p < 0.5$). The factor analysis is applied in the categories of the internal house units, kitchen, and washroom facilities, external house unit and outdoor activities area, mosque area, outdoor access facilities and internal house services, as well as opinion and improvement of a retirement home. According to Table 3, the result indicates that the majority of the categories identified in the retirement home for the KMO test indicates that the results are more than 0.5 and the Bartlett's test of significant value is 0.000 ($p < 0.5$). Therefore, the factor analysis of the retirement home can be carried out.

Table 3: KMO and Bartlett's test

Category	KMO test	Bartlett test
Internal house unit	0.788	0.000
Kitchen and washroom facilities	0.626	0.000
External house unit and outdoor activities area	0.587	0.000
Mosque area	0.821	0.000
Outdoor access facilities and internal house services	0.643	0.000
Opinion and improvement on retirement house	0.740	0.000

The internal house unit indicates the three-factor analyses, namely F1 with size unit and bedroom area; F2 with wall color and plug point; and F3 with construction, floor finishes and lightings (Table 4). Similarly, the kitchen and washroom facilities are also identified according to the three-factor analysis, which has F1 as a storage area, sufficient area, and hand wash basin; F2 as total pipes and pipe placement; and F3 as aid tools in the washroom (for emergency cases) and the height of the plug points. Among these factors, the size of the bedroom area as well as the aids tools in the washroom (for emergency cases) are considered important and requires more attention to better facilitate the senior citizens in their daily usage of the facilities. The size of the bedroom

should be at the minimum size to enable relaxation and comfort to be obtained at the most maximum level. The washroom should be suitably modified for a senior citizen to use so that the safety of the users is being given priority. This situation will determine the respondents' satisfaction of the retirement home, that will lead to them achieving happiness. Next, the external house unit and outdoor activities area only indicate two factors; comfortable and the corridor or passageway as F1, and stairs and floor cleanliness as F2. Both factors are related to the safety and security of the senior citizens as they are linked to the movement or mobility.

The findings regarding the mosque area's factor analysis indicate that three-factors have been selected, namely F1 for facilities and sufficient kitchen area with tidiness, sufficient tables and chairs in dining area, and cleanliness of toilet; F2 for internal and external cleanliness, sufficient area for prayers, comfortable ambiance of the mosque, and the washroom facilities; and F3 for their involvement with the mosque's activities. The results show that the kitchen area at the mosque needs major improvements which require additional facilities to be provided. Sufficient area size is also required because when activities are carried out, this place becomes the centre of activities where many people will gather to help in preparing foods and beverages. The size of the praying hall for the male and female worshippers should be sufficient to cater to the numbers of residents during an event.

The outdoor access facilities and internal services are grouped into five-factors, which are F1 for access to the library, access to social activities center, access to public transport, and general transport; F2 for access to shopping malls and access to hospital, F3 for medical services and healthcare services, F4 for cleaning services, facilities, and food services, and F5 for access to the park. Due to the limited numbers of public transport services provided in this area, the majority of residents here own a car or motorcycle. Hence, this creates the issue of inadequate parking bays for the residents. The healthcare and medical services provided by management of the retirement home is considered as providing minimum satisfaction, which leads to the residents needing increased access to the nearby hospital. However, the in-house cleaning services and food services provided are considered the most satisfying. In addition, most of the services and

facilities need to be upgraded to increase the happiness index of the retirement home center. For example, the functional layout and unit design of the housing units, barrier-free and elderly friendly spaces, aesthetical value, safety, and security aspect, affordable living cost, as well as elderly-friendly recreational facilities and amenities need to be improved. The layout of the house and design play influencing roles to affect the emotions and sentiments of the residents. The dissatisfaction might trigger the feeling of being isolated from family and friends, missing their previous homes, facing lack of privacy, loss of independence, and feeling insecure. Therefore, the house characteristics such as the environment and layout especially need to be of an adequate size. Finishes and facilities should be designed suitable for senior citizens to feel comfortable and

satisfied, which subsequently lead to the increase of the happiness index.

In this research, the bedroom, kitchen, and washroom are the main areas that require improvement to cater to the needs of the ageing people. For example, the slippery floor finishes in washroom will increase the possibility of an accident to take place. Increasing the size area of the washroom and fixing a hand railing may help in reducing accidents from happening. On the other hand, the kitchen and bedroom require a special type of floor finishes and lightings. It may facilitate the freedom of movement and create a more comfortable space for living. Generally, residents who stayed in 'Pondok Darul Maab' are satisfied with the rental and management fees, as well as feeling secure and having their privacy protected.

Table 4: Factor analysis of retirement home

Retirement Home		F1	F2	F3	F4	F5
<i>Internal House Unit</i>	Size unit	.860				
	Bedroom area	.839				
	Wall color		.758			
	Plug point		.375			
	Construction			.774		
	Floor finishes			.662		
	Illumination			.519		
<i>Kitchen and Washroom Facilities</i>	Storage area	.921				
	Sufficient area	.849				
	Hand wash basin	.445				
	Total pipes		.816			
	Pipe placement		.753			
	Aid tools in the washroom (for emergency cases)			.746		
	The height of plug point			.603		
<i>External House Unit and Outdoor Activities Area</i>	Comfortable	.790				
	Corridor	.700				
	Stairs		.691			
	Floor cleanliness		.457			
<i>Mosque area</i>	Kitchen area in mosque	.787				
	Sufficient kitchen area	.755				
	Tidiness of kitchen area	.739				
	Facilities of the kitchen area	.725				
	Sufficient tables & chairs in the dining area	.723				
	Illumination in the dining area	.607				

	Cleanliness of toilet	.394			
	In/External cleanliness		.743		
	Sufficient area for male/female to pray		.713		
	Comfortable of mosque		.640		
	Washroom facilities		.402		
	Involvement with mosque activities			.844	
<i>Outdoor Access Facilities & Internal House Services</i>	Access to library	.870			
	Access to social activities center	.870			
	Access to public transport	.769			
	General transport	.729			
	Access to shopping malls		.936		
	Access to hospital		.910		
	Medical services			.831	
	Health care services			.786	
	Cleaning services				.770
	Facilities				.685
	Food and services				.679
	Park				.633
<i>Opinion & Improvement on Retirement House</i>	Easy access to other parts of the house	.923			
	Aesthetical value	.910			
	Health aspect	.849			
	Barrier-free and elderly friendly spaces	.847			
	Safety and security aspect	.775			
	Function layout and design of the unit	.738			
	Isolated from family and friends		.717		
	Missing your previous home		.681		
	Lack of privacy		.597		
	Loss of independence		.593		
	Feel insecure		.443		
	Affordable living cost			.599	
	Elder-friendly recreational facilities and amenities			.588	
	Spaciousness			.349	

F1 = Factor 1, F2 = Factor 2, F3 = Factor 3, F4 = Factor 4, F5 = Factor 5

4. CONCLUSION

As a summary, the bedroom, kitchen, and washroom areas of the retirement home are the areas that require the most improvement in terms of larger space area, more suitable floor finishes, lightings, and aids such as hand railing. The house characteristics such as the surrounding environment and layout do affect the emotions of the senior citizens, which can incidentally reduce their satisfaction and happiness index. Open spaces for easier mobility and comfort, ample parking bays, amenities for the community, ergonomic furniture, as well as design evolution in the facilities management that are appropriate for the retired people should be made available. This study also contributes references to architects and real estate players in designing houses according to the needs of the senior citizen.

This study found that the social support provided by family members, the physical characteristics of the home can partly contribute towards a better quality of the life for the elderly.

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6. REFERENCES

- Aini, A.M., Wan Abd Aziz, W.N.A., & Hanif, N.R. (2015). *Housing Need for the Ageing Communities*. Report for NAPREC Real Estate Research Fund NAPREC R&D 2013/6.
- Barford, A., Dorling, D., Smith, G. D., & Shaw, M. (2006). Life expectancy: women now on top everywhere: during 2006, even in the poorest countries, women can expect to outlive men. *BMJ: British Medical Journal*, 332(7545), 808.
- Chua, Y. P. (2011). *Kaedah dan statistik penyelidikan: kaedah penyelidikan*. McGraw-Hill Education.
- Costa-Font, J. (2013). Housing-related well-being in older people: the impact of environmental and financial influences. *Urban Studies*, 50(4), 657-673.
- Diener, E. and R. Biswas-Diener (2009), *Happiness: Unlocking the Mysteries of Psychological Wealth*. Oxford, UK: Blackwell Publishing Ltd.
- Frey, B. S. (2008). *Happiness: A revolution in economics*. MIT Press Books, 1.
- Frey, B. S., & Stutzer, A. (2000). Happiness, economy and institutions. *The Economic Journal*, 110(466), 918-938.
- Kahneman, D. and A. B. Krueger (2006). 'Developments in the measurement of subjective well-being'. *Journal of Economic Perspectives* 20, 3-24.
- Kahneman, D. (1999), 'Objective happiness'. In: D. Kahneman, E. Diener, and N. Schwarz (eds.): *Foundations of Hedonic Psychology: Scientific Perspectives on Enjoyment and Suffering*. New York, Chapter 1: Russell Sage Foundation.
- Kehn, D. J. (1995). Predictors of elderly happiness. *Activities, Adaptation & Aging*, 19(3), 11-30.
- Kimball, M., & Willis, R. (2006). Utility and happiness. *University of Michigan*, 1-67.
- Kutney-Lee, A., McHugh, M. D., Sloane, D. M., Cimiotti, J. P., Flynn, L., Neff, D. F., & Aiken, L. H. (2009). Nursing: a key to patient satisfaction. *Health affairs*, 28(4), w669-w677.
- Gross National Happiness Report (2016). Gross National Happiness Index Report, Retrieved from <http://ophi.org.uk/policy/national-policy/gross-national-happiness-index/>
- Lane, Robert E. (2000) *The Loss of Happiness in Market Economies*. New Haven and London: Yale University Press.
- Layard, P. R. G. (2005). *Happiness. Lessons from a new science*. London: Penguin Books.
- Lindenberg, S., & Frey, B. S. (1993). Alternatives, frames, and relative prices: A broader view of rational choice theory. *Acta sociologica*, 36(3), 191-205.
- Lindenberg, S. (1990). Homo socio-oeconomicus: The emergence of a general model of man in the social sciences. *Journal of Institutional and Theoretical Economics (JITE)/Zeitschrift für die gesamte Staatswissenschaft*, 146(4), 727-748.
- Pinkhasov, R. M., Shteynshlyuger, A., Hakimian, P., Lindsay, G. K., Samadi, D. B., & Shabsigh, R. (2010). Are men shortchanged on health? Perspective on life expectancy, morbidity, and mortality in men and women in the United States. *International journal of clinical practice*, 64(4), 465-474.
- Ryff, C. D. (1989). Happiness is everything, or is it? Explorations on the meaning of

- psychological well-being. *Journal of personality and social psychology*, 57(6), 1069.
- Tseng, S. Z., & Wang, R. H. (2001). Quality of life and related factors among elderly nursing home residents in Southern Taiwan. *Public Health Nursing*, 18(5), 304-311.
- Van Praag, B. M., & Ferrer-i-Carbonell, A. (2011). Happiness economics: A new road to measuring and comparing happiness. *Foundations and Trends® in Microeconomics*, 6(1), 1-97
- Veenhoven, R. (2008). Healthy happiness: Effects of happiness on physical health and the consequences for preventive health care. *Journal of happiness studies*, 9(3), 449-46