

## AN INVESTIGATION ON PREDICTORS OF LIFE SATISFACTION AMONG THE ELDERLY

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### Abstract

In the elderly, the perception of life satisfaction and quality of life is associated with many factors such as healthy life-span, chronic illnesses, expectations and self-perception of ageing. This study aims to determine the effects of different variables including age, employment, cognition, polygamy, ethnicity, debt, marital status, sex differences, intimacy capability, sleep hours, home ownership status, taking salary, educational level, and living with a partner on life satisfaction in the elderly. This study recruited 2322 respondents who were non-institutionalized Malaysian elderly aged 60 years and above. Life satisfaction was measured by asking in general 'Are you satisfied with your current life'. The multiple logistic regression analysis was used to predict the effects of susceptible variables on life satisfaction among subjects. Approximately, 90.4 % of respondents reported that they were satisfied with their current life. The results of multiple regression analysis showed that ethnic Malay (odds ratio [OR] = 1.46;  $p = 0.022$ ), and living with a partner (OR = 2.11;  $p = 0.011$ ) significantly increased life satisfaction among subjects ( $p < 0.05$ ). Age, sex differences, employment, polygamy, cognition, marital status, educational level, debt, home ownership status, taking salary, intimacy capability and sleep hours were not significant factors for being satisfied in life among respondents ( $p > 0.05$ ). It was concluded that ethnic Malay and living with a partner increased the feeling of life satisfaction among subjects.

**Keywords:** Elderly, Quality of life, Life Satisfaction

### 1 INTRODUCTION

Life satisfaction is an individual's subjective well-being that represents a person's quality of life (QOL) (Anand and Arora, 2009; Kaufman et al., 2010). QOL is a concept that is evaluated based on own goals, concerns, cultures, expectations, standards, living places and value systems that a person has (Netuveli and Blane, 2008). QOL and life satisfaction are correlated to a healthy and productive life (Anand and Arora, 2009) and being satisfied in life reflects the condition of having a good life (Kaliterna et al., 2004). Life satisfaction is a subjective judgment (Anand and Arora, 2009) that is based on the comparison between the expectations and possessions of a person in whole life rather than that in a certain condition (Melek, 2004). It is referred to the feelings and happiness that can be associated with emotions, moods, cognitive status and the background of a person (Diener, 2009). Satisfaction in life shows the feeling of pleasure that a person has regarding own expectations and circumstances in life as a whole (Jan and Masood, 2007). The feeling of satisfaction in life

among the older people indicates the abilities in adjustment and adaption with situations they deal with (Hervé et al., 2012). Life satisfaction is often used as an indicator to measure successful aging (García et al., 2011), which is a process characterized by physical healthy, mental functioning, social active, and financially secure (Eshkoo et al., 2014). This concept is a central theme of gerontology and gerontologist attempt to assist older people to age well.

There are many factors including poor health, poverty, disability, loneliness and anxiety that can affect the feeling of life satisfaction in the elderly. For instant, limited income can sometimes have a great impact on life satisfaction in the elderly by influencing their ability to pay for treatments, medicines and other needs such as glasses (Borg et al., 2006). Aging is also a significant obstacle to gain satisfaction in life in the elderly because of causing worthless and powerless. However, aging is an unpreventable process with biological, chronological and social aspects (Melek, 2004) as well as the number of elderly people is increasing; therefore, it is of utmost importance to improve life satisfaction in this specific age group. This study, therefore, aimed to study various variables including age, education, ethnicity, salary, debt, employment, polygamy, cognition, sleep hours, sex differences, intimacy capability, marital status, home ownership status, and living with a partner, which may influence life satisfaction in the non-institutionalized elderly in Malaysia.

## 2 METHODOLOGY

The project (Project Code: NN-060-2013) was a heterogeneous prospective survey entitled “Neuroprotective Model for Healthy Longevity among the Malaysian Elderly” and carried out in co-operation with Universiti Kebangsaan Malaysia (UKM), and Institute of Gerontology, Universiti Putra Malaysia (UPM). The approval and permission for conducting the study were received from the Ethical Committee of Universiti Kebangsaan Malaysia. This project recruited 2322 elderly who were Malaysian population aged 60 years and above, residing in non-institutional places. Samples were collected from different ethnicities in Malaysia involving Malays, Chinese, Indians and others that were classified as two groups: (0) Non-Malays and (1) Malays. The elderly who were living in institutions and bedridden, were excluded. Participants were gathered at community halls and centers for interview session and health screening. Trained fieldworkers conducted a face-to-face interview. The present study evaluated the effects of age, ethnicity, sex differences, debt, salary, marital status, polygamy, employment, cognition, home ownership status, intimacy capability, educational level, sleep hours and living with a partner on life satisfaction among samples. A questionnaire was used to collect data on socio-demography parameters and the other variables. Life satisfaction was measured through asking in general ‘Are you satisfied with your current life’ on a 4-point Likert scale including very satisfactory, satisfactory, not satisfied and not very satisfactory. The respondents who reported not satisfactory and not very satisfactory were placed in a group of not being satisfied with life and those with the answers of satisfactory and very satisfactory were designated as the second group and marked as life satisfaction.

### 2. 1 Statistical analysis

The prevalence of cognitive decline was computed for all subjects with regard to their independent variables. The bivariate analysis was carried out using a series of chi-square tests to determine the association between life satisfaction and each variable among samples. The multivariate logistic regression analysis was applied to predict the effects of independent variables on life satisfaction. Odds ratios (OR) with 95% confidence intervals (95% CI) were computed. The critical level for rejection of null hypothesis was considered to be a p value of 5%, two-tailed. All analyses were done using the Statistical Package for the IBM Social Sciences (SPSS) software version 22.0 (Chicago, IL, USA).

## 3 RESULTS

Analysis was run on data collected from 2322 subjects who were the Malaysian elderly. The prevalence of life satisfaction was 90.4 % (95 % CI 89.13–91.53) among subjects (Table 1).

Table 1: Prevalence of life satisfaction among 2322 elderly

Character	n	n (%)	95% CI
Life satisfaction			
Yes	2099	90.4	89.13-91.53
No	168	7.2	6.26-8.37

It was found that the percentage of life satisfaction was 92.7 % among the subjects who had own home and 92.4 % among the subjects who did not have own home. The prevalence of life satisfaction was 91.3 % among the subjects with sleeping less than 6 hours and 92.8 % among those with sleeping 6 hours or more.

The findings indicated that the percentage of life satisfaction among the respondents who were employed (93.7 %) was approximately close to those who were not employed (92.3 %). In addition, the rate of life satisfaction was 91.6 % among the respondents who had debt and 92.7 % among those without debt. The results indicated that the percentage of life satisfaction among the subjects who were taking salary (92 %) was approximately close to those without taking salary (92.7 %).

The prevalence of life satisfaction among the subjects with normal cognition and cognitive decline was 93.9 and 92 % respectively. In addition, 92.9 % of the respondents who were not polygamist and 89.7 % of those who were polygamist reported satisfaction in their life. The rate of life satisfaction was 93.6 % among the subjects who were living with a partner and 90.7 % among those without living with a partner. The percentage of life satisfaction among the subjects with and without intimacy capability was 91.8 and 92.8 % respectively. Furthermore, the results showed that the prevalence of life satisfaction among males (92.6 %) was close to females (92.6 %). The rate of life satisfaction was found to be as high as 93.1 % among married subjects and 91.5 % among single subjects. The results showed that 92.6 % of the elderly who were less than 75 years and 92.4 % of the elderly who were 75 years and above were satisfied in their life. Moreover, the prevalence of life satisfaction was 92.9 % among educated subjects and 91.3 % among non-educated subjects. Among all samples, 93.5 % of Malays and 91.1 % of non-Malays reported being satisfied with their life.

Bivariate analysis established the association of life satisfaction with each variable by chi-square tests. The results showed that ethnicity ( $\chi^2 = 4.37$ ,  $p = 0.037$ ), and living with a partner ( $\chi^2 = 6.43$ ,  $p = 0.011$ ) were significantly associated with the feeling of life satisfaction among respondents. In addition, it was found that life satisfaction was irrelevant to age, polygamy, employment, debt, cognition, intimacy capability, sex differences, sleep hours, home ownership status, marital status, and taking salary ( $p > 0.05$ ) (Table 2).

Table 2: Prevalence of life satisfaction and associations with socio-demographic factors

	Whole	n	n%	95% CI	$\chi^2$	p value
Home Owner						
No	950	878	92.4	90.56-93.94	0.06	0.811
Yes	1313	1217	92.7	91.15-93.98		
Sleep hour						
Less than 6 hours	400	365	91.3	88.07-93.64	1.19	0.276
6 hours or more	1786	1658	92.8	91.54-93.94		
Employment						
No	1742	1607	92.3	90.9-93.41	1.25	0.263
Yes	510	478	93.7	91.28-95.52		
Debt						
No	2111	1956	92.7	91.47-93.7	0.23	0.632
Yes	155	142	91.6	86.18-95.03		
Salary						
No	1943	1801	92.7	91.45-93.77	0.21	0.649
Yes	324	298	92	88.51-94.47		
Cognitive Decline						
No	705	662	93.9	91.88-95.44	2.55	0.110
Yes	1537	1414	92	90.54-93.25		
Polygamist						
No	2162	2008	92.9	91.72-93.89	NA	0.335
Yes	68	61	89.7	80.25-94.93		
Living with partner						
No	795	721	90.7	88.47-92.52	6.43	0.011
Yes	1472	1378	93.6	92.24-94.75		
Intimacy Capability						
No	1744	1619	92.8	91.52-93.95	0.66	0.418
Yes	510	468	91.8	89.05-93.85		
Sex Differences						
Male	1085	1005	92.6	90.92-94.04	0.00	0.948
Female	1182	1094	92.6	90.91-93.91		
Marital status						
Singles	716	655	91.5	89.21-93.31	1.88	0.171

Married	1551	1444	93.1	91.73-94.26		
Ethnicity						
Malays	1425	1332	93.5	92.07-94.64	4.37	0.037
Non-Malays	842	767	91.1	88.97-92.83		
Age						
Less than 75	1805	1672	92.6	91.33-93.75	0.02	0.879
75 years and above	462	427	92.4	89.6-94.5		
Educational level						
No	472	431	91.3	88.42-93.53	1.41	0.234
Yes	1795	1668	92.9	91.64-94.02		

Significant at the 0.05 level using the chi-square test

The findings of multiple logistic regression analysis showed that living with a partner ( $p = 0.011$ ) and ethnic Malay ( $p = 0.022$ ) were significantly associated with the feeling of life satisfaction among subjects ( $p < 0.05$ ). It was found that living with a partner (OR = 2.11, 95 % CI 1.19 – 3.77) and ethnic Malay (OR = 1.46, 95 % CI 1.06 – 2.03) significantly increased life satisfaction among respondents ( $p < 0.05$ ). Cognition ( $p = 0.097$ ), marital status ( $p = 0.171$ ) and education ( $p = 0.833$ ) were not found significant predictors of life satisfaction among subjects ( $p > 0.05$ ) (Table 3).

Table 3: Prevalence of life satisfaction and associations derived by logistic regression analysis

	B	SE	p value	OR	95% CI for OR	
					Lower	Upper
Cognition	-0.313	0.189	0.097	0.73	0.51	1.06
Living with partner	0.748	0.295	0.011	2.11	1.19	3.77
Marital status	-0.413	0.302	0.171	0.66	0.37	1.20
Ethnicity	0.381	0.166	0.022	1.46	1.06	2.03
Education	0.042	0.199	0.833	1.04	0.71	1.54

Significant at the 0.05 level using the logistic regression analysis

Hosmer-Lemeshow test:  $X^2(8) = 11.19$ ;  $p = 0.131$

## 4 DISCUSSION

Different factors such as cognition, independency, emotional status, physical activity, social support and socio-demographic parameters can affect life satisfaction (Onishi et al., 2010). As the number of elderly people is on the rise; therefore, further studies are needed to improve life satisfaction in this group. This study was designed to identify the effects of age, ethnicity, home ownership status, polygamy, salary, cognition, employment, debt, sex differences, intimacy capability, marital status, education, sleep hours and living with a partner on the feeling of life satisfaction among the non-institutionalized elderly in Malaysia. The results showed that ethnic Malay and living with a partner were statistically significant predictors of life satisfaction among subjects.

Our result confirmed previous reports indicating the prominent effect of partnership on the increased life satisfaction. One explanation of the effect can be the positive effect of close relationship on covering basic and universal human needs (Diener et al., 2000). In addition, it provides an interpersonal intimacy and emotional support, which can lead to well-being and life satisfaction (Diener et al., 2000; Troxel et al., 2007). It seems that a good interpersonal network between partners along with a proper concept of aging process (Silva 2014) can positively impact life satisfaction among the elderly (DeLamater and Moorman, 2007). Furthermore, being satisfied in life was prominently observed in Malay elderly compared to non-Malays. The effects of ethnicity on life satisfaction can vary via religious beliefs, lifestyle and cultures (Jean-Louis et al., 2001). Various factors including social and cultural parameters can impact one's perception regarding life satisfaction (Hombrados-Mendieta et al., 2013).

The findings showed that age, marital status, sleep hours, polygamy, employment, debt, cognition, intimacy capability, sex differences, home ownership status, and taking salary were unrelated to life satisfaction among subjects. Thus, these factors may affect the feeling of life satisfaction via moderating effects. However, these results established that such factors may sometimes affect subjective well-being but there is no guarantee (Diener 1994). As aging is inevitable and aged population is increasing, main focus is now to elevate primary care, promote life satisfaction and increase successfully aging.

## 5 LIMITATIONS

There are some limitations to this study. First, self-reported data can limit to determine correctly the level of

life satisfaction among subjects. Thus, more research with developed tools and more variables are needed to assess the effects of age-related problems on life satisfaction with a higher accuracy. The second limitation is the design of study, which confines to determine the exact effects of variables on life satisfaction. Furthermore, the presence of physical and psychological co-morbidities in subjects can limit the appropriate assessment of being satisfied in life. However, it is needed to do further research for identifying the exact causes and risk factors of life satisfaction.

## 6 CONCLUSIONS

We concluded that ethnic Malay and living with a partner were significant contributing factors to affect and increase life satisfaction among respondents. Our results showed that age, sex differences, education, debt, employment, cognition, marital status, home ownership status, polygamy, sleep hours, and taking salary were not significant predictors of life satisfaction among subjects ( $p > 0.05$ ). Further investigations are required to identify potential factors for the improvement of satisfaction in life among the elderly.

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