ความพึงพอใจชีวิตในพื้นที่เกาะของประเทศไทย กรณีศึกษาในพื้นที่เกาะภาคตะวันออก

Life Satisfaction Factors on a Remote Island of Thailand: Case Study of Working and Retired People in Eastern Region

คัทสึโนริ คาเนโกะ

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บทคัดย่อ

งานวิจัยนี้มีจุดประสงค์เพื่อศึกษาความสัมพันธ์ระหว่างสภาพเศรษฐกิจและสังคมกับความพึงพอใจในชีวิตของผู้คนบนเกาะใน ภูมิภาคตะวันออกของประเทศไทย โดยการใช้แบบสอบถามเป็นเครื่องมือในการเก็บรวบรวมข้อมูลด้วยวิธีการสุ่มตัวอย่าง ซึ่งแบ่งออกเป็น 2 กลุ่ม คือ กลุ่มวัยทำงานและวัยเกษียณอายุ ค่าเฉลี่ยของความพึงพอใจสำหรับทุกกลุ่มตัวอย่างเท่ากับ3.16 กลุ่มวัยทำงานเท่ากับ 3.15 และวัยเกษียณอายุ เท่ากับ 3.17 สำหรับการวิเคราะห์ข้อมูลจะใช้วิธีการวิเคราะห์แบบเรียงลำดับ (Ordered Probit) เพื่อหาปัจจัยที่มีผลต่อ ความพึงพอใจในชีวิตของผู้คน ผลจากการศึกษาแสดงให้เห็นถึงอายุ เพศ ขนาดครอบครัว ปริมาณการใช้น้ำ นิสัยการดื่มสุรา การสูบบุหรี่ สถานะการทำงาน ปัจจัยด้านทรัพย์สิน ปัจจัยชุมชนและความต้องการขั้นพื้นฐาน พื้นที่ใช้สอย ซึ่งเป็นปัจจัยที่มีอิทธิพลต่อความพึงพอใจ ในการดำรงชีวิต การศึกษานี้ยังพบว่าปัจจัยที่มีผลต่อความพึงพอใจในการดำรงชีวิต มีความแตกต่างระหว่างช่วงวัยทำงานและวัย เกษียณอายุ ข้อเสนอแนะของการศึกษา พบว่านโยบายควรจะชี้เฉพาะเจาะจงทุกปัจจัยสำหรับวัยทำงานและวัยเกษียณอายุ

คำสำคัญ: ความพึงพอใจในชีวิต วัยทำงาน วัยเกษียณอายุ เกาะในประเทศไทย การสำรวจครัวเรือน

Abstract

This study investigates the relationship between socio-economic conditions and life satisfaction of people on an island in the eastern region of Thailand. The data was collected by questionnaire using the random sampling method. The sample was analyzed in two groups, the working and retired generations. Average life satisfaction score is 3.16 for all samples, 3.15 for the working generation, and 3.17 for the retired generation. We used the ordered probit estimation method to analyze the data in order to find factors that affect people's life satisfaction. The result shows that age, gender, household size, water use, drinking and smoking habit, job status, asset, community and basic needs factors, and living areas influence life satisfaction. This study also found factors affecting life satisfaction are different between the working generation and the retired generation. It suggests that policies should be specified for the working generation and the retired generation.

Keywords: Life Satisfaction, Working Generation, Retired Generation, Islands in Thailand, Household Survey

1. Introduction

Happiness studies have increased in the last several decades. Most happiness researches in the field of psychology were completed before the late 1990's. In addition to advancement of computer many national-level

surveys on happiness or life satisfaction have been conducted all over the world and it lead the development of happiness study.

Economists are interested in what factors affect happiness or life satisfaction (LS) (e.g., Frey & Stutzer, 2002a; Diener & Seligman, 2004; Bruni & Porta, 2005; Ohtake, 2004; Shiraishi & Shiraishi, 2007; Tsutsui, Ohtake & Ikeda, 2009) and investigated what factors have an impact on the happiness and life satisfaction in the economics field. The set of factors related to LS are health (e.g., Diener et al., 1999; Oshio & Kobayashi, 2010), education (e.g., Hartog & Oosterbeek, 1998), income (e.g., Blanchflower & Osward, 2004; Easterlin, 2001), asset (e.g., Han & Hong, 2011), family (e.g., Diener & Seligman, 2004), community (e.g., Hooghe & Vanhoutte, 2011), and, job and unemployment (e.g., Clark & Oswald, 1994; Korpi, 1997; Winkelmann & Winkelmann, 1998; Di Tella, MacCulloch, & Oswald, 2001).

The improvement of a population's life satisfaction is an important policy task for any government. Happiness of people is related closely to political science and the satisfaction of members in a society is an interest for any government (Hellevik, 2003). Moreover, the quality of government itself can be an important factor to influence LS (Helliwell J. F. & Huang H. (2008)"). Therefore, the information on LS can be useful for policy makers. Actually, the Thai government has been collecting a kind of "LS" data all over the country for 20 years which is known as the Basic Minimum Needs (BMN) Survey. Unfortunately, the available BMN data is processed and only aggregated at the village, sub-district, district, and provincial levels, so any individual level data is unavailable (Kaneko, 2007). That is why this study aimed to search for factors affecting individual LS by using original surveyed micro-data.

Meanwhile, this study focuses on the life satisfaction of people living on an island. In general, living conditions on a mainland and an isolated island are different. For instance, a small island doesn't have any river and therefore, people try to keep rainwater for any purpose of using water in their life. Prices of goods are more expensive than that of mainland because even the enough amounts of rice and vegetable cannot be produced on the island and people need buy it from mainland and pay transportation costs. Furthermore, there are fewer industries to generate income except for fishery and tourism. This is a limitation to find jobs in formal sector. Regardless of these facts, there are few studies to deal with investigation of people's living and their satisfaction, so this study deals with it.

The paper proceeds as follows. Section two expresses the objective of this study and section three describes data, variables and model. The following section shows life satisfaction scores and its relationship with respondents' attributes, and the results of regression analysis. The last section is a summary and discussion.

2. Objective

The objective of this study is to investigate the relationship between socio-economic conditions and life satisfaction of the people on an Island in a province, eastern of Thailand.

3. Methodology

Data

Data was collected by an original household survey conducted during March to May 2008. Simple random sampling was used to select households and the researcher and his assistants visited 350 households and 99.4% (348 households) filled out and returned the questionnaire.

The island is located in a province, eastern of Thailand and 12 kilometers from the mainland. The gross area of the island is 18 square kilometers and the population was 5,083 in 2008. Major industries which people engage in are fishery, retail, the informal sector, tourism and the civil services. The weather is warm year

round. The district which covers the island has 7 villages and 1, 633 households.

As for household size, 2 (35.7%) was the largest group followed by 1 (33.4%) and 3 (16.3%). The number of respondent was 668 (male = 331, female = 337）but only 644 respondents answered all questions.

Dependent Variable

The questionnaire asked people "How much are you satisfied with your current life totally?" on a five-point scale. The choices were "5=Very Satisfied", "4=Satisfied", "3=Neither Satisfied nor Dissatisfied", "2=Dissatisfied", and "1=Very Dissatisfied" same as other LS studies such as Cabinet Office, Government of Japan (2005) and Jung, Muntaner & Choi (2010). The most frequent answer was "Neither Satisfied nor Dissatisfied" (68.87%) followed by "Satisfied" (23.01%), "Dissatisfied" (7.36%), "Very Satisfied" (0.46%), and "Very Dissatisfied" (0.31%). "Dissatisfied" plus "Very Dissatisfied" amounted to 7.67% of the samples. It shows the people on the island felt less unhappy than those of other countries in the previous studies[i]. On the contrary, respondents with "Satisfied very much" plus "Satisfied" are 23.47% (Table1).

Table 1 Life Satisfaction

	Frequency	%
Very Satisfied	3	0.46%
Satisfied	150	23.01%
Neither Satisfied nor Dissatisfied	449	68.87%
Dissatisfied	48	7.36%
Very Dissatisfied	2	0.31%

Independent Variable

This study collected demographic information thorough the questionnair such as age and its square, gender, marriage status, years in education, health status, household size, household income per capita (HIC), household water consumption per capita (HWC), a dummy

for working, life style (exercise habits, drinking habits, smoking habits) and village.

Age is respondents' age and Age square can measure the change of impact size of age on LS. Male is a dummy variable which indicates 1 when a respondent is male (1 = male; 0 otherwise). Marriage is a dummy variable which indicates 1 when a respondent is married (1 = marriage; 0 otherwise). Years in education is the number of years of schooling. Health status is self-rated health as 5 = good, 4, 3, 2, 1 = poor. Household size shows the number of family member and HIC is computed from total household income divided by household size. Household size might be the proxy of family situation and household income reflects the economic status. HWC is calculated from household water consumption divided by household size. Because water utilization is supposed to be an important condition for living on an island, HWC is expected to affect LS. Working Dummy indicates the respondents' working status (1 = working; 0 otherwise). Exercise Habits is a dummy variable and shows whether respondents take exercise regularly or not (1 = taking exercise once or more a week; 0 otherwise). Drinking Habits is a dummy variable and shows the regularity of drinking (1 = drink regularly; 0 otherwise). Smoking Habits is a dummy variable and shows whether respondents smoke regularly or not (1 = smoking regularly; 0 otherwise).

In addition, the study collected the information on people's satisfaction on several dimensions (assets, income, job, culture, family, health, medical care, water, housing, and education, local community, local politics, and national politics) with a five-point scale, same as LS. The average satisfaction scores on those dimensions are shown in Table 2. Those dimensions referred to the Basic Minimum Needs (BMN) Survey conducted by Ministry of Interior[ii]. The overall LS score is 3.16 in average and the scores in each dimension suggest that people on the island are relatively satisfied with family (3.45), housing (3.46) and education (3.76) but not satisfied with local community (2.85) and national politics (2.93).

Table 2 Satisfaction on several dimensions

Satisfaction	N	Mean	S.D.	Min	Max
Assets	653	3.07	0.55	1	5
Income	653	3.04	0.85	1	5
Job	653	3.24	0.87	1	5
Culture	653	3.04	0.67	2	5
Family	653	3.45	0.83	1	5
Health	653	3.09	0.74	1	5
Medical care	651	3.07	0.52	1	4
Water	652	3.21	0.60	1	5
Housing	652	3.46	0.71	1	5
Education	652	3.76	0.84	1	5
Community	652	2.85	0.56	1	4
Local Politics	652	3.01	0.63	1	5
National Politics	652	2.93	0.70	1	5
Life Satisfaction	652	3.16	0.56	1	5

Then, a factor analysis was carried out with promax roatation to abstract factors from 13 life satisfaction scores in order to reduce the variables, and five factors (Labor Factor, Politics Factor, Asset Factor, Community Factor and Basic Needs Factor) were acquired with cut-off level as 0.3 (Table 3).

Table 3 Factor loadings

Satisfaction	Factor1 Labor	Factor2 Politics	Factor3 Asset	Factor4 Community	Factor5 Basic Needs
Job	0.9498				
Income	0.6399				
Health	0.3040				
Local Politics		0.8580			
National Politics		0.3273			
Assets			0.7855		
Medical care				0.4653	
Community				0.3773	
Education					0.5019
Water					0.4851
Housing					0.3917
Culture					
Family					

Factor 1 is considered as the factor related to labor and comprised the satisfaction on job, income and health. Factor 2 is considered as the factor related to politics and comprised the satisfaction on local politics and national politics. Factor 3 is considered as the factor related to only asset. Factor 4 is considered as the factor related to community and comprised the satisfaction on medical care and health. Factor 5 is considered as the factor related to basic needs and comprised the satisfaction on education, water and housing. These five factors are included as independent variables in ordered probit estimation.

Model

This study defines the general form of the determinants of LS referring to Dolan, Peasgood, White (2008) as the following form:

$$LS_{report} = r(ls)$$

where the self-reported LS is the function of the true LS(ls). True LS is affected by socio-economic factors and satisfaction to several dimentions. This study used the ordered probit estimation method because dependent variable is discrete variable and just indicates the order (Greene, 1997). The estimation function follows the form:

Life Satisfaction$_i$ = α_1Age$_i$ + α_2Age2$_i$ + α_3Male$_i$ + α_4Marriage + α_5Years in Education$_i$ + α_6Health Status$_i$ + α_7Household size$_i$ + α_8HIC$_i$ + α_9HWC$_i$ + α_{10}Working Dummy$_i$ + α_{11}Exercise$_i$ + α_{12}Drinking$_i$ + α_{13}Smoking$_i$ + α_{14}Labor Factor$_i$ + α_{15}Politics Factor$_i$ + α_{16}Asset Factor$_i$ + α_{17}Community Factor$_i$ + α_{18}Basic Needs Factor$_i$ + α_{19}Village dummy$_j$+ $\square_i$,

where *Life Satisfaction* represents the latent continuous variable and $\square_i$ is the error term with a standard normal distribution. Ordered probit estimation was done for the working and retired generations respectively.

This study analyzed in the two generations separately because the different LS functions were assumed. In general, people in the retired generation spend longer time at their home. On the contrary, people in the working generation spend longer time outside of their home. Because "discretionary time" and "spare time" influence the self-reported LS (Eriksson, Rice & Goodwin, 2007). In addition, people in the two generation would have the different role and status in the Thai society. For example, the social status of "jobless" for the elderly people is considered to be different from the status for young people. Furthermore, health conditions are influenced by "retirement" (Sjösten & et al., 2010), so retirement might affect LS.

4. Results

Before doing regression, we consider the relationship between life satisfaction (LS) and the selected attributes.

Gender

The number of male respondents was 319, and the average LS score was 3.16 and the standard deviation (S.D.) was 0.57. Similarly, the number of female respondents was 333 and the average LS score was 3.16 and S.D. was 0.54. With the sample testing the difference in mean value of the LS scores between the two groups were as follows: t-value equals 0.0164 and p-value equals 0.9869. That is to say, there is no gender difference in LS. The results are different from the previous studies which reported males, on average, as less happy than females

(Inglehart, 1990, White, 1992, Hellevic, 2003, and Tsutsui, Ohtake and Ikeda, 2009).

As Tsutsui, Ohtake and Ikeda (2009) suggested, LS or happiness is influenced by the role of each gender in societies rather than just gender. It suggests that the roles of male and female in this island society are similar.

Age

Figure 1 shows the relationship between LS and age groups. Among the five groups, the age≤29 is the happiest with the LS scores getting lower with age. The age 50-59 is the least happy and the group over 60 years and above has a higher LS score than that of the 50-59 age group. It looks like a U-shaped curve.
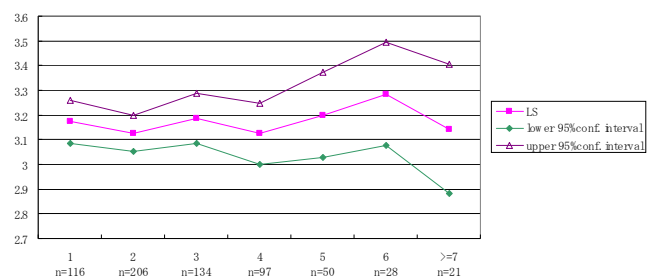
Figure1 Age group and LS
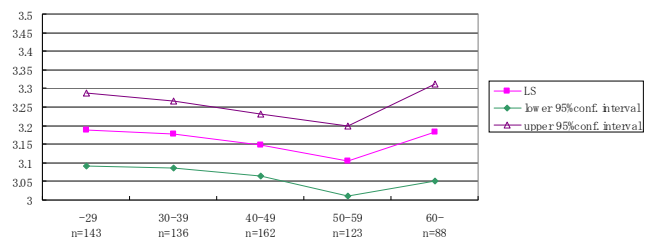
Household size

As reported in Figure2, people feel happiest when the household size is six, although the sample size for this group is small. However, the LS score decreases if household size is seven and more. Nuclear family has higher LS than people stay with their partner or a friend.
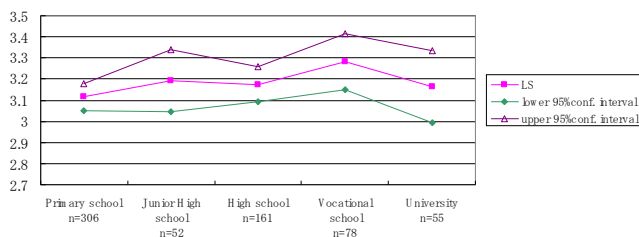
Figure2 Household size and LS

Marriage

The number of respondents for the "marriage" group was 292, and the average LS score was 3.17 with a S.D. of 0.55. Similarly, the number of respondents for the "single (including widow and divorce)" group was 360, and the average LS score was 3.15 with a S.D. of 0.56. With the testing sample the difference in mean value of LS scores between the two groups were as follows: t-value equals 0.4844 and p-value equals 0.6282. That is to say, there is no difference in LS score because of marital status.

Education

According to educational level, people who graduated from vocational school have the highest LS and people who graduated from primary school or had no education have the lowest LS. There is not a clear difference between the graduates from junior high school and high school. People who have a Bachelor degree have lower LS than the people with lower educational achievement. This implicates that studying at universities in itself cannot improve LS.
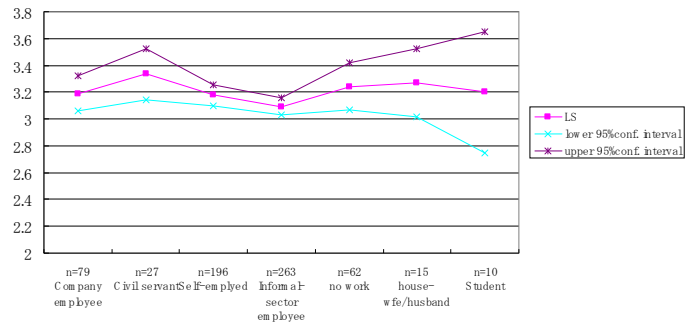
Figure4 Occupation and LS

Income

Figure 5 and Figure 6 show the relationship between household income level and LS. Even Figure 5 uses total household income and Figure 6 uses household income per capita, results are similar and summarized into two interesting findings. Firstly, the lowest income group

has the highest LS and may have an attribute of "happy slave" or "sour grapes" (Elster and Roemer, 1991, p.6) Secondly, the LS level is improved when the income level rises but after reaching the saturation point of 40,000 Baht for household income and 15,000 Baht for household income per capita the LS gets lower.

Figure3 Education and LS

Figure5 Household income and LS

Occupation

Civil servants have the highest LS among all occupations. We cannot find any clear difference between people who work for companies and people who operate own their business. It is noteworthy that people who don't work and also house-wives/husbands have higher LS than people who work except for civil servant. Informal sector employees have the lowest LS among all occupations.
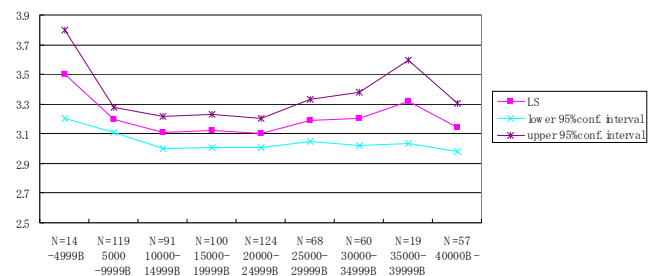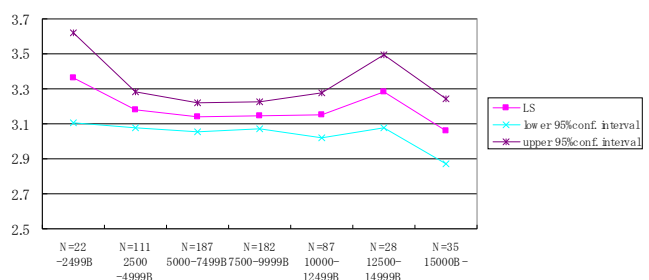
Figure6 Household income per capita and LS

Estimation results

Table 4 displays the descriptive statistics. Sample size is 558 and 86 for the working generation and the retired generation, respectively.

Average life satisfaction score is 3.15 for the working generation, and 3.17 for the retired generation. Average age of respondents is 39 years old for the working generation, and 69 years old for the retired generation. The ratio of male to respondents is 51% for the working generation, and 33% for the retired generation. 45% of working generation and 37% of retired generation are married. Average years in education are 9.31 and 3.79, respectively. Self-rated health statuses are 3.33 and 2.12 in average and it shows the young people have better health than that of the elderly people. The ratio of working people is 93% for the working generation and 40% for the retired generation. 34% of working generation and 24% of retired generation take exercise once or more in a week. 31% of working generation and 2% of retired generation has drinking habit and 12% of working generation and 6% of retired generation smokes regularly.

Table5 presents the results of ordered probit estimation for the working and the retired generations, respectively. The result indicates that HWC, smoking habits, the community factor and the basic needs factor have a positive impact on the LS for the working generation.

This study found that water utilization is an important factor in living on any island because no water is available from river. The living condition with sufficient water can enhance the life satisfaction. Working dummy shows the negative sign and it indicates people consider labor as suffering for their life. Another interesting finding is smoking habit have a positive relationship with LS. People on the island who are satisfied with the community and the basic needs have higher LS score. This might suggest that younger people cannot be satisfied with the daily life on the island because they are not satisfied with the local community and the access to the basic needs such as housing and water. Area difference was also found that people live in village 3, village 6 and village 7 were less satisfied with their living condition. In the regression, village 1 was a reference group, so the results showed the difference between each village and village 1.

However, age, age square, male, marriage, years in education, health status, HIC, exercise habits, drinking habits, labor factor, politics factor, and asset factor are not significant determinants.

Table 4 Descriptive Statistics

Variables	Working generation (N=558)				Retired generation (N=86)			
	Mean	Std.Dev.	Min	Max	Mean	Std.Dev.	Min	Max
Life Satisfaction	3.15	0.54	1	5	3.17	0.61	1	4
Age	39.07	10.99	19	59	69.75	6.53	60	84
Age*Age	1647.59	858.74	361	3481	4908.06	929.93	3600	7056
Male	0.51	0.50	0	1	0.33	0.47	0	1
Marriage	0.45	0.49	0	1	0.37	0.48	0	1
Years in Education	9.31	4.28	0	16	3.79	3.11	0	16
Health Status	3.33	0.62	2	5	2.12	0.54	1	4
Household size	2.93	1.70	1	10	2.98	1.77	1	10

HIC	8151.30	3726.08	0	35000	6355.45	4017.87	0	24000
HWC	57.32	29.26	9.07	166.21	62.63	35.96	29.35	173
Working Dummy	0.93	0.23	0	1	0.40	0.49	0	1
Exercise Habits	0.34	0.47	0	1	0.24	0.43	0	1
Drinking Habits	0.31	0.46	0	1	0.02	0.15	0	1
Smoking Habits	0.11	0.32	0	1	0.05	0.23	0	1
Labor Factor	0.15	0.73	-2.55	1.94	-1.05	1.26	-2.69	0.88
Politics Factor	0.01	0.86	-3.31	2.86	-0.10	0.72	-1.47	1.49
Asset Factor	0.04	0.78	-1.98	2.81	-0.21	0.86	-2.93	1.69
Community Factor	0.09	0.63	-1.78	2.09	-0.60	0.62	-2.09	1.82
Basic Needs Factor	0.04	0.69	-3.24	1.99	-0.20	0.70	-1.78	1.08
Village1	0.20	0.40	0	1	0.16	0.37	0	1
Village2	0.15	0.36	0	1	0.12	0.33	0	1
Village3	0.22	0.41	0	1	0.17	0.38	0	1
Village4	0.07	0.26	0	1	0.13	0.34	0	1
Village5	0.05	0.23	0	1	0.10	0.30	0	1
Village6	0.27	0.44	0	1	0.23	0.42	0	1
Village7	0.00	0.08	0	1	0.05	0.23	0	1

HIC: Household Income per Capita, HWC: Household Water Consumption per Capita

Table 5 Ordered Probit Estimation Results on LS

Variables	Working generation				Retired generation			
	Coeff.	Std.Err.	Z	P>|Z|	Coeff.	Std.Err.	Z	P>|Z|
Age	0.00	0.03	0.11	0.90	-3.37***	0.81	-4.12	0.000
Age*Age	0.00	0.00	-0.27	0.78	0.02***	0.00	4.18	0.000
Male	-0.10	0.12	-0.84	0.39	0.72**	0.35	2.03	0.042
Marriage	0.00	0.11	0.06	0.95	-0.00	0.33	-0.00	0.999
Years in Education	0.02	0.01	1.47	0.14	-0.03	0.05	-0.70	0.483
Health Status	-0.14	0.11	-1.30	0.19	0.23	0.41	0.56	0.578
Household size	0.01	0.03	0.38	0.70	0.26**	0.13	1.97	0.049
HIC	0.00	0.00	0.63	0.53	-0.00	0.00	-0.77	0.441
HWC	0.00*	0.00	1.73	0.08	-0.00	0.00	-0.83	0.407
Working Dummy	-0.47**	0.23	-2.01	0.04	-0.10	0.56	-0.18	0.858
Exercise Habits	0.02	0.11	0.24	0.80	0.34	0.40	0.85	0.395
Drinking Habits	-0.05	0.13	-0.41	0.68	-3.89**	1.67	-2.33	0.020
Smoking Habits	0.30*	0.17	1.67	0.09	1.62	1.08	1.50	0.134
Labor Factor	-0.15	0.09	-1.55	0.12	-0.17	0.23	-0.76	0.448
Politics Factor	0.02	0.07	0.31	0.75	0.08	0.26	0.31	0.754
Asset Factor	0.05	0.08	0.62	0.53	0.77***	0.23	3.37	0.001
Community Factor	0.41***	0.11	3.57	0.00	0.56	0.40	1.40	0.163
Basic Needs Factor	0.24***	0.09	2.75	0.00	0.06	0.27	0.23	0.815
Village2	-0.20	0.16	-1.25	0.21	-1.66***	0.62	-2.67	0.008
Village3	-0.35**	0.16	-2.12	0.03	-1.75***	0.65	-2.67	0.008
Village4	0.13	0.22	0.61	0.54	1.39**	0.65	2.13	0.034
Village5	-0.20	0.25	-0.81	0.42	0.53	0.58	0.92	0.359
Village6	-0.90***	0.15	-5.75	0.00	-2.15***	0.60	-3.55	0.000
Village7	-1.87***	0.50	-3.74	0.00	-0.65	1.07	-0.61	0.542
Observations	558				86			
Log pseudolikelihood	-399.64				-45.64			
Pseudo R2	0.1145				0.4131			

Note: z-statistics calculated using robust standard errors.
*, ** and *** indicate statistical significance at 10%, 5% and 1% levels, respectively.

On the other hand, age square, male, household size, asset factor and village dummy are positively associated with LS, and age, drinking habits and village dummy are negatively associated with LS for the retired generation. But marriage, years in education, health status, HIC, HWC, working dummy, exercise habits, smoking habits, labor factor, politics factor, community factor, and basic needs factor are not significant factors.

The result presents life satisfaction for the elderly is getting lower with age but the decreasing rate is getting smaller and life satisfaction returns to rise after the age of 70[iii]. Old men are satisfied with their life higher than old women. The elderly in big family have higher satisfaction than in small family. Because community factor is not significant statistically, this suggests that family is more important for the elderly than local community. Satisfaction to asset is also strongly associated with LS. Drinking habits and LS have a negative association. This might reflect people are not satisfied with their life and then, they become to drink alcohols regularly.

At last, we confirmed the area difference on the peoples' LS. People live in village2, village3, and village6 have lower LS than the people in village1. On the contrary, people in village 4 have higher LS than that of village 1.

Discussion

In this section, we discuss the factors especially which are significant statistically in the previous section with findings in previous studies.

To begin with the importance of water, people living on the island can access water thorough rainwater, purchasing water from traders and utilization of the piped water. The local government has encouraged people to set a rainwater tub at houses. Older and larger houses have big and many water tubs but smaller house can set only one tub. Households in the working generation are more likely to use the piped water system (Kaneko, 2009). The results showed water consumption and LS have a positive and significant association for the working generation consistent with Guardiola, González-Gómez, & Lendechy-Grajales (2011) but it was not significant statistically for the retired generation. This is partly

because the elderly households stay at the older house with big water tub and hence they have enough volume of water.

There are many evidences that unemployment or jobless status have a negative relationship (Di Tella, MacCulloch, & Oswald, 2001; Sano & Ohtake, 2007). Helliwell (2003) described unemployment has a stronger effect negatively on LS in developed countries than that of developing countries. Frey & Stutzer (2002a) indicated the unemployment in the country where working is a strong social norm makes people have lower LS. This might suggest that working is not strong social norm in the island. Krstic & Sanfey (2007) concluded people who work in informal sector have lower LS than people in formal sector. Many people on the island are engaged in the work in informal sector and, therefore, working dummy might have a negative effect on LS.

As for smoking habits, previous studies indicated smoking made LS lower (Tsutsui, Ohtake, & Ikeda, 2009; Grant, Wardle & Steptoe, 2009). However, people who are smoking have higher LS than people don't smoke on the island similar to Piqueras, Kuhne, Vera-Villarroel, Straten & Cuijpers (2011). A possible reason is the people who have smoking habit are more optimistic (Lyubomirsky, & Lepper, 1999) because they chose smoking to satisfy their wants even they might understand the health risk of smoking.

Although health status was not a significant factor associated with LS in this study, health status is a key determinant of LS in general (Oshio & Kobayashi, 2010). The most of respondents in the retired generation reported self-rated health status as not good and hence, we could not get a significant result. Actually, many elderly people on the island have chronic illness and we expect the illness reduce their LS. A study found chronic illness was closely related to depression but family member and relatives care could reduce a depression risk (Kongmeesuk, Kaneko & Triwuttanon, 2008). Mental health is considered to be a determinant of LS more important than physical health (Dolan, Peasgood & White, 2008). Chyi & Mao (2012) pointed that the elderly living own children reported the lower LS and living their grandchildren reported higher LS. Also, economic security is a critical issue for the elderly (Han & Hong, 2011).

Furthermore, trust in other people also affects the self-reported LS (Helliwell, 2003; 2006). Constructing economic security and social trust for the elderly might be a priority of government intervention to enhance population's LS.

Thailand has been confronting with regional differences in many aspects. Solving economic disparity among regions has been a challenging for a long time and basic infrastructures such as education and medical care also are mal-distributed across the country. Even there exists the regional difference in a province (Sumngern, Azeredo, Subgranon, Sungvorawongphana & Matos, 2010). However, regional disparity of LS can be explained by the demographic factors such as occupation, education and family condition (Yamane, Yamane & Tsutsui, 2008). This study controlled demographic factors but nevertheless there existed regional differences of LS in a small society. It suggests the formation of community and LS might have a relationship.

5. Conclusion

This study examined the factors affecting life satisfaction (LS) of people on an island in the Eastern Thailand. Data was collected by random sampling methods and analyzed by ordered probit regression. The main findings are (1) factors affecting LS are different between the working generation and the retired generation; (2) water utilization is one of the key factors especially for young household; (3) lifestyle habits have an impact positively and negatively on LS; (4) working makes people feel unhappy; (5) age is a negative factor for the retired generation; (6) the asset factor is important for the elderly LS; (7) the elderly who are in larger household are more satisfied with their life; (8) men have higher life satisfaction than women in the retired generation.

There are some policy implications for policy makers. When the government implements the policies on people's living, the effect on their life satisfaction are different because the needs and factors affecting on LS of working generation and retired generation are totally different. Moreover, policy makers need observe carefully the effects of policy on their LS in each area because the regression results indicated the village dummy was a positive or a negative sign.

This study is designed as a cross sectional study, so it cannot control cross-sectional bias. Future research will use panel data. Household income per capita was used as an independent variable to capture their economic factor in this study. However, Ferrer-i-Carbonell (2005) and Urakawa & Matsuura (2007) suggested that the relative income comparing with the income of reference group (such as educational level, one's year of birth, marital status and residential area) have impact on LS. Hence, future research should control the relative income factor in the model.

[i] Norway 11% (Hellerik, 2003) and Japan 12.4%(Tsutsui, Ohtake & Ikeda, 2009)

[ii] The Community Development Department of the Ministry of Interior has collected the basic minimum need (BMN) since 1982. This data set include information on people's demographic, physical, economic, and social status as well as housing, health, education, poverty, children, and culture.

[iii] Culculated by $\partial LS/\partial Age = -3.373945 + 0.0480656$ Age $= 0$, because the slope of age-life satisfaction equal to zero at the minimum point. By solving the above equation, age = 70.19.

6. Acknowlegement

7. References

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