# DIFFERENCES IN THE QUALITY OF LIFE OF ELDERLY PEOPLE ACCORDING TO THEIR CHARACTERISTICS OF THE ELDERLY IN SAMUT SONGKHRAM PROVINCE

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## ABSTRACT

This study was a survey research that aimed to compare the differences in the quality of life of elderly people by classifying the characteristics of elderly people. Population scope of this research would focus to adults aged over 60 who had been staying in Samut Songkhram province, Thailand. Number of population in this research was 415 adults from 3 districts; 111 adults from Amphawa, 95 adults from Bangkontee, and 209 adults from the main municipality. Research equipment used in this study was a questionnaire which was divided into 2 parts. For the first part, it was personal information in terms of quality of life of elderly people that consisted of sex, age, educational level, status, occupation and income, member quantity in family, relationships and living condition. For the second part, it was the assessment of quality of life namely EQ-5D-5L. The results of this study found that there were the differences in quality of life of elderly people when classified by elderly people's characteristics. Quality of life classified by sex of elderly people was not significant different, in contrast to quality of life classified by age, educational level, occupation, income, which was mentioned as significant difference by a significance level of .05. Nonetheless, quality of life classified by status, member quantity in family, living condition, and relationships was not significant different.

*Keywords:* quality of life, elderly people, Samut Songkhram

## INTRODUCTION

World population in many present societies has been rapidly transforming to the "aging-society". According to Population Reference Bureau (2012), many developed countries both in Europe and North America have been moving to the "aged society". In the same senses, some country in Asia such as Japan has been more advanced being the "super aged society". In ASEAN, Thailand has been also continuing to the "aging-society", which it keeps the second ranks after Singapore (1). In 2014, Thailand has 68 million populations. 65 million of all registered in the census list are consisted of Thai and non-Thai nationalities. Less is non-Thai who mostly come from neighboring countries.

In the past 10 years, total number of Thai population was constant according its growth rate is quite slow down. Empirically, growth rate of Thai population in 2014 was about 0.5 percentages per year which it continually went down. This was caused by the extending of saturation point of population in Thailand. So far, the age structure in Thailand has been rapidly changed; Thai population has been transformed from teenager in the past to older adults nowadays. There adults over 60 was exceeded 10 million population in 2014, accounted for 15 percentages of all.

Certainly, the circumstance of "aging" on Thai population has presented a challenging issue in terms of socio-economic development. In 2014, Thailand consisted of 4.3 adults (age 15-59 years old) per an over 60 aged elderly person. Hence, it estimates that Thailand will have 2 adults per an elderly person by 20 years.

Many Thai populations have been educated that now Thai society has been becoming an aging-society, however, in fact of world population, Thailand has been changed to aged-society already since 2005. According

to population research, a number of Thai elderly people are about 10 percentages of total population in Thailand. So, this is an evidence to define that Thailand has been going to "aged society". By 2021, a ratio of elderly people will be reached to 28 percentages of total Thai population, so Thailand will be completely a "super aged society".

In regard with provincial state level, there are differences on aging level varied by area scope. In 2014, report showed that top 5 areas of elderly people are Lampang (143.5), Lampoon (143.3), Phrae (140.0), Samut Songkhram (133.7) and Singhaburi (128.4) (2).

Samut Songkhram, a smallest province in Thailand, has a numerous quantity of elderly people in the fourth top ranking of Thailand. This is one of necessary areas to pay more attention to all elderly people to promote their quality of life. Not only the author is a lecturer in the division of elderly care, department of Health Sciences at College of Allied Health Sciences, Suan Sunandha Rajabhat University where it is located in Samut Songkhram, but the author is also interested in the promotion of quality of life of elderly people. Many researches in the field of elderly care is my main focusing, so I hope that the results of this research will have many advantages for those related to elderly people and help supporting the promotion of quality of life of elderly people as much.

## OBJECTIVES

1. To compare the differences in the quality of life of elderly people by classifying the characteristics of elderly people.

## SCOPE OF RESEARCH

1. *Content Scope*

   This research was a survey research that targeted to the quality of life. It was consisted of five dimensions of health, i.e. mobility, self-care, usual activities, pain, and anxiety.
2. *Population Scope*

   This research especially focused to the over-60-aged populations who have been living in Samut Songkhram. Target population in this research was referred to Taro Yamane's calculation.
3. *Timing Scope*

   October 2016 to September 2017

## LITERATURE REVIEW

A word 'Elderly' or older person is a commonly used definitions for aged people. There is no general rule or international agreement on the age at which a person becomes old. Some developed countries has commonly defined people at 65 years as 'elderly person' according to the chronological age, therefore the use of a calendar age to mark person who is getting older as elderly person will be depended on a project and its objectives (3). Some scholars suggested postponing the age at which called elderly person, in Japan, the government changed a commonly used definition of people at 65 years to people at 75 years as elderly person (4)(5)(6). However, Thailand still refers people at 65 years as elderly people with regard to the participations, in-depth interviews and empirically numeric evidences on demography that demonstrates a remain aged of people at 65 years in the present day is equal as people at 60 years in the last fifty years. Moreover, it believes that definition of elderly person specified by age may support to a human management.

However, positively, defining a definition of elderly person is not only a thing to do, but a preparation to support a person who is getting older is also a must. It is necessary to recognize on valued elderly humanity and care how to promote quality of life of elderly people as well. Awareness to valued elderly people should be promoted to children in their family to let them see the significance of good relationships among members. A basic way to promote the recognition is a promotion on activities among elderly people and children.

Moreover, building a positive attitude about physical transformation of elderly people should be promoted by organizing a seminar or academic talk, paper publicizing, and broadcasting on airs and social networks. Besides, it should have many studies to support the extension on the retired age in the official section, and any measures or welfare to enhance older workers (7).

For health assessment, in Thailand, elderly person evaluate the health problems that may attack them by 2 domains of physical and mental health domains. For the physical domain, most of them evaluate that they have a good health even some have chronic diseases. With regard to a survey on elderly population in 2007 reported by the National Statistical Office (NSO), 43 percentages of elderly population self-evaluate that they are good health, followed by 28.9 percentages of medium. Also 44.3 percentages of elderly people living in municipality self-evaluate at good, which is higher scores than elderly people who are living outside municipality (42.5 percentages). There is an assessment tool to evaluate health for elderly person, also called "Barthel Activities of Daily Living (ADL)" which elderly people will provide scores of bathing, grooming, toilet using, transferring, feeding, dressing, stairs and mobility in house. This is to detect the elderly's ability in any activity of their living. 90 percentages of elderly people can self-help for daily activities without any assistance. 10 percentages of all have a stairs problem, they worry about accident. 80 percentages of all is without a problem of bladder and bowels; however, one of fifth of 80 sometimes faces with bladder and bowels. Almost 5.1 percentages of this number are not able to control the bladder and bowels.

Besides, for mental domain, a tool to survey a psychological problem in elderly people is questionnaire which is consisted of 15 questions, namely Thai Mental Health Indicator (TMHI-15). The scores in each question are 0-3 points, 3 means to good mental health, full score is 45 points which the standardization for normal person is 27.01 – 34 points. The 2008 report reviewed that elderly people have total score at 31.44 points – it is in the normal standard. However, this is quite low when compared with other age ranks. In 2009, the score was increased to 32.62 scores. The reason why 2009's score is higher might be from an official assistance from the government that directly affected to quality of life then reflected to a better mental health (8). Due to social domain, the report disclosed the increased numbers of living characteristics of elderly people. In 2007, 7.6 percentages of all elderly people would like to stay alone which it was plus almost a time from 1994. This is rather critical and risky because when people is getting older and keeping isolate, it is difficult to take care in time when they are facing any health problem. It is certainly that the age is older, the physical and mental health are weaker. Many diseases such as hypertension, diabetes, hyperlipidemia and etc. are ready to attack elderly people. However, it is found that most of elderly people are confronted to osteoarthritis. They have tooth loss and dental problem. Most of them have less 20 teeth in their mouth which reduce their chewing ability. Moreover, 12.4 percentages of elderly people meet with dilemmas such as dementia and depression. For the dementia, its frequency occurs in female is about 15.1 percentages of all, followed by male that is about 9.8 percentage (9).

## RESEARCH METHODOLOGY

This research used a questionnaire as a tool for data collection. The questionnaire was divided into 2 parts. First part was personal information of quality of life of elderly people which was consisted of sex, age, educational level, status, occupation, and income, member quantity in family, relationships and living condition. For the second part, was an evaluation sections to assess a quality of life using EQ-5D-5L (instead of EQ-5D-3L), to analyse for classification ability, to test-retest for reliability, and to evaluate the satisfaction. The reasons why this research used 5L is in terms of economic wealthiest, 5L could provide a lower score of ICER than 3L as well as it would greater reduce the instability of research results. Thus, 5L questionnaire has been recommended and suitable for Thailand. This research focused the elderly people only Samut Songkhram. There were 415 elderly adults from three districts (1) 111 adults from Amphawa, (2) 95 adults from Bangkontee, and (3) 209 adults from Samut Songkhram municipality.

## DATA ANALYSIS

Analysis in the research used a statistic package of t-test, ANOVA, multiple comparisons of Scheffe's method and Tamhane's method (if equal valiance not assume).

## RESULTS OF THE RESEARCH

The differences in quality of life of elderly people are classified by sex, as follow.

**Table 1** Comparison of different levels in quality of life of elderly people classified by sex

| t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference |
|---|---|---|---|---|
| -.086 | 413 | .931 | -.00418 | .04860 |

*P<.05

From Table 1, the result showed that the differences in quality of life of elderly people are not varied by sex at significance level of .05.

**Table 2** Comparison of different levels in quality of life of elderly people classified by age, status, educational level, occupation, income, member quantity in family, living condition, and relationships.

| Variables | | SS | df | MS | F | p-value |
|---|---|---|---|---|---|---|
| Age | cross-group | 6229.191 | 3 | 2076.397 | 15.216 | .000* |
| | inside group | 56087.411 | 411 | 136.466 | | |
| | Total | 62316.601 | 414 | | | |
| Status | cross-group | 1083.597 | 4 | 270.899 | 1.814 | .125 |
| | inside group | 61233.004 | 410 | 149.349 | | |
| | Total | 62316.601 | 414 | | | |
| Educational level | cross-group | 2767.859 | 4 | 691.965 | 4.764 | .001* |
| | inside group | 59548.742 | 410 | 145.241 | | |
| | Total | 62316.601 | 414 | | | |
| Occupation | cross-group | 1935.699 | 5 | 387.140 | 2.622 | .024* |
| | inside group | 60380.903 | 409 | 147.631 | | |
| | Total | 62316.601 | 414 | | | |
| Income | cross-group | 4902.607 | 6 | 817.101 | 5.807 | .000* |
| | inside group | 57413.994 | 408 | 140.721 | | |
| | Total | 62316.601 | 414 | | | |
| Member in a family | cross-group | 2337.202 | 9 | 259.689 | 1.754 | .075 |
| | inside group | 59979.399 | 405 | 148.097 | | |
| | Total | 62316.601 | 414 | | | |
| Living condition/ livelihood | cross-group | 540.883 | 3 | 180.294 | 1.200 | .310 |
| | inside group | 61775.718 | 411 | 150.306 | | |
| | Total | 62316.601 | 414 | | | |
| Relationships | cross-group | 227.306 | 3 | 75.769 | .502 | .681 |
| | inside group | 62089.296 | 411 | 151.069 | | |
| | Total | 62316.601 | 414 | | | |

*P<.05

Results in the Table 2 showed the comparison of different levels in quality of life of elderly people classified by age, status, educational level, occupation, income, member quantity in family, living condition, and relationships. These results are implied that the differences in quality of life of elderly people are significantly varied age, educational level, occupation and income at significance level of .05, in contrast to the variables classified by status, member quantity in family, living condition and relationships which were not significant different at significance level of .05.

**Table 3** Multiple comparisons of different levels in quality of life of elderly people classified by age following to Scheffe's Method

*P<.05 MD = Mean Difference (I-J) SE = Std. Error

| Age (Yrs) | 70-79 Yrs | | 80-89 Yrs | | 90-99 Yrs | |
|---|---|---|---|---|---|---|
| | MD | SE | MD | SE | MD | SE |
| 60-69 | 4.80* | 1.27 | 7.21* | 1.81 | 41.10* | 8.30 |
| 70-79 | | | 2.41 | 1.92 | 36.30* | 8.32 |
| 80-89 | | | | | 33.89* | 8.42 |

From Table 3, the results showed that quality of life in terms of health of elderly people aged among 60-69 was significant different from elderly people aged among 70-79, 80-89, and 90-99 at significance level of

.05. Furthermore, to especially compare between ages 70-79 and 90-99, results informed that the qualities of life among these ages were significant different in contrast to elderly people aged 80-89 at significance level of .05. In addition, to compare between ages 80-89 and 90-99, results revealed that the qualities of life among elderly people in these ranks of age were also significant different at significance level of .05.

**Table 4** Multiple comparisons of different levels in quality of life of elderly people classified by educational level following to Scheffe's Method
*P<.05 MD = Mean Difference (I-J) SE = Std. Error

| Educational level | Primary | | High school | | Diploma | | Under graduated | |
|---|---|---|---|---|---|---|---|---|
| | MD | SE | MD | SE | MD | SE | MD | SE |
| Lower Primary | -2.36 | 1.73 | 6.24 | 2.14 | 11.13 | 4.81 | 8.03* | 2.54 |
| Primary | | | 3.87 | 1.67 | 8.76 | 4.62 | 5.67 | 2.06 |
| High school | | | | | 4.89 | 4.79 | 1.79 | 2.41 |
| Diploma | | | | | | | -3.10 | 4.94 |

From Table 4, the results showed that elderly people who graduated from lower level had the differences in quality of life of elderly people with others graduated from university. However, elderly people with lower primary school level had no differences in quality of life compared to elderly people who had highest study from primary school, high school, diploma level. Quality of life of elderly people who graduated from primary school was not significant different from who were from high school, diploma and university at significance level of .05. Quality of life of elderly people who graduated from high school level was not significant different from who were from diploma and university at significance level of .05. In addition, quality of life of elderly people who graduated from diploma level was not significant different from who were from under-graduated level at significance level of .05, respectively.

**Table 5** Multiple comparisons of different levels in quality of life of elderly people classified by occupation following to Tamhane's Method

| Occupation | Hired | | Agriculture | | Self-employed | | Trade | | Fishery | |
|---|---|---|---|---|---|---|---|---|---|---|
| | MD | SE | MD | SE | MD | SE | MD | SE | MD | SE |
| Unemployed | 5.62* | 1.29 | 2.40 | 1.74 | 3.03 | 4.37 | 3.53 | 1.56 | -5.55 | 6.52 |
| Hired | | | -3.23 | 1.71 | -2.59 | 4.36 | -2.09 | 1.52 | -11.18 | 6.51 |
| Agriculture | | | | | 0.63 | 4.51 | 1.13 | 1.92 | -7.95 | 6.61 |
| Self-employed | | | | | | | 0.50 | 4.45 | -8.58 | 7.73 |
| Trade | | | | | | | | | -9.08 | 6.57 |

*P<.05 MD = Mean Difference (I-J) SE = Std. Error

From Table 5, the results disclosed that quality of life of unemployed elderly people was significant different from the hired elderly people. Conversely, there were no significant differences in elderly people who worked in sectors of agriculture, self-employed, trade, and fishery at significance level of .05. Also, there quality of life of hired elderly people was no significant differences in elderly people who worked in sectors of agriculture, self-employed, trade, and fishery at significance level of .05. Next, quality of life of agricultural elderly people was no significant different from others who worked as business owner or self-employer, trader, and fishermen at significance level of .05. In the same senses, quality of life of the self-employed elderly people was no significant different from others who worked as trader and fishermen at significance level of .05. Finally, quality of life of elderly people who worked as trader was no significant different from others who worked as fishermen at significance level of .05.

**Table 6** Multiple comparisons of different levels in quality of life of elderly people classified by income following to Scheffe's Method

| Income (THB/month) | **5,001 – 10,000** | | **10,001 - 15,000** | | **15,001- 20,000** | | **20,001 - 25,000** | | **25,001 - 30,000** | | **30,001up** | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MD | SE | MD | SE | MD | SE | MD | SE | MD | SE | MD | SE |
| 0 – 5,000 | 7.45* | 1.38 | 4.25 | 2.97 | 7.00 | 3.26 | 6.53 | 3.82 | 6.55 | 3.82 | 7.09 | 6.89 |
| 5,001 – 10,000 | | | -3.24 | 3.11 | -0.50 | 3.38 | -0.96 | 3.93 | -0.94 | 3.93 | -0.41 | 6.95 |
| 10,001 - 15,000 | | | | | 2.74 | 4.28 | 2.28 | 4.73 | 2.30 | 4.73 | 2.83 | 7.43 |
| 15,001- 20,000 | | | | | | | -0.46 | 4.91 | -0.44 | 4.91 | 0.09 | 7.55 |
| 20,001 - 25,000 | | | | | | | | | 0.02 | 5.31 | 0.55 | 7.81 |
| 25,001 - 30,000 | | | | | | | | | | | 0.55 | 7.81 |

*P<.05 MD = Mean Difference (I-J) SE = Std. Error

From Table 6, the results tested by Scheffe's Method revealed that the quality of life of elderly people who were provided income up to 5,000 Baht per month was significant different from elderly people with income 5,001 – 10,000 Baht per month, but there was no significant differences from others with income 10,001 – 15,000, 15,001 – 20,000, 20,001 – 25,000, 25,001 – 30,000 and over 30,001 Baht per month at significance level of .05.

Besides, the quality of life of elderly people who were provided income 5,001 – 10,000 Baht per month was not significant different from others with income 10,001 – 15,000, 15,001 – 20,000, 20,001 – 25,000, 25,001 - 30,000 and over 30,001 Baht per month at significance level of .05.

Moreover, the quality of life of elderly people who were provided income 10,001 – 15,000 Baht per month was not significant different from others with income 15,001 – 20,000, 20,001 – 25,000, 25,001 – 30,000 and over 30,001 Baht per month at significance level of .05.

In the same senses, the quality of life of elderly people who were provided income 15,001 – 20,000 Baht per month was not significant different from other with income 20,001 – 25,000, 25,001 – 30,000 and over 30,001 Baht per month at significance level of .05.

The quality of life of elderly people who were provided income 20,001 – 25,000 Baht per month was not significant different from other with income 25,001 – 30,000 and over 30,001 Baht per month at significance level of .05.

Finally, the quality of life of elderly people who were provided income 25,001 – 30,000 Baht per month was not significant different from other with income over 30,001 Baht per month at significance level of .05.

## DISCUSSION

1. The results of this research implied that even there were the differences of sex; the quality of life of elderly people was not varied by sex in contrast to educational level, occupation, income at significance level of .05. The quality of life of elderly people classified by status, member quantity in family, living conditions and relationships was not different. These results was related to Porntip Siriwanbutr's study (11) elderly people's physical development both male and female was slow down which directly affected to their quality of life. In terms of age, educational level, occupation, and income, these variables also impacted to the quality of life of elderly people. This implied that the age is older, the worse physical domain is worse. Furthermore, the differences in quality of life of elderly people may be followed by educational levels. It was detected that the elderly people who graduated from higher education could access to information channels such as news, health information, than others from lower education. Access of health information based on having higher degree supported the quality of life of elderly people. These results were in accordance with Wanich Suksathan's and Kantapong Prabsangob's research (12) who discussed that the limited health literacy in elderly people was from older age, lower education and income.

In addition, the differences of occupation affected to the quality of life of elderly people, it can see that unemployed elderly people had no score for mobility which was different from the hired elderly people. They

were able to exercise and to have more mobility during working. The way they exercised on job working or mobility is a great occasion to promote quality of life of elderly people. In this regard, due to classification by income, it was another factor to promote the quality of life of elderly people because the elderly people who were provided higher income would have much money so that their power purchasing was better than other with lower income.

2. According to the results of multiple comparison tests following Scheffe's method, the tested variables such as age, educational level and income were critically analyzed in order to investigate the different levels in quality of life. The results informed that the quality of life of elderly people at age 60 – 69 was different from others at age 70 – 79, 80 – 89 and 90 – 99 years old.

Of course, the quality of life of elderly people at age 70 – 79 was discriminated from others who were 90 – 99 years old. It is the same quality of life as elderly people at age 80 – 89 which it was significant difference from others who were 90 – 99 years old at significance level of .05.

Furthermore, due to the variable of educational level, the quality of life of elderly people who graduated from the below primary school level was significant different from whom completed university degree at significance level of .05. According to variable of income, the quality of life of elderly people with income 0 – 5,000 Baht per month was significant different from elderly people with income 5,001 - 10,000 Baht per month at significance level of .05. This is because of the elderly people's physical development as mentioned – the age is older, the physical domain is worse. Also, the education is better; the access to health information to support the quality of life is easier.

3. However, the multiple comparisons following Scheffe's method did not analyze the quality of life of elderly people classified by occupation. It was caused by unaccepting the deviation of those data. Thus, the author chose a multiple comparisons following Tamhane's method instead. The tested results showed that the quality of life of unemployed elderly people was significant different from the hired elderly people at significance level of .05. This can be described that the different occupations directly affected to the quality of life of elderly people.

## RECOMMENDATION

1. Any organization related to elderly people care in Samut Songkhram is able to refer this research as a model or pathway to promote the quality of life of elderly people.

2. Any those are interested in assistance for elderly people and others related to health care programs for elderly people is able to refer this research to organize activities to promote the quality of life of elderly people. However, organizing activities should concentrate base on terms of educational level, occupation, and income. The activities should appropriately adjust for elderly people in each area as well.

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