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Socio-Demographic Determinants of Quality of Life Among Aging Population in Thailand

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Abstract

Thailand is becoming an aged society. It is very important to investigate the effect of Thailand becoming an aged society. It is crucial to examine the impact of socio-demographic factors on quality of life (QoL) for population aging. This study aimed to understand the QoL of older adults aged 60 years or older based on their socio-demographic status. Using the data of 13 Regional Health (RH) of Thailand from 2012-2018. QoL was measured with the Thai version of the WHOQOL-BREF. A total of 400 older adults were selected from each region each year. To analyze the factors affecting the QoL between 2012 and 2018, the linear regression model was used. The results showed that the QoL significantly increases with age for both sexes. The QoL was significantly higher than the overall mean in the married and secured income groups. According to time, the QoL in 2015 was significantly lower than the overall mean. In addition, the groups of adults in Bangkok, lower northeast, southwest, and south of the country showed a significantly lower QoL.

Keywords: Quality of Life, aging, socio-demographic factors, WHOQOL-BREF (THAI)

1. Introduction

Population aging is a global challenge. This is due to an increase in life expectancy and a decrease in fertility rate. In 2022, there were 771 million people worldwide who were 65 years of age or older, accounting for approximately 10% of the global population. The aging population has been growing rapidly and it will reach 16% in 2050 and 24% by 2100 (United Nations World Population Prospects, 2023). It has significant and multifaceted effects on society, economies, healthcare systems, and more. For example, with aging comes a higher demand for healthcare services and treatments for age-related conditions, leading to increased healthcare costs. Healthcare systems face an increased demand for services tailored to the elderly, including specialized care for age-related conditions. This can result in increased demand for mental health services. Governments may need to implement policies and reforms that address the unique needs of an aging population, including healthcare financing, elder care services, and retirement age adjustments.

The aging population in Asia is also expected to increase. The average life expectancy is higher than the world average. While it is true that some Asian countries have relatively high birth rates, it's important to note that this varies significantly across the continent. Countries with higher birth rates may experience continued population growth, while those with lower birth rates will have a more pronounced aging population. As demographic trends can change over time, governments and organizations must have policies in place to address the challenges and opportunities associated with aging populations and birth rates in their respective countries (Długosz & Razniak, 2014).

In Thailand, the aging population is increasing at a rapid rate. The proportion of the population aged 60 years or older is projected to increase from 13% in 2010 to 33% in 2040 (Economic Research Institute for ASEAN and East Asia, 2021). Addressing the impact of a rapidly increasing aging population in Thailand requires careful planning, interdisciplinary collaboration, and a commitment to policies and services that support the well-being and dignity of older individuals while maintaining economic and social stability. This demographic change is a long-term process that requires ongoing attention and adaptation in various sectors of society.

Developing and maintaining the functional ability that enables well-being among the aging population is important for national policy plans. As the elderly population increases, so does the social burden of caring for them. QoL in older age has become a research issue in many disciplines (Ismail et al., 2021). The aging population and their QoL is a complex phenomenon that requires increasing numbers of multidisciplinary studies.

QoL is defined by the World Health Organization as an individual's perception of their position in life in the context of the culture and value systems in which they live and about their goals, expectations, standards, and concerns. It mainly covers health issues, material comforts, personal safety, relationships, opportunities to help and encourage others, socializing, emotions, life satisfaction, and economics (World Health Organization, 2023). QoL and its determinants in an aging society is a primary relevant information for policy-makers.

Studies addressing determinants of QoL have been documented. For example, a study in India found that older age, male, no schooling, without a spouse, lower economic status, and chronic disorder were determinants associated with low QoL scores (Singh et al., 2022). Another study reported that females show a higher QoL than males, QoL depends more on the relationship with family members rather than the type of family alone, financial independence was found to afford better QoL in the elderly, and the elderly living in joint families had better QoL than in nuclear families (Bansal, 2019). A study in Poland found that age determined worse QoL. Drinking alcohol was associated with better QoL and depression determined lower QoL, both were reported as determinants from a study in Spain. Self-reported unhappiness was also related to worse QoL as reported by a study in Finland and Poland. Smoking status determined worse QoL, low levels of physical exercise have been associated with lower QoL, being emotionally affected by health issues, a strong social network, and a comfortable environment were other factors that were associated with higher QoL (Raggi et al., 2016). Therefore, understanding QoL and its determinants in older age is becoming an important issue.

Studies addressing determinants of QoL generally focus on measuring determinants of QoL under particular morbidity conditions, and mental health problems, a few focusing on QoL in the general population. In addition to this, socio-economic factors have been shown to affect QoL. Some factors are commonly associated with QoL but some predictors were specifically associated with QoL in single countries (Raggi et al., 2016). Studies of determinants of QoL in Thailand are almost lacking.

The present study aims to investigate factors affecting QoL and compare the differences in QoL among the elderly who live in each Regional Health (RH) in Thailand. The results of this study can be used as guidelines to promote and improve the QoL of aging in Thailand. As well as being used for the benefit of policy formulation to properly care for the QoL of the aging with further directions.

2. Method

2.1 Setting and Participants

The data used in this study were obtained from RH, Ministry of Public Health, Thailand. There are 77 administrative provinces in 13 RH in Thailand. Generally, each RH included 4-8 provinces (3-6 million people). In 2012-2015 there were 12 RH and in 2016 Bangkok was separated into its own RH (National Health Commission Office, 2015). Participants were adults aged 60 years or older who were resident members in Thailand's provinces from 2012 to 2018.

2.2 Procedure

A sample of 34,800 adults aged 60 years or older were selected based on a quota sampling technique. Four hundred adults per RH were selected from senior club members in each province each year.

2.3 Measures

2.3.1 Outcome Variable

The outcome variable for this study was QoL assessed using the World Health Organization Quality of Life Assessment-Brief Instrument (WHOQOL-BREF). The WHOQOL-BREF is a trustworthy screening tool that has been used extensively and is accepted in all cultures. There are 26 items in this instrument. The 24 items are grouped into four domains that focus on physical, psychological, social, and environmental, and 2 items evaluate overall QoL and health satisfaction. On a Likert scale, each item is rated from 1 to 5, with higher numbers meaning higher QoL. Consequently, the QoL's overall score ranges from 26 to 130. They can be compared to the standards that Thai people have already accepted as appropriate. Scores between 26 and 60 indicate poor QoL, 61 to 95 indicate moderate QoL and 96 to 130 indicate good QoL. (Department of Mental Health Thailand, 2023). In this study, the WHOQOL-BREF-THAI was used to evaluate QoL.

2.3.2 Explanatory Variables

Sociodemographic characteristics included gender, age, marital status, source of income, caregiver, and medical treatment place. Gender and age were grouped into 6 levels (with three levels of age in years: 60–69, 70–79, and 80+). Marital status was categorized as single, married, widowed, and separated or divorced. The source of income was categorized as an elderly allowance, business, and pension or employment. The caregiver was categorized as self-care, spouse, children, and relatives. Treatment place was categorized as sub-district province hospital, government hospitals, and private hospital or clinic. RH and year were also explanatory variables.

2.4 Data Analysis

The total score of QoL is a continuous outcome. Socio-demographic characteristics are categorical determinants. Year and RH are also categorical determinants. Descriptive statistics including the mean of total QoL classified by levels of determinants are presented. Preliminary analysis comprises two sample t-tests or one-way analysis of variance as appropriate were used to compare means for levels of each determinant. Multiple regression was used to model the relationship between determinants and the total score of QoL. Data analysis was performed using R. This study was approved by the research ethics committee for science, technology, and health science (psu.pn.1-003/62), Prince of Songkla University, Pattani Campus.

3. Results

Table 1 shows the socio-demographic characteristics and differences in means of QoL between the groups. There were slightly more women than men who participated in the study; 97% had married status, 88% had spouses being caregivers, 45% had income from an elderly allowance, 40% had income from the business, and 96% used government hospitals for their medical treatment. The means of QoL were significantly different between groups of socio-demographic factors, year, and RH.

Table 1. Means of QoL classified by socio-demographic characteristics, year, and RH.

Determinant	Number	Percent	Mean	SD	p-value
Gender-age group					<0.001
Male					
60-69	7,059	20.3	81.5	14.6	
70-79	6,822	19.6	76.8	12.9	
80+	2,630	7.6	78.1	10.3	
Female					
60-69	7,862	22.6	75.8	11.0	
70-79	7,450	21.4	73.6	10.0	
80+	2,977	8.6	74.5	8.1	
Marital Status					0.018
Single	425	1.2	78.4	11.4	
Married	33,865	97.3	76.7	12.1	
Widow	266	0.8	77.4	10.8	
Divorce	244	0.7	75.8	11.0	
Source of income					<0.001
Elderly allowance	15,507	44.6	68.7	10.3	
Business	13,816	39.7	79.7	7.3	
Pension	5,457	15.7	92.1	6.8	
Other	20	0.1	66.6	6.9	
Caregiver					<0.001
Alone	48	0.1	77.5	12.0	

Table 2. (Continued)

Determinant	Number	Percent	Mean	SD	p-value
Spouse	30,580	87.9	76.8	12.3	
Children	3,803	10.9	76.2	9.7	
Relatives	369	1.1	78.8	11.0	
Treatment place					<0.001
Sub-district province Hos.	226	0.6	68.2	9.9	
Government Hos.	33,260	95.6	76.6	12.1	
Private Hos. or clinic	1,314	3.8	82.4	8.1	
Year					<0.001
2012	4,800	13.8	77.2	10.9	
2013	4,800	13.8	77.6	12.0	
2014	4,800	13.8	78.6	11.3	
2015	4,800	13.8	76.3	11.6	
2016	5,200	14.9	76.1	12.5	
2017	5,200	14.9	75.9	12.5	
2018	5,200	14.9	75.7	13.0	
Regional health (RH)					<0.001
1	2,800	8.0	81.8	11.0	
2	2,800	8.0	81.5	11.8	
3	2,800	8.0	81.4	11.9	
4	2,800	8.0	70.0	11.4	
5	2,800	8.0	71.9	14.0	
6	2,800	8.0	81.0	7.8	
7	2,800	8.0	79.4	9.4	
8	2,800	8.0	80.8	8.1	
9	2,800	8.0	80.7	8.2	
10	2,800	8.0	79.9	7.4	
11	2,800	8.0	70.9	12.1	
12	2,800	8.0	69.7	12.4	
13	1,200	3.4	58.2	3.3	

A multiple regression model was used to identify socio-demographic factors, year, and RH affecting QoL. The model gave an r-squared of 59.4% indicating the proportion of variance of QoL explained by socio-demographic factors, year, and RH. The quantile-quantile (Q-Q) plot of studentized residuals in Figure 1 shows that the model fits well as the residuals in the quantile-quantile (Q-Q) plot of studentized residuals tended to follow a red line.

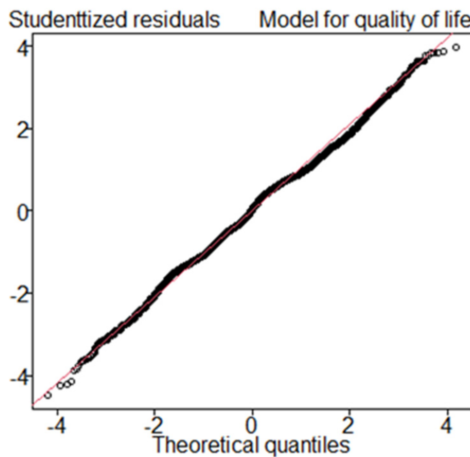

Figure 1. Quantile-quantile (Q-Q) plot of residuals from multiple regression model

Figure 2 shows the confidence interval plots of mean QoL for each factor adjusted for other factors in the model. It should be noted that most of the confidence intervals are very short due to the large sample size in each category resulting in smaller standard error. The overall QoL was 76.8. The QoL significantly increases with age for both sexes and is slightly higher for women than men. The QoL was highest among women aged 80 years or older.

The QoL was significantly higher than the overall mean in the married group. The groups of those who had marital status as divorced had the lowest QoL. The QoL was significantly higher than the overall mean for the groups of those who had the source of income from pension and business.

The groups of those who had used private hospitals or clinics for their medical service had the highest QoL whereas those who had used local sub-district hospitals had the lowest QoL.

According to time, the QoL in 2015 was significantly lower than the overall mean. In addition, the groups of adults in Bangkok, lower northeast, southwest, and south of the country showed a significantly lower QoL.

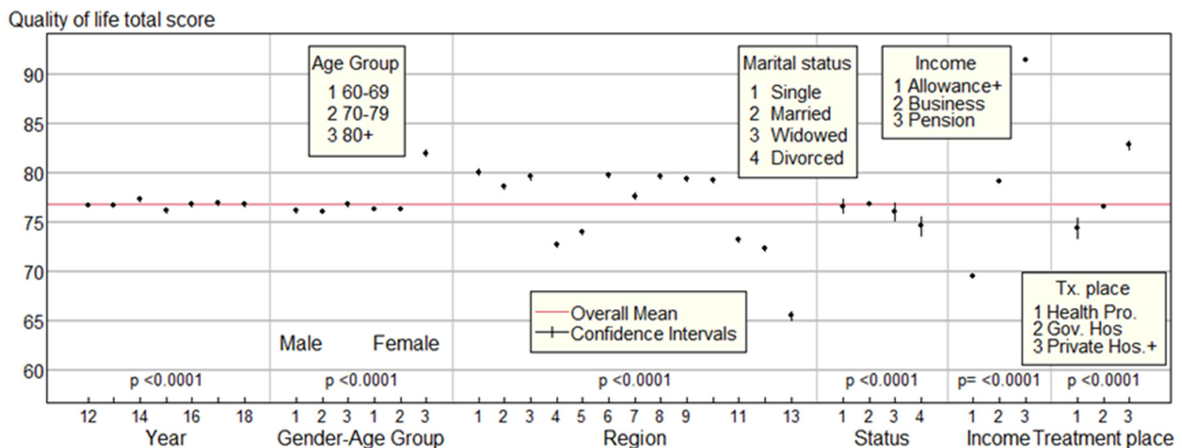

Figure 2. Confidence interval plots of QoL classified by socio-demographic factor levels

4. Discussion

The purpose of this study was to investigate the effects of socio-demographic factors on the QoL of older adults in Thailand from 2012 to 2018. Our results show that the most important factors were gender-age group, marital

status, and income. A slight difference in QoL from 2012-2018 was observed. Differences in QoL among RH were also presented.

Our results show that age determined increases QoL for both sexes, especially among women aged 80 years and over. One reason for this might be that the aging in this period were born in an age without technological development and had a simple lifestyle. Particularly in rural areas, chemicals are not utilized and most occupations are still in agriculture. They continued to coexist primarily with nature at that time. Additionally, compared to other age groups, the population aged 80 years and over in Thailand receives the highest subsistence allowance from the government (Saksunan, 2017) and has the most caregivers (Plodpluang et al., 2017).

The relation between individual QoL and age is controversial. In some studies, age was found among the predictors of decreased QoL (Brett et al., 2019; Qadire et al., 2023; Samadarshi et al., 2021; Gobbens & Remmen, 2019), most likely as a result of the effect of chronic conditions in older individuals, while such a relationship was not confirmed in other studies (Elisi et al., 2017). The characteristics of the elderly women aged 80+ in this study were that they had less employment experience and had lived for their families rather than for themselves. Therefore, it is necessary to study in more detail, the relationship between age and the QoL of elderly women in Thailand using large samples.

Income has been sometimes used as a way to address socioeconomic status inequalities connected to QoL. Our findings show that being pensioners who have regular income and owning business are related to increased QoL compared to those who have senior allowance (at most 25 USD/month) from the government (Micali et al., 2019), (Santhalingam et al., 2022) (Panita et al., 2021). Similar results were found among participants in the study of QoL of pensioners in India (Charles & Kulandai, 2020), as well as the study of QoL among older adults covered by various pension funds in Iran (Sadighiyan et al., 2021). The finding of many previous studies is that QoL is higher among the elderly who are employed (Samadarshi et al., 2021; Akhtari-Zavare et al., 2018; Sala et al., 2022).

Marital status was found that related to QoL same as the study of impacts of age and marital status on the elderly's QoL in an elderly social institution in Indonesia (Daely et al., 2022) and compared the QoL between single and remarried elderly in Iran (Moudi et al., 2020). In contrast to the study of QoL among patients with colorectal cancer in East Azarbijaban, it was found that it was not related to QoL (Laghousi et al., 2019).

Year and RH, both factors were found to be related to QoL. It was shown that there was a tendency for a decline in the QoL scores from 2012 to 2018. For many reasons, a survey of the economic and social conditions of households claims that the financial crisis caused family spending to rise between 2011 and 2017. However, income will improve in 2021 because of a variety of government-subsidized support projects (National Statistical Office [NSO], 2023). A report from the Pollution Control Department found that the amount of solid waste generated tended to increase from 2012-2019 (Pollution Control Department, 2023) and a report from the prevalence of surveillance diseases tends to rise from 2012 to 2019 and then dramatically decline from 2020 to 2021 (Department of Disease Control, 2022).

When considering each RH, there was only one in the poor QoL group (score 26-60) (Sirisuwan et al., 2021) because people in that area are stressed brought on by the high cost of living and other expenses associated with residing in a large city compared to other area. A study of household spending patterns was carried out. The average monthly household expenditure of people living in Bangkok was determined to be 870 USD, in contrast to the national average household expenditure of 592 USD (NSO, 2023).

Taken as a whole, our results pointed out similarities and differences of determinants with other research. However, it serves as a guide to improve elderly people's QoL in a variety of ways. This leads to elderly people having an excellent QoL, being happy, satisfied, and having the ability to live in society.

5. Conclusions

To summarize, this study found that age income, and married status are important factors affecting the QoL. To improve the QoL of older adults, it is necessary to understand the characteristics of the elderly and to create a suitable environment for them. This study has some limitations. Health-related information, illnesses, and diseases are not included. Therefore, future research should collect and analyze these data as well.

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Informed Consent

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Data Availability Statement

The data that support the findings of this study are available on request.

Competing Interests Statement

The authors declare that there are no competing or potential conflicts of interest.

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