Factors Influencing the Quality of Life (Qol) Among Thai Older People in a Rural Area of Thailand

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Abstract

Background: The population prevalence of older people has been growing worldwide. Quality of Life (QoL) among older people is a significant public health concern. Hence, this study aimed to assess level of QoL and factors influencing QoL among rural Thai older people.

Methods: The study was undertaken in Phayao Province where is one of the top ten provinces with the highest index of Thai aging. A district in this province was purposively selected to be the study area and the quota-sampling technique was used for sample collection, totally 400 older people participated according to Taro Yamane. The WHOQoL-Old was employed to interview elderly QoL. Multivariate linear regression was performed to determine the factors influencing QoL among the older people.

Results: Over two-thirds of older people (68.5%) had QoL at fair level. The vast majority (96%) had high scores for Activity Daily Living (ADL). Approximately one-fifth (20.5%) reported current smoking and 31.7% reported ever drinking during previous year. Following univariate analysis, nine factors – gender, age, education, working, income, present illness, drinking, ADL, and participating in elderly club were identified as being significantly associated with QoL (P <0.05). Multivariate analysis revealed four factors predictive of QoL among elderly: ADL, income, alcohol drinking, and present illness (P < 0.01).

Conclusion: Physical function, health status and financial were the predictor of QoL among elderly. Noticeably, drinking was one predictive factor of QoL but only among moderate drinkers. Hence, healthy life style should be considered as key areas in attempts to promote QoL among elderly people.

Keywords: Influencing factors, Quality of Life, Elderly

Introduction

Due to increase in life expectancy and advances in medical technology, the population prevalence of older people has been growing worldwide. The proportion of persons aged 60 yr and over is expected to double from 2007 to 2050, and their actual number will more than triple, reaching 2 billion by 2050 (1). Asian countries have witnessed the largest increase in older people as a proportion of their total population than countries in other continents and over 50% of all older people in the world actually live in Asia (2). Thailand, a middle income country and becoming aging society, the national statistics show that the proportion of persons aged over 60 yr in Thailand now accounts for 13 percent of the total population (3,4). Ageing society means that people would be at an increased risk of developing debilitating diseases and functional disability and may be expected to suffer

with the problems of dependency and disability leading to increased burden to the society. In Thailand, the combination of the aging population and higher unemployment rate together played a major impact upon the elderly. These elderly were forced to face many challenges such as: their health status, healthcare service utilization, social welfare, lifestyles and the overall quality of life (5). However, the elderly are neither a vulnerable group nor a social burden, but should be part of the social development resources in a society. The elderly should be entitled to recognition and support by the family, community and the state so as to lead a valuable life with dignity and sustain their healthy and living standards as high as possible (6). Quality of life can be one indicator of healthy life in the older age as World Health Organization defined quality of life as "an individual's perception of life in the context of culture and value system in which he or she lives and in relation to his or her goals, expectations, standards and concerns" (7). According the challenge in the 21st century is to delay the onset of disability and ensure optimal quality of life for older people (8). In 2004, the WHOQOL working group has developed quality of life standards for people aged 60 and above which were tested in several countries (9). However, there are very few studies of the QoL in older people using WHOQOL-Old (10) in Thailand. Therefore, there is a need to assess the quality of life status among the elderly people in Thailand.

In northern Thailand, less work has been done to reveal quality of life among rural elderly population. Therefore, the current study aimed to assess the level of QoL and to explore factors influencing QoL among rural Thai older people in Phayao province, where was identified as one of top ten provinces with highest index of Thai aging in 2014 (3). This may serve as baseline information and help in planning the services for elderly population in rural Thailand.

Materials and Methods

This cross-sectional study was conducted among older people (≥ 60 years) who were living in Pha-

yao Province, the northern rural area of Thailand. The formula by Taro Yamane (11) was used for the calculation sample size, by using 60,261 elderly (12) for calculating a required sample size of 400 older people. Muang district was selected to be the study area, since it had the highest number of older people in the region, and within this district, we chose the sub-district of Bantom since it had the highest number of older people of all sub-districts in Muang district. Quota sampling was used to calculate the number of participants from 9 villages and random sampling was used to recruit participants in each village. Informed consent was obtained from all participants.

The study was given ethical approval by the Ethics Review Committee for Research Involving Human Research Subjects, Health Science Group, Chulalongkorn University, Thailand.

The researcher scheduled one-day training on a structured interview questionnaire for five trained nursing students. The survey was conducted in July-November 2012, using face-to-face interviews, which took approximately 20 minutes each. The questionnaire included closed ended questions in four parts:

Part I: Socio-demographic characteristics.   Part II: Activity Daily Living (ADL), the 10 ADL items was comprised of feeding, transferring, toilet use, grooming, bathing, walking on level surface, ascending and descending stairs, dressing, controlling of both bowels and bladder. The cut off point for severe disability was less than 12 points (13, 14).

Part III: Health status that includes history of personal check up, personal illness, health problems, health services from the health facility and the healthcare card.

Part IV: 4) World Health Organization Quality of Life questionnaire-version for older people (WHOQOL-OLD) (9), the 24 QoL items with rating scale, was composed of 6 facets: sensory abilities, autonomy, past-present, and future activities, social participation, death and dying. Back translation was used to translate those questionnaires from English to Thai language, then it was validated by three experts. Its reliability was 0.88. The overall score starts from 24-120 points, and it is

interpreted into three categories: low QoL (24-55 scores), fair QoL (56-88 scores) and high QoL (89-120 scores).

Statistical analysis was undertaken using independent *t*-test to test the difference between means of QoL from two separategroupsof the socio-demographic variables. In addition, Pearson correlation was used to test the relationship between the continuous socio-demographic variables and QoL. Meanwhile, multivariate linear regression analysis was used to determine factors predictive of QoL

among older people. Statistical significance was set at a *P*-value of < 0.05.

Results

The general characteristics of the study participants are shown in Table 1. Over two-thirds (68.5%) had QoL at fair level, followed by high level (29.5%) and low level (2%) as shown in Table 2.

Table 1: Socio-demographic characteristics of elderly in Phayao Province, Thailand (n=400)

Socio-demographic factors	n	%
Gender		
male	152	38.0
female	248	62.0
Age (min=60; max=97; mean=71.9; SD.=8)		
60 -79	323	80.8
≥ 80	77	19.2
Education		
Primary school	390	97.5
Higher than primary school	10	2.5
Working		
Not working	297	74.3
Working	103	25.7
Income, US$ per month		
≤ 100	347	86.7
> 100	53	13.3
Present illness		
No	136	34
Yes	264	66
- Hypertension	160	40
- Musculoskeletal diseases	72	18
- Diabetes	57	14.3
Alcohol consumption (within last year) Never consumed	273	68.3
Has consumed	127	31.7
Participating in elderly club		
No	231	57.7
Yes	169	42.3
Activity Daily Living (ADL)		
Low level (0-11 scores)	16	4
High level (≥ 12 scores)	384	96

Table 2: Number and percentage of the Quality of Life among elderly in Phayao Province (n=400)

Quality of Life	n	%
Low level) 24 – 55 scores(	8	2.0
Fair level) 56 – 88 scores(	274	68.5
High level) 89 – 120 scores(	118	29.5

From the univariate analysis, the following nine factors were significantly associated with Quality of Life among elderly people in Phayao Provinces: – gender, age, education, working, income, sickness, drinking, daily activities, and club member (*P*<0.05) as Table 3-4.

Results from multivariate linear regression analysis revealed four factors predictive of QoL among older people: ADL, income, drinking, and present illness as shown in Table 5. However, the five factors gender, age, education, working, and participating in elderly club was not associated with QoL among elderly.

Table 3: The difference between means of QoL from two separategroupsof the sociodemographic variables using independent *t*-test (n=400)

Socio-demographic factors	Value n (%)	P-values
Gender, n (%)		0.028
male	152 (38)	
female	248 (62)	
Education, n (%)		0.001
Primary school or lower	390 (97.5)	
Higher than primary school	10 (2.5)	
Working, n (%)		< 0.001
Not working	297 (74.3)	
Working	103 (25.7)	
Present illness, n (%)		0.005
No	136 (34)	
Yes	264 (66)	
Alcohol consumption, n (%)		< 0.001
No	273 (68.3)	
Yes	127 (31.7)	
Participating in elderly club member, n (%)		0.011
No	231(55.7)	
Yes	169 (42.3)	

Table 4: The relationship between the continuous socio-demographic variables and QoL using Pearson correlation (n=400).

Socio-demographic factors	Value	P-values
Age, Correlation coefficient (r)	-0.151	0.002 (b)
ADL, Correlation coefficient (r)	0.345	< 0.001 (b)
Income, Correlation coefficient (r)	0.219	< 0.001 (b)

Table 5: Factors predictive of Quality of Life among elderly in Phayao Province (n=400) using multivariate linear regression analysis

Factors	B	Beta	t	P-value
ADL	2.210	0.320	7.051	< 0.001
Income	0.001	0.183	4.042	< 0.001
Drinking	4.027	0.159	3.504	0.001
Present illness	-2.538	-0.102	-2.247	0.025

Discussion

Findings revealed that more than half of the respondents were female (62%), as the ratio between female male among Thai elderly was 1.3:1 (15). Mostly elderly (97.5%) finished primary school or lower, this in line with several studies in South East Asia countries (16). Three quarters of respondents (74.3%) were not working, since most of them stayed with their family and their children looked after them. 71.3% of them had 1 to 3 people living in the household. The majority of respondents (86.7%) reported low monthly incomes (less than 100 US.$) and nearly half (43.5%) felt that their incomes were not sufficient. The main source of income was the government social welfare system, followed by their children. Two thirds of respondents (66%) had a present illness, with 40% of them having hypertension. This in line with the WHO reported the main health burdens for older people are from non-communicable diseases (17). 31.7% reported ever drinking within the previous year and among those, 62.5% reported average alcohol consumption was 0.5-1 standard drinks per episode, which was considered as moderate drinkers (18). Over a half of them (57.75%) participated in elderly club. The vast majority (96%) had high level of Activities Daily Living (ADL) scores, although the respondents were not in the oldest elderly group (average age =71.9 year (SD.=8)), and hence were still able to help themselves for their daily life activities.

In term of QoL measured by the WHO-QOL Old, the average overall QoL was 'fair'. More than two thirds of older people had QoL at fair level, followed by high level, and very few were in low-level. This is consistent with the previous finding using the same tool, WHO-QOL Old questionnaire to assess QoL among 400 elderly people in a rural community in the Northeast of Thailand (5). Multivariate analysis revealed four factors predictive of QoL among older people: Activity Daily Living (ADL), income, drinking, and present illness. ADL was one predictive factor for QoL among elderly, which is consistent with study by

Somrongthong et al. (5), which found that disability in activity of daily living was significantly affected to QoL among older people. This finding is also similar to other studies that disability or less ADL to be statistically associated with QoL (19-21). Income was also related to QoL, similar to other research which found that poor financial status was related with poorer psychological QoL and total QoL score (22).

Drinking was one factor to be predictive of QoL among elderly in Pahyao Province. Accorging to Wenjie et al. (23), occasional and moderate alcohol use were associated with lower mortality compared to never drinkers (RR=0.72, CI=0.63-0.83). From this study, there was 31.75% of elderly reported ever drinking within the previous year and most (62.5%) of those reported an average alcohol consumption was 0.5-1 standard drink per episode considered as moderate drinkers. Hence, it was supported that moderated drinking among elderly was one of factor influencing QoL. In addition, those elderly may be considered as 'social drinkers', which is drinking three or less measured drinks (or a blood alcohol level of up to 0.05%) (24). There are three main reasons that people drink in a social situation: relaxing, social norm and social lubricant (24). Possibly that social drinking caused them to have better QoL than those who were lonely.

Health problems were also linked with QoL. This study showed that present illness of older people was a protective factor for QoL, which can be referred that elderly who had present illness would had lower QoL than those who were healthy. This study consistent with study by Miranda (25) that the QoL among elderly patients who suffered from chronically diseases can be affected by multi-morbidity in the physical domain and probably also in the psychological domain.

Some limitations of this study should be addressed that the data collection used face-to-face interview, there might be some information bias. The study was asking older people to recall memories in order to measure some variables, so that there might be a recall bias. In addition, the sample was not representative of the whole province, and therefore the study findings may not be gen-

eralized to other areas. Therefore, future studies should involve more districts and elderly from different districts of Thailand to get more consolidated evidence.

This study brought to light some of the predictive factors of QoL among elderly in Phayao province. Four risk factors were predictive of QoL: alcohol drinking, physical function, health status, and financial were the predictors of quality of life among elderly.

Noticeably, drinking was one of the predictive factors of QoL but only among moderate drinkers. Hence, empowering elderly in physical activities, healthy life style and regular health care check-ups should be considered in attempts to promote quality of life of elderly people.

Ethical considerations

Ethical issues (Including plagiarism, informed consent, misconduct, data fabrication and/or falsification, double publication and/or submission, redundancy, etc.) have been completely observed by the authors.

Acknowledgment

References

1. United Nations (2002). Global Issues: Ageing. *www.un.org/en/globalissues/ageing/index.shtml.*
2. World Health Organization (2002). Ten facts on ageing and the life course.Available from: *www.who.int/features/factfiles/ageing/ ageing_en/index3.html.*
3. Office of the National Economic and Social Development Board (2012). *The expectation of the number Thai population in 2010-2014.*
4. UNFPA THAILAND (2006). *Population aging in Thailand: Prognosis and policy response.* Bangkok, pp.: 2-3.
5. Somrongthon R, Wongchalee S, Yodmai K, Kuhirunyaratn P, Sihapark S Mureed S (2013). Quality of Life and health status among Thai elderly after economic crisi, Khon Kanen province, Thailand. *Eur J Sci Res,* 112(3): 314-24.
6. The Ministry of Social Development and Human Security Thailand (2009). The 2 National Plan on The Elderly 1 Revised of 2009 st (2002-2021). Available from*: www.oppo.opp.go-.th/info/OlderPlan2(Re52)_EN.pdf.*
7. World Health Organization (1996). WHOQOL-BREF: Introduction, Administration, Scoring and Generic Version of the Assessment. Program on mental health. Geneva, WHO. *www.who.int/mental_health/media/en/76.Pdf.*
8. Mohapatra SC, Gambir IS, Singh IJ, Mishra NK (2010). Nutritional status in elderly people of Varanasi district. *Indian J Prev Soc Med,* 40(3): 152-56.
9. Power M, Quinn K, Schmidt S, WHOQOL-OLD Group (2005). Development of the WHOQOL-Old module. *Quality of Life Research,* 14: 2197-214.
10. World Health Organization (2004). *WHO-QoL Old manual.* Copenhagen: WHO European office, pp.: 551-58.
11. Yamane Taro (1970) *Statistic: An Introductory Analysis.* Tokyo : Harper International Edition, pp.: 886-87.
12. Department of Provincial Administration, Thailand (2010). *Provincial population Statistic.*
13. Challis D, Mozley CG, Sutcliffe C, et al. (2000). Dependency in older people recently admitted to care homes. *Age and Ageing,* 29(3): 255-60.
14. Jitapunkul S, Kunanusont C, Phoolcharoen W, Suriyawongpaisal P, Ebrahim S (2003). Disability-free life expectancy of elderly people in a population undergoing demographic and epidemiologic transition. *Age and Ageing,* 32(4): 401-05.
15. Ministry of Interio [MOI] (2010). Department of Provincial Administration, Thailand. Available from: *www.dopa.go.th/.*
16. UNESCO (2010). *Reaching the Marginalized.* EFA Global Monitoring Report. United Nations Educational, France, pp.: 7.

17. World Health Organization (2011). *Global status report on non-communicable diseases 2010.* Geneva: World Health Organization, pp.: 1-2.
18. U.S. Department of Agriculture and U.S. Department of Health and Human Services (2010). *Dietary Guidelines for Americans.* 7th ed. US Government Printing Office, Washington, pp.: 30-2.
19. Gunaydin RK (2011). Determinants of quality of life (QoL) in elderly stroke patients: a short-term follow-up study. *Arch Gerontol Geriatr*, 53(1): 19-23.
20. Lasisi AG (2010). Disability and quality of life among community elderly with dizziness: report from the Ibadan study of ageing. *J Laryngol Otol*, 124 (9): 957-62.
21. Donmez LG (2005). Disability and its effects on quality of life among older people living in Antalya city center, Turkey. *Arch Gerontol Geriatr*, 40(2): 213-23.
22. Weerasak MPA, Somboon I, Doojpratana P (2008). Quality of life of the community base patients with mild cognitive impairment. *Geriatr Gerontol Int*, 8: 80-85.
23. Wenjie S, Schooling M, Chan WM, Ho KS, Lam TH, Leung GM (2009). Moderate alcohol use, health status, and mortality in a prospective chinese eldely cohort. *Alcoho, Health Status and Mortality,* 19(6): 396-03.
24. Vaden Health Centre Stanford (2011). What is social drinking?. Available from: *vaden.stanford.edu/health_library/alcoholSocialDrinking.htm.*
25. Miranda de Nóbrega TC, Jaluul O, Machado AN, Paschoal SMP, Jacob Filho W (2009). Quality of life and multimorbidity of elderly outpatients. *Clinics,* 64(1): 45-50.