QUALITY OF LIFE IN THE ELDERLY OF PHAYAO PROVINCE, NORTHERN THAILAND

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Abstract. With increasing numbers of elderly population worldwide, quality of life (QOL) among this population group has become a significant public health concern. A cross-sectional study using a Thai version of WHO quality of life-BREF (WHOQOL-BREF THAI) test to assess QOL and influencing factors among the elderly (≥60 years of age, n = 622) was conducted in three districts of Phayao Province, northern Thailand from September to November 2018. Replies to the questionnaire indicated overall QOL at a fair level (based on assessment: poor, fair or good). Stepwise multiple regression analysis revealed membership of a senior citizen club as an independent positive QOL factor, while age, need of care and chronic health problems were independent negative factors. These findings should be of assistance to family members, healthcare professional and social workers in understanding and meeting the problems and challenges confronting the elderly population in Phayao Province.

Keywords: elderly population, northern Thailand, predictive factor, quality of life

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INTRODUCTION

The proportion of the world elderly population (≥60 years of age) is increasing (Prasartkul, 2019), and Thailand is no exception, with the elderly projected to reach 30% of the country population by 2035 (Knodel *et al*, 2015). This will impact public health and social welfare, as well as Thailand national development goal of progressing from an agricultural to industrialized nation (Prasartkul, 2019).

As people become older, their physical and mental health tend to deteriorate, leading to a decline in the quality of life (QOL). Improvement in QOL forms a key part of the 12th National Economic and Social Development

Plan and the National Public Health Development Plan for the years 2017-2021. QOL can be assessed in terms of (i) daily living, (ii) physical health, (iii) mental health, (iv) society, (v) economy, and (vi) environment (Anonymous, 1998). World Health Organization (WHO) has divided a QOL (WHO QOL-BREF) test into four components consisting of questions on physical and psychological health, social relationship, and environmental situation (WHO,1996). A Thai version (WHO QOL-BREF THAI) (Mahatnirunkul *et al*, 2002) has enabled to identify statistically significant parameters impacting QOL of Thai elderlies, namely, age, gender, education, current employment, health status and perception, and family relationship (Seangpraw *et al*, 2019). Predictive factors of QOL are active daily life (ADL) style, income, alcohol consumption, and presence of illness (Hongthong *et al*, 2015).

In 2018, Phayao Province was identified as one of the top ten provinces with the highest proportion of elderly population (Prasartkul, 2019). People of Phayao Province are composed of a variety of ethnic groups, each with its own unique life style. QOL information for Phayao Province has been limited, insufficient and, in particular, not up-to-date regarding problems and needs of the elderly, the majority of whom have less formal education compared to other adult age groups and are engaged in the agriculture sector (MSDHS Office of Technical Promotion and Support, Region 10, 2018), factors which contribute to their rapid physical deterioration and lack of preparations for problems confronting the aged. A previous study conducted on QOL of the elderly in Phayao Province reported a QOL of a fair level and predictors of QOL were income, daily activity, alcohol consumption and present illness (Hongthong *et al*, 2015). Here, QOL and predictive factors of the elderlies among the various ethnic groups in Phayao Province were determined. The findings should serve as baseline data for development of programs to improve QOL and prepare long-term care services geared for the senior population of rural Thailand.

MATERIALS AND METHODS

Study design and recruitment of participants

A cross-sectional study was conducted to assess QOL and its associated factors among the elderly in three districts, Muang (representing an urban community), Chiangkham (semi-urban community), and Phusang (rural community), of Phayao Province, northern Thailand during September to November, 2018. Inclusion criteria were (i) ≥60 years of age, (ii) residing in Phayao Province for at least 6 months, and (iii) being able to converse in Thai. Exclusion

criterion was clinically diagnosed and registered as a disabled person.

Sample size was calculated using Daniel's formula (Daniel, 1995) from a previous study (Jiandon *et al*, 2011), arriving at a minimum number of 592 subjects plus 5% to compensate for incomplete data and withdrawal from the study.

Research protocol was approved by the Institutional Review Board, University of Phayao (approval no. 3/033/60). Prior written consent was obtained from each participant, who was informed all data collected were confidential, name was not recorded and participant could withdraw from the study at any time.

Questionnaire employed

A 2-part questionnaire was employed in a face-to-face interview by a member of the research team. The first part collected demographic profile, health status and need of care; and the second part was a Thai version of WHO quality of life-BREF test, WHOQOL-BREF THAI (Mahatnirunkul *et al*, 2002), consisting of 26 items with 4 domains, namely, physical, psychological, social relationship, and environmental, with scores ranging 26-130 points and a QOL grading system where <61 points is defined as poor, 61-95 points as fair and >95 points as good. The questionnaire was examined for content validity by three qualified experts in health behavior, public health, and gerontological nursing. The questionnaire was pre-tested on 30 elderly subjects living in another community, with a Cronbach's alpha index of (acceptable) 0.84 (Streiner and Norman, 1995). Interview was carried out in the participant's home and lasted an hour.

Statistical analysis

Descriptive statistics are used to describe socio-demographic characteristics and QOL level of participants. An independent t-test was performed to analyze difference between mean QOL score and each socio-demographic characteristic, followed by stepwise multiple regression to identify independent predictive factors of QOL. A p-value <0.05 is considered statistically significant.

RESULTS

Socio-characteristics of participants

Participants (n = 622) were 69 ± 8 (mean ± SD) years of age, with 61.0% females, 57.6% belonging to Muang ethnic group, 70.4% married, 71.5% having completed a primary school level education, 56.3% working (21.9% in agriculture, 12.4% laborer,10.7% housewife, 8.4% trader and 2.9% retired government official) and had an average (± SD) monthly income of 2,258 ± 3,360 THB (THB 33 = USD 1) (Table 1). Nearly

50% of the participants suffered from some type of chronic diseases [hypertension (34.9%), diabetes mellitus (9.0%) and gout (3.5%)], 97.4% reported need for care and 75.9% belonged to a senior citizen club (Table 1).

Participants QOL

Overall QOL of the participants was graded as fair, and overall QOL level in each of the four domains, namely, physical, psychological, social relationship, and environmental, was considered fair (Table 2).

Predictive QOL factors

Among the 10 socio-demographic characteristics surveyed (Table 1), stepwise multiple regression analysis of independent parameters revealed

Table 1

Socio-demographic profiles of participants from Phayao Province, northern Thailand (September – November 2018)

Characteristic	Number (%) (n = 622)
Gender	
Male	241 (38.7)
Female	381 (61.3)
Ethnic group	
Muang	358 (57.6)
Lue	139 (22.3)
Lao Isan	125 (20.1)
Age, years[a]	
60-69	397 (63.8)
70-79	151 (24.3)
80-89	60 (9.6)
≥90	14 (2.3)
Education	
No formal schooling	91 (14.6)
Primary school	445 (71.6)
High school level and higher	86 (13.8)

Table 1 (cont)

Characteristic	Number (%) (n = 622)
Marital status	
Married	438 (70.4)
Widowed/divorced/separated	160 (25.7)
Single	24 (3.9)
Occupation	
Unemployed	272 (43.7)
Farmer	136 (21.9)
Laborer	77 (12.4)
Housewife	67 (10.7)
Trader	52 (8.4)
Retired government official	18 (2.9)
Income (THB/month)[b]	
≤3,000	521 (83.8)
3,001-6,000	41 (6.6)
6,001-9,000	18 (2.9)
>9,001	42 (6.7)
Membership of a senior citizen club	
Yes	472 (75.9)
No	150 (24.1)
Need of care	
Yes	605 (97.3)
No	17 (2.7)
Health problem	
Yes	325 (52.3)
No	297 (47.7)

[a]Mean ± SD = 69 ± 8 years; [b]Mean ± SD = 2,258 ± 3,360 THB (THB 33 = USD 1).

Table 2

Quality of life (QOL) level of participants from Phayao Province, northern Thailand (September - November 2018)

Domain	QOL score[a] (mean ± SD)	QOL level[a] (score)	Number (%) (n = 622)
Physical	22 ± 4	Poor (7-16)	51 (8.2)
		Fair (17-26)	500 (80.4)
		Good (27-35)	71 (11.4)
Psychological	19 ± 3	Poor (6-14)	48 (7.7)
		Fair (15-22)	504 (81.0)
		Good (23-30)	70 (11.3)
Social relationship	9 ± 2	Poor (3-7)	89 (14.3)
		Fair (8-11)	424 (68.2)
		Good (12-15)	109 (17.5)
Environmental	26 ± 5	Poor (8-18)	38 (5.8)
		Fair (19-29)	428 (68.8)
		Good (30-40)	158 (25.4)
Overall	83 ± 13	Poor (26-60)	41 (6.6)
		Fair (61-95)	469 (75.4)
		Good (96-130)	112 (18.0)

[a]WHO QOL-BREF THAI test (Mahatnirunkul *et al*, 2002)

membership of a senior citizen club was a positive QOL predictor, while age, need of care and health problem were negative QOL predictors, accounting for 33.4 % of variance of QOL (Table 3).

DISCUSSION

Thai society in the northern region of the country is largely based on kinship that leads people to depend on each other in such social activity as maintenance of welfare rights of the elderly members (Vaseenon, 2006), which constitute part of the national policies on supporting and promoting medical services and public health, education, career promotion and appropriate occupations (Prasartkul, 2020). Thus, northern Thai peoples are

Table 3

Predictive factors of quality of life of participants (n = 622) from Phayao Province, northern Thailand (September - November 2018)

Predictive factora	B	Beta	t	p-value[b]
Age	-0.290	-0.178	-5.285	<0.001
Membership of a senior citizen club	12.567	0.932	0.451	<0.001
Need of care	-5.727	-1.001	-5.723	<0.001
Health problem	-2.901	-0.106	-3.180	<0.002

[a]A stepwise multiple regression was performed to identify independent predictive factors: constant = 95.13, R^2 = 0.334

[b]Significant at p <0.05

B: unstandardized coefficient; Beta: standardized coefficient; t: t-test index

active in promoting self-development, creating networks and participation in social activities, which have led to the elderly population gaining rights to treatment benefits and access to medical and public health services (Prasartkul, 2020).

Thus, it is not surprising that the participants reported their overall QOL as being at a fair level. Stepwise multiple regression analysis revealed one independent parameter positively impacting QOL (membership of a senior citizen association) and three independent negative parameters (age, need of care and health problems).

Chaosuansreecharoen and Chaosuansreecharoen (2016) reported a higher frequency of participation in clubs for older adults in three southern border provinces of Thailand is strongly related to higher QOL levels. Similarly, in the Uniflor municipality of the state of Parana, Oliveira *et al* (2016) observed elderlies who participated in social groups had better QOL scores in social and intimate domains. Thus, families and communities should recognize the value of associations for the elderly in maintaining the well-being of this vulnerable group. In Phayao Province where such clubs already exist, residents should ensure their older members actively participate in these clubs and should cooperate in maintaining and providing financial support for these associations.

Age is one of a number of indicators in determining one's self-care ability (Orem, 1980). In a recent study

conducted in a rural area of Northern Thailand, Seangpraw *et al* (2019) noted the older their subjects the lower their average QOL scores. Aging is accompanied by decline in physical and cognitive functions and older individuals will depend more on others to assist in carrying out their daily tasks and social activities, thereby affecting their self-confidence and self-esteem. Thus, family and health care staff should cooperate in supporting and encouraging older members to become more independent.

Problems related to the needs of care of the elderly in Phayao Province are complex. The elderly in general have a lower level of cognitive ability, higher occurrence of depression, and greater need for financial and psychological support (Weiangkham *et al*, 2014). In families with younger members infected with HIV-AIDS, older members must take on the additional burden of care and expenses. These factors compromise the elderlies' ability of self-care and acerbate their financial and psychological problems. In these situations, other family members, healthcare professionals and social workers must offer assistance both psychological and physical (Pramesona and Taneepanichskul, 2018). Healthcare providers and social workers in Phayao Province should give priority to the problems of the elderly and accord appropriate medical attention and social support to raise health-related QOLs.

Common health problems among participants in the present study still were previously reported (Hongthong *et al*, 2015). However, in the elderly, chronic diseases can lead to poor control of movement and limit routine performance of daily activities, resulting in emotional distress and negative thoughts and feelings (DiBonaventura *et al*, 2012). Thus, empowering older adults to take care of themselves through physical activities, healthy life styles and regular medical check-ups should benefit to promote good QOL.

The strength of this study was that it was community-based. However, there were several limitations: firstly, the process of data collection using face-to-face interviews may have led to recall bias; secondly, participants were not representative of the whole province; and thirdly, each district has distinct ethnic group with its own particular life style, which were not reflected in the generalized findings.

In summary, the study reveals a quality of life at a fair level among adults 60 years of age and above surveyed in three districts representative of urban, semi-urban and rural communities in Phayao Province, northern Thailand. Independent quality of life positive factor was participation in an

association for older members, while independent negative factors were age, need of care and chronic health problems. These findings should be assistance to family members, healthcare professionals and social workers to develop programs and means of assistance to improve the quality of life of the elderly population in their communities that is increasing as Thailand becomes an aging nation.

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