

Original Research Article

Health status and mental health among elderly in rural, Thailand: a community based cross-sectional study

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ABSTRACT

Background: The transition to an aging society in Thailand over the past several years has had significant impacts across various sectors, include the quality of life for the elderly, health and mental health problems, and the need to expand healthcare services. Therefore, it is essential to investigate the health and mental health status of the elderly in Thai society.

Methods: A community based cross-sectional study was conducted to assess health status and mental health among elderly rural areas. A total of 158 samples were collected from the district of U Thong, Suphan Buri province during August and September 2023. Data were collected using the Basic Geriatric Screening (BGS), and Thai Mental Health Indicators version 2007 (TMHI-15) questionnaires. The demographic characteristics questionnaire was also applied. Descriptive statistics were utilized for data analysis.

Results: Out of a total of 158 samples, 65.2% were female. The mean age of the participants was 72.2±8.5 years. The prevalence of chronic diseases among the participants was 69.0%. Nutritional status assessment revealed that 57.0% of the participants were overweight or obese based on BMI. Disability data indicated that 10.1% of the participants had hearing impairments, 63.9% had visual impairments, and 71.5% had oral health problems. Overall, 8.2% of the elderly had limitations in activities of daily living, and 19.6% experienced poor mental health.

Conclusions: The result showed that important health problems in elderly were non-communicable diseases, disability, and mental health.

Keywords: Health status, ADL, Mental health, Elderly, Rural

INTRODUCTION

The aging of the population is a global phenomenon and a topic of concern for governments worldwide. While the global birth rate is declining, the number and proportion of the elderly population are rapidly increasing. In 2022, there were as many as 1,109 million elderly people worldwide, accounting for 14% of the global population.¹ Thailand has been an aging society since 2005.² Thailand's population in 2022 was 66.1 million, with 12.5 million elderly people, accounting for 18.86% of the total

population. By the year 2040, it is estimated that Thailand will have 18.9 million elderly population, 31.44% of the overall population, which transforming the country into a super-aged society.³ The transition to an aging society in Thailand over the past several years has had significant impacts across various sectors, including the economy, society, health, and the environment. For example, the labor shortage has necessitated the importation of workers from neighboring countries. Additionally, there are challenges in resource allocation and elderly welfare, which continue to rise. Issues also include the quality of life for the elderly, health and

mental health problems, and the need to expand healthcare services and elderly care, requiring more healthcare professionals. Infrastructure development that accommodates the elderly is also essential.⁴

An aging society has considerable implications for the national healthcare system. The primary health issues for the elderly arise from chronic diseases such as cancer, cardiovascular diseases, respiratory diseases, sensory organ disorders (e.g., vision and hearing loss), and neurological disorders (e.g., dementia). Therefore, it is crucial to continually develop the public health service system, which involves substantial budgetary expenses. Efforts must focus on enabling the population to maintain self-care capabilities into old age, promoting health before aging, and reducing health risk factors such as smoking, alcohol consumption, unsafe sex, high blood pressure, and high body mass index, which remain prevalent issues in Thailand.⁵ The elderly is characterized by physiological changes in the body and a decline in bodily functions, increasing the risk of diseases. These changes impact the acceptance of these transitions, leading to psychological issues. When physical health deteriorates and self-sufficiency is lost, elderly individuals may feel they lack value to their families and society.⁶ Thai health survey revealed that elderly people suffer from various health issues: 60.7% have hypertension, 20.4% have diabetes, 23.8% have high cholesterol, 38.4% are obese, 39.8% have metabolic syndrome, and 17.6% have cataracts. Furthermore, 52.2% have fewer than 20 teeth and 26.4% have hearing problems.⁷ Several studies have also reported mental health issues among the elderly.^{8,9} When elderly individuals experience illness, the clinical manifestations and progression of diseases differ from other age groups, often involving multiple concurrent health issues.¹⁰

As Thailand approaches the status of a "super-aged society," many elderly individuals face various changes in physical, mental, social, environmental, economic, and technological aspects. Some elderly individuals are left alone, resulting in decreased social participation, which adversely affects their health and quality of life. Therefore, it is essential to investigate the health and mental health status of the elderly in Thai society. The study aimed to assess the physical and mental health state of the elderly in rural Thailand. Understanding and having data on the health status of the elderly will guide the monitoring of health issues, health promotion, and the development of medical and social care systems to support the future aging society.

METHODS

A community based cross-sectional study was conducted among the elderly population residing in three rural areas of Sa Yai Som subdistrict, U Thong district, Suphan Buri province, Thailand. The study population included the elderly aged 60 years and older. Total population of 1,051 elderly. Sample size calculations are based on the formula

for an estimation of a definite population.¹¹ The proportion of mental health of 0.86 from a previous study was used for sample size calculation by using the margin of error (0.05) with 5% significance. A total of 158 samples were collected.⁸

The accidental sampling approach was used. The inclusion criteria include elderly people aged 60 or older who have lived in Sa Yai Som Subdistrict, U Thong District, Suphan Buri Province for more than three years, have Thai nationality, and consent to participate in the study. Data was collected from August to September 2023.

Research instrument

The instruments utilized in this study were a questionnaire divided into 3 sections.

Section 1, Demographic characteristics

This section included gender, age, education level, occupation, smoking habits, and consumption of alcohol.

Section 2, Health status

This section employed the use of the Basic Geriatric Screening (BGS) instrument, which was developed by the Committee for the Development of Screening and Health Assessment Tools for the Elderly, Ministry of Public Health, and is detailed in the 2021 Elderly Health Screening and Assessment Manual. The BGS contains the following: nutritional status (Body Mass Index: BMI), hearing, vision, oral health, osteoporosis risk, osteoarthritis risk, urinary incontinence, sleep, and activities of daily living (ADL).¹²

Section 3, Mental health

The department of mental health established the Thai mental health indicators version 2007 (TMHI-15) 13, which were used in this section. The TMHI-15 is composed of 15 questions covering four components. Mental state, mental efficiency, mental quality and support factors.

Data analysis

Data were analyzed using descriptive statistics. Categorical data was presented as frequencies and percentages, while numerical data were provided as means, standard deviations, minimums, and maximums. The results are presented in three sections.

Demographic characteristics, health status, which includes nutritional status, hearing, vision, oral health, osteoporosis risk, osteoarthritis risk, urinary incontinence, sleep issues, and ability to perform daily living activities, and mental health.

Ethical consideration

This study was conducted under the project The study for community health assessment by participatory learning process in Sa Yai Som subdistrict, U Thong district, Suphan Buri province. The study obtained ethical approval by the Human Research Ethics Committee, Bansomdejchaopraya Rajabhat University, on July 21, 2023 (COA No. BSRU-REC 660701). Ethical considerations were taken throughout the interview. Informed consent was obtained from all participants. The participants could deny and ask to stop the interview or testing at any time without giving reasons. The result did not show the participants' names and addresses and could not be traced back.

RESULTS

Demographic characteristics

A total 158 elderly were study which include males 34.8% and females 65.2%. The mean age of the samples was 72.2 ± 8.5 , with a range between 60 and 96 years. The highest level of education was primary school for 75.3%. Most participants (44.3%) were unemployed. Smoking prevalence was 5.1%, while alcohol intake was 4.4% (Table 1).

Health status

About 69.0% of elderly has a prevalence of chronic diseases, with the most common being hypertension, diabetes, and hyperlipidemia. Additionally, 31.0% of the elderly had more than one chronic disease. Nutrition status found that 33.5% of participants has normal BMI, while 57.0% had overweight and obese. Finding shows that 10.1% of participants were hearing impairment, 63.9% have visual impairment, 71.5% have oral health problems, 19.0% and 36.7% have urinary incontinence and sleep problems, respectively. Moreover, this study found that 31.0% and 46.8% at risk of osteoporosis and osteoarthritis, respectively. Regarding the activities of daily living, 3.2% were dependent, and 5.0% as partial-dependent. Details are provided in Table 2.

Mental health

Overall, the mental health of the elderly was poor (19.6%), fair (37.3%), and good (43.1%). The age groups with the highest prevalence of poor mental health were those over 80 years old, 70-79 years old, and 60-69 years old, with rates of 29.4%, 20.8%, and 14.1%, respectively (Table 3).

Table 1: Demographic characteristics of participants (n=158).

Demographic characteristics	N	%
Gender		
Male	55	34.8
Female	103	65.2
Age (years) Mean$\pm$SD=72.2 $\pm$8.5, Min-Max =60-96		
60–69	71	44.9
70–79	53	33.6
≥ 80	34	21.5
Educational level		
No schooling	20	12.7
Primary school	119	75.3
Secondary school	12	7.5
More than secondary school	7	4.4
Occupation		
Unemployed	70	44.3
Agriculture	34	21.5
Merchant	18	11.4
Self employed	7	4.4
General employment	29	18.4
Smoking		
No	150	94.9
Yes	8	5.1
Alcohol consumption		
No	151	95.6
Yes	7	4.4

Table 2: Health status among elderly.

Health status	N	%
Underlying diseases		
No	49	31.0
Yes	109	69.0
Hypertension	23	21.0
Diabetes	10	9.2
Hyperlipidaemia	11	10.1
Hypertension and diabetes	4	3.7
Hypertension and hyperlipidaemia	22	20.2
Hypertension, diabetes and hyperlipidemia	21	19.3
Hypertension, diabetes and stroke	1	0.9
Hypertension, chronic kidney disease and gout	1	0.9
Cardiomegaly	4	3.7
Osteoporosis	4	3.7
Cardiovascular diseases	3	2.8
Hyperthyroidism	2	1.8
Cirrhosis	1	0.9
Chronic obstructive pulmonary disease	1	0.9
Cancer	1	0.9
Nutritional status (BMI) Mean±SD=23.7±3.9; Min-Max=15.4-36.3		
Underweight (≤ 18.5 kg/m ²)	15	9.5
Normal (18.5-22.9 kg/m ²)	53	33.5
Overweight (23.0-24.9 kg/m ²)	36	22.8
Obese (≥ 25.0 kg/m ²)	54	34.2
Hearing impairment		
No	142	89.9
Yes	16	10.1
Visual impairment		
No	57	36.1
Yes	101	63.9
Oral Health problems		
No	45	28.5
Yes	113	71.5
Urinary incontinence		
No	128	81.0
Yes	30	19.0
Sleep problems		
No	100	63.3
Yes	58	36.7
Osteoporosis risk		
Low	50	31.7
Moderate	59	37.3
High	49	31.0
Osteoarthritis risk		
No	84	53.2
Yes	74	46.8
Activities of daily living		
Independent	145	91.8
Partial-dependent	8	5.0
Dependent	5	3.2

Table 3: Mental health among elderly.

Mental health	Overall		60-69 years		70-79 years		≥80 years	
	n=158	(%)	n=71	(%)	n=53	(%)	n=34	(%)
Poor	31	(19.6)	10	(14.1)	11	(20.8)	10	(29.4)
Pair	59	(37.3)	23	(32.4)	21	(39.6)	15	(44.1)
Good	68	(43.1)	38	(55.5)	21	(39.6)	9	(26.5)

DISCUSSION

The elderly are an age where the body's physiology changes. As a result, the body's functions decrease, causing the risk of disease and mental health problems. In this study, the prevalence of chronic diseases in participants were 69.0%, which the most common being hypertension, diabetes, and hyperlipidemia. The top three chronic diseases in this study also aligns with previous national studies.⁷ This finding is similar to a study conducted among elderly in rural Phrae Province, which reported a 73.7% prevalence of chronic diseases among the elderly.¹⁴ Furthermore, this study found that 31.0% of the elderly had more than one chronic disease. This might be due to age-related physical deterioration, leading to the development of chronic diseases and disabilities.¹⁵

More than half of the elderly (57.0%) in this study had overweight and obese, which is consistent with reported of Thai urban populations (61.7%).¹⁶ However, this finding goes in contrary to a study conducted by Muhammad T et al, who reported that elderly in rural and urban in India have a very different body mass index (13.8% vs. 33.3%).¹⁷ The fact that Thai elderly are overweight and obese may be related to a lack of physical activity.⁷ The prevalence of hearing problems in elderly which study in rural areas (10.1%) was lower than urban areas (31.8%) in previous national study.¹⁸ Conversely, the prevalence of visual problems is higher in the rural elderly (63.9%) compared to those in urban areas (53.6%). Nevertheless, were found that the prevalence of hearing problems among Thai elderly is similar to that in China. Whereas visual problems are significantly higher among Thai elderly compared to their Chinese.¹⁹

The oral health problems in this study were 71.5%, which were a higher than that of the study in rural areas in Lampang, Thailand (54.1%) and urban areas in Chaing Mai, Thailand (48.8%). These oral health problems are significant as they affect chewing, swallowing, speaking, smiling, communicating, and socializing, as well as the overall quality of life of the elderly.²⁰⁻²³

The prevalence of urinary incontinence was 19.0%, higher than that found among the elderly in other rural area from previous study, which was only 12.2%, and also higher than in urban elderly in Thailand, where the prevalence was between 8.0% and 13.7%.²⁴⁻²⁶ Urinary incontinence is a common issue among the elderly and affect their quality of life.²⁷ Our findings indicated that

36.7% of rural elderly had sleep problems, which is lower than in both rural (44.2%) and urban areas (59.2%) in Thailand.^{28,29} There is empirical evidence that sleep problems are a result of chronic muscular discomfort and frequent nocturia.³⁰ Elderly who have osteoporosis and osteoarthritis have the risk of falling and breaking bones.³¹⁻³³ The study in Singapore reported that 52.0% of elderly has a moderate to high risk of osteoporosis, which is lower than our study (68.3%). Furthermore, the prevalence of osteoarthritis in the elderly was 46.8%, which was greater than the 24.5% reported in Saudi Arabia.³⁴ Thailand National study of elderly in rural and urban communities found that 9.2% had limitations in activities of daily living, with a tendency toward more limitations in the future.³⁵ Correspondingly, our study showed that 8.2% of the elderly had limitations in their daily activities. In addition, poor mental health was reported by 19.6% of the elderly, higher than the 13.6% found in rural Ubon Ratchathani and 13.1% found in urban Pathum Thani province.^{36,37} The elderly with mental health issues also experience a negative impact on their quality of life in both social and national dimensions, leading to problems such as functional disorders in daily activities, sleep disorders, and suicidal behaviors due to significant health problems. Therefore, health management of the elderly is necessary.^{38,39}

The limitation in this study was depended on self-reported questionnaires may introduce bias. The participants might underreport or overreport their health status and mental health due to social desirability, which is prone to measurement errors.

CONCLUSION

Noncommunicable diseases, disability, and mental health were the most important health concerns among the elderly. This study concludes that promoting both physical and mental health is critical and should be a top focus for the elderly and their caregivers. Furthermore, relevant agencies should build an effective healthcare system for the elderly in order to prevent illness and impairment.

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