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## RESEARCH ARTICLE

### The Relationship Between The Perception of Elderly's Health Status and Health Behaviors in Nakhon Nayok Province, Thailand

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#### Abstract:

#### Purpose:

This research aims to study the relationship between perception of elderly's health and health behaviors in Nakhon Nayok province, Thailand

#### Methods:

This research was a cross-sectional study. The questionnaire was used to collect the data. This research was conducted in Nakhon Nayok province. The sample size was 270 which applied Taro Yamane's formula at a significant level 0.05. The descriptive statistics was implemented to describe the variables by presenting the frequency, percentage, mean and standard deviation. Furthermore, multiple regression analysis was applied to analyze the relationship between perception of elderly's health and health behaviors. The statistical significance was considered to reject Hypothesis-null at  $< 0.05$ .

#### Results:

From a total of 270 people, more than 58.22% of the elderly perceived that they had moderate health conditions. Most elderly had congenital diseases (62.2%). The multiple regression analysis results showed that health status perception and health status perception when compared to their cohort related significantly to health behavior.

#### Conclusion:

The government should support the elderly on participation, trust, engagement, and cultural concern of the people in the community, which can contribute to promoting the physical, mental and social condition of the elderly.

**Keywords:** Perception, Elderly's health, Health behaviors, Taro Yamane's formula, Health status, Mental and social condition.

#### Article History

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## 1. INTRODUCTION

The number of elderly patients in Thailand has increased dramatically in recent years. In 2014, the proportion of elderly to the general population was 14.9%, which increased from 6.8% in 1994. The proportion was predicted to be as high as 15.7%, in 2025. This is because of the effects of population control policies which reduced the mortality rate, along with medical advancements that increased life expectancy. As a result, there was a gradual change in the age structure of the country's population. The aging society is an issue for which the government has to prepare because it is an individual issue that could become a public issue [1 - 3]. This is because the

elderly has faced physical deterioration, illness, and disability due to aging, all of these factors lead to mental health problems. In the absence of proper attention, it would eventually cause a public issue. Several studies have also found that self-ratings of health among elderly adults are valid measures of the respondent's objective health status and match up as well to physician evaluation [4 - 6].

The elderly is the age that has changed the body in a way that deteriorates the ability to live life and increases the risk of chronic diseases. From the Welfare and Health Survey in Thailand in 2015, about half of the elderly reported the presence of chronic diseases or illnesses, with 42.3% of the elderly had at least 2 chronic diseases or diseases [3]. According to the Thai Elderly Survey in 2013, 41 percent of elderly are hypertension, 18 percent are diabetic and 9 percent

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are osteoarthritis [4]. Besides, there is a tendency to increase the mental health problem in the elderly. From the depression survey, elderly depression increases with age which presented 3.2%, 4.2% and 4.8% in elderly aged between 60-69 years, 70-79 years and over 80 years or more, respectively.

Nakhon Nayok province had been an agricultural society where people led a simple lifestyle and were more closed to nature. As the lifestyle of the people has become more capitalistic, money has become a large factor in living and the people are less supportive of each other. Besides, there are many problems associated with the elderly in the community, such as aging-associated diseases (*i.e.*, high blood pressure, diabetes, heart disease, and atherosclerosis). Moreover, most of the elderly suffered from depression because their children, who used to live with them, moved to other places for work. The purpose of this study is to discuss the relationship between perception of elderly's health and health behaviors in Nakhon Nayok province, Thailand.

## 2. MATERIALS AND METHODS

This research was a cross-sectional study and conducted in Nakhon Nayok province. Nakhon Nayok is one of the central provinces. The province is divided into four districts including Mueang Nakhon Nayok, Pak Phli, Ban Na and Ongkharak. The researchers conducted surveys in Ban Na district due to that area that has the highest number of elderly. In addition, Ban Na is still a community that has not developed, and is lacking many utilities. Most of them are elderly people and young children because of the migrant population migrating into the city to find work. The sample size was 270 which applied Taro Yamane's formula at a significant level 0.05. The selection of the sample with the qualification is the person who is over 60 years old, both male and female, with no communication problems and are willing to participate in research. Besides, the sample has to stay in the responsibility area of the Ban Na, Nakhon Nayok province. The researcher randomized the names of all elderly in Ban Na, Nakhon Nayok province using the computer program until the specified amount was reached. Regarding the list name of elderly, researchers received the list name from the provincial administrative department. To collect the data, the researcher collected the information from the few of the selected names. The data was collected between June and August 2018.

The questionnaire consists of three parts: (1) Sociodemographic information of elder (such as sex, age, status, religion, occupation, education level, and family income). (2) Elderly health status (Body Mass Index (BMI), dental health, common disease, and health problem) as well as health awareness. According to the WHO (2010), health status can be measured using pathological and clinical measures and is usually observed by clinicians or measured using instruments [7]. Moreover, health awareness included 2 variables; elder health status' perception and elder health status perception when compared to their cohort. The questions were "What is your general health today?" and "How is your health compared to other people of the same age?", which need to be answered within 4 scales; very good, medium, poor, and terrible.

Lastly, the survey about health behaviors included 10

questions (1) Do you have exercised 3 days a week and 30 minutes at a time? (2) Do you work on hobbies such as gardening, embroidery, basketry, drawing, raising animals or not? (3) Do you smoke? (4) Do you drink alcohol? (5) Have you eaten both meat and flour and enough fat for your daily needs? (6) Do you eat fruits and vegetables regularly? (7) Do you eat supplements? (Including herbs, vitamins, minerals) (8) Do you check your body regularly? (9) Do you participate in community activities? and (10) Do you sleep enough? All these items were measured by "never done", "sometimes done" and "always done".

The questionnaire was tested with content validity and reliability [8]. Regarding content validity which is the process of establishing the representativeness of items for the domain of skills, task, knowledge and so forth of whatever, is being measured. The researcher consults the instruments related to the test with the lecturer and teachers who are experts in elderly health. The reliability test is needed to make sure that the instrument can be consistent if used in other time. It showed that the reliability of Cronbach's alpha is 0.872.

### 2.1. Ethical Considerations

This research has been approved by the Ethics committee, Srinakharinwirot University where in the certificate of approval number is SWUEC-149/60E.

### 2.2. Data Analysis

The current study attempted to predict the relationship between perception of elderly's health and health behaviors in Nakhon Nayok province, Thailand. The dependent variable was the health behaviors of the elderly. The construction of this variable was based on questions in health behaviors section which included exercise, hobby, smoking, eating meat and flour sufficient for each day's needs, eat fruits and vegetables, eat extra food, regular physical examination and participated in the activities of the community. The dependent variable was measured by 10 items within 3 scales "never done", "sometimes done" and "always done" by dividing the score into 0-10 points with low health behaviors, 11-20 points, with moderate health behavior and 21-30 points with a high level of healthy behavior.

While the independent variable was the elderly's health status perception and elderly's health status perception when compared to their cohort, the elderly's health status perception and elderly's health status perception when compared to their cohort were measured in 4 scales, "excellent", "good", "medium", and "bad". For comparing health status perception with others, it was divided into the following categories like equal to others, better than others and inferior to other people.

Analyses were performed with SPSS. The descriptive statistics were implemented to describe the variables by presenting the frequency, percentage, mean and standard deviation. Furthermore, multiple regression analysis was applied to analyze the relationship between the perception of the elderly's health status and health behaviors in Nakhon Nayok province. The statistical significance was considered to reject Hypothesis-null at  $< 0.05$ .

### 3. RESULTS

#### 3.1. The Sociodemographic Factor of Elderly

From a total of 270 people (Table 1), most of them were female (65.2%), aged between 60-65 years old (48.1%). Most of them being Buddhists (94.1), completing primary education (73.3%), 54.1% of the elderly are married, 52.2% of the elderly work as farmers and have family income between 15,001-20,000 baht per month (47.4%).

**Table 1. Frequency and percent about a sociodemographic factor of elderly.**

Sociodemographic Factor	Frequency	Percent
<b>Gender</b>		
Male	94	34.8
Female	176	65.2
<b>Age</b>		
60-65 years	130	48.1
66-70 years	72	26.7
71-75 years	36	13.3
76-80 years	20	7.4
over 81 years	12	4.4
<b>Religion</b>		
Buddha	254	94.1
Islam	16	5.9
<b>Occupation</b>		
Not working	105	39.0
Agriculture	141	52.2
private business	24	8.8
Government officials / retired Pensioner	0	0.0
Contractors	0	0.0
<b>Education Level</b>		
Primary school	198	73.3
Secondary or equivalent	48	17.8
Bachelor's degree or equivalent	12	4.4
Not being educated	12	4.4
<b>Family Income</b>		
Less than 10,000 baht	33	12.2
10,001-15,000 baht	73	27.0
15,001-20,000 baht	128	47.4
More than 20,001 baht	36	13.3
<b>Marital Status</b>		
Single	28	10.4
Couple/Married	146	54.1
Widowed / Divorced / Separated	96	35.6
<b>Total</b>	<b>270</b>	<b>100.0</b>

#### 3.2. Elderly's Health Status Analysis

From a total of 270 people, it was found that 41.5% of the elderly had normal body mass. In dental health, most of the elderly had more than 20 teeth (60.4%). Among most of the elderly, 62.2%, have congenital diseases. The top 3 most common diseases are blood pressure followed by diabetes and osteoarthritis accounted for 34.6 percent, 14.9 percent and 12.6 percent, respectively. The major problem of the elderly is sleep

and vision problems (21.1%), followed by mobility problems (14.1%) and urinary incontinence (12.2%).

#### 3.3. Perception of the Elderly's Health Status and Health Behaviors

58.22% of the elderly had a moderate level of health status perception. In addition, 83.58% of the elderly had the same level of health when compared to the same age group. Nearly 97.03 percent of older people need to use other medical devices such as dentures, walking sticks, walking aids and hearing aids.

#### 3.4. Elderly's Health Behaviors Analysis

When questioning the health behavior of the elderly in the past 6 months such as exercise, hobbies, smoking *etc.*, it was observed that 62.6% of the elderly had a moderate score of health behavior. (Mean =22.45, SD. = 1.94). However, most of the elderly did not smoke and drink alcohol.

#### 3.5. The Relationship Between the Perception of the Elderly's Health Status and Health Behaviors

As presented in Table 2, the multiple regression results showed that health status perception is related significantly to health behavior. Moreover, health status perception when compared to their cohort is also related significantly to health behavior.

**Table 2. Analysis of the relationship between the perception of the elderly's health status and health behaviors.**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	.725	.213		3.404	.001
Health status perception	.674	.223	.149	3.027	.003
Health status perception when compared to their cohort	.275	.042	.324	6.605	.000

a. Dependent Variable: Health behavior (in the past 6 months)

### 4. DISCUSSION

Regarding health perception, the majority of the respondents perceived that they were in good health status. Moreover, they perceived that they had a similar level of health status when compared to their cohort [9 - 16]. According to the study of Banerjee, Perry, Tran, & Arafat (2010) found that the majority of older people had good health perception at 53.5 percent [17]. Most of the sample groups were older people who had changed according to the aging process, not clearly showing the body's functioning in the body's work at the reserve level at this age which can compensate for changes [18]. While changes in the aging process both physically and mentally will be more apparent in the elderly, middle and late ages. The elderly are the age that changes the body in a deteriorating way, causing health problems, especially with chronic illness [18]. Therefore, caring for elderly people with chronic diseases should focus on encouraging older people to have self-care, see their values and be able to help themselves as much as possible [19].

The government should support the elderly on participation, trust, engagement, and cultural concern of the people in the community, which contribute to promoting the physical, mental and social condition of the elderly. People in the community participated in working to identify and analyze the health problems of the elderly using the Basic Activity of Daily Living (ADLs) as a tool to help design proper routines and activities for the elderly [9-11]. Moreover, the people helped raise a fund to establish a medical device bank for lending necessary medical devices to the elderly. These activities created trust among people, resulting in engagement and enhanced well-being of the elderly and developed a culture for the community [13, 14].

#### LIMITATION AND CONCLUSION

In this study, more than 50% of respondents perceived that they had a moderate level of health status. However, it should be careful in interpreting the perceived health status because most people tend to judge themselves as having better health.

#### ETHICS APPROVAL AND CONSENT TO PARTICIPATE

This research has been approved by the Ethics committee, Srinakharinwirot University where in the certificate of approval number is SWUEC-149/60E.

#### HUMAN AND ANIMAL RIGHTS

Not applicable.

#### CONSENT FOR PUBLICATION

Not applicable.

#### FUNDING

None.

#### CONFLICT OF INTEREST

The authors declare that there is no conflict of interest, financial or otherwise.

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