

Original Research Article

Factors influencing self-rated health in Thailand: findings from a national cross-sectional study

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ABSTRACT

Background: This study aims to determine the prevalence of self-rated health (SRH) in Thailand and related factors.

Methods: National representative, cross-sectional, data was used for this analysis. SRH was measured by asking the question: "How do you rate your general health?"; the following response answers were "very good", "good", "moderate", "not good", and "very bad". We classified "very good" and "good" as "good". For "poor", we collapse moderate, not good, and very bad. Descriptive and multiple logistic regression analyses were conducted using R version 4.3.0.

Results: The prevalence of SRH was 46.4% (95% CI: 45.8%, 47.0%). The multiple logistic regression analysis showed that those who aged 70-75 years and above had higher odds of poor health status compared to those aged 45-49 years (adjusted odds ratio: 2.7; 95% CI: 2.2, 3.4). Participants who reported having a non-communicable disease were more likely to report poor health status than those who not (adjusted OR: 4.8; 95% CI: 4.1, 5.7).

Conclusions: This study reveals that there have a high prevalence of self-rated health and identifies significant factors such as non-communicable diseases, age, and the number of years of schooling attended.

Keywords: Self-rated health, Non-communicable disease, A national-survey

INTRODUCTION

Self-rated health (SRH) is a subjective indicator of health that the World Health Organization (WHO) recommends for use in health monitoring.^{1,2} Due to its accuracy in predicting and measuring health outcomes like morbidity, mortality, functional challenges, and chronic diseases across a variety of populations.^{3,4} SRH is often measured using a single item that asks respondents to rate their current health on a scale of 1 to 5, with 1 being "very good" and 5 being "very poor." Age, lifestyle, psychological factors, social and emotional support, and chronic diseases are all known to affect SRH in older persons, according to research.⁵⁻⁷

It is crucial to investigate the relationship between SRH and socioeconomic characteristics for a number of reasons. It enables us to pinpoint the causes of health disparities and

develop interventions.⁸ Knowing how socioeconomic factors relate to SRH, it might help us finding a vulnerable people and design interventions that are specifically designed to advance health equity.⁹ Additionally, understanding the connection between SRH and socioeconomic variables, we may pinpoint obstacles to healthcare access and create strategies to widen access for underserved areas. In general, this analysis is essential for advancing health equity and enhancing everyone's health outcomes.^{10,11} This study was to investigate the relationship between socioeconomic factors and SRH in order to finding a demographic, health status, and socioeconomic.

METHODS

This study used data from the National Health and Welfare Survey 2019 (NHWS), which focused on the Thai

population aged 15 years and above. It was a nationwide, population-based cross-sectional survey with a multi-staged stratified cluster sampling design during 01 March 2019 to 31 March 2019. The selection of samples was carried out by the National Statistics Office Thailand. All older persons within the selected living quarters were included in this survey. The NHWS was 27960 households and 68,005 participants. 27,900 participants were included participants who reported their health status to analysis. This study was approved by the Mahasarakham university Institutional Review Board (Approval number: 335-365/2022).

Measurement

For self-rated health, participants were asking the question: “How do you rate your general health?”; the following response answers were “very good”, “good”, “moderate”, “not good”, and “very bad”. We classified “very good” and “good” to “good”. For “poor”, we collapse moderate, not good, and very bad. We included sociodemographic variables in the analysis such as gender (male, female), age in years (45-49, 50-54, 55-59, 60-64, 66-69, 70-74, ≥ 75), occupation level (employed, unemployed), number of years attended in a school (no, 1-6, 6-12, >12), and marital status (single, married, divorced or separated or windowed). We also collected the chronic diseases that was based on self-reporting of being medically diagnosed.

Analysis

We analyzed the data using R version 4.1.0. The associations of the factors with SRH were tested using

Chi-square tests or fisher’s exact test appropriately. In the multivariable analysis, the logistic regression analysis was used to calculate the crude and adjusted odds ratio (OR). P values less than 0.05 were considered in assessing the significant association.

RESULTS

A total of 27,900 participants were included in this study. The summarized sample characteristics were as follows: almost 59.9% were females, 19.1% were aged 50-54 years old, 68.9% were working, attended school for 1-6 years (56.5%), 66.1% were married, and 17.9% had a chronic disease. The details of the characteristics are shown in Table 1. The prevalence of SRH was 46.4% (95% CI: 45.8%, 47.0%).

The multiple logistic regression analysis showed that those who aged 70-75 years and above had higher odds of poor health status compared to those aged 45-49 years (adjusted odds ratio: 2.7; 95% CI: 2.2, 3.4). Participants who were not working had 1.4 times higher odds of poor health status compared to those who were working (95% CI: 1.2, 1.6). Participants who had attended school for more than 12 years had 40% lower odds of poor health status compared to those who had not attended school (adjusted OR: 0.60; 95% CI: 0.4, 0.8).

Participants who reported having a non-communicable disease were more likely to report poor health status than those who not (adjusted OR: 4.8; 95% CI: 4.1, 5.7). All results are presented in Table 2.

Table 1: Socioeconomic factors by self-rated health.

Variables	Number of participants (n=27900)	SRH (good) (n=14952)	SRH (poor) (n=12948)	P value
Gender				
Male	11195 (40.1)	6352 (42.5)	4843 (37.4)	<0.001
Female	16705 (59.9)	8600 (57.5)	8105 (62.6)	
Age (year)				
45-49	3050 (16.7)	1994 (24.4)	1056 (10.5)	<0.001
50-54	3484 (19.1)	1937 (23.7)	1547 (15.3)	
55-59	3428 (18.8)	1713 (20.9)	1715 (17)	
60-64	3227 (17.7)	1233 (15.1)	1994 (19.8)	
66-69	2410 (13.2)	722 (8.8)	1688 (16.7)	
70-74	1597 (8.7)	341 (4.2)	1256 (12.4)	
≥75	1082 (5.9)	242 (3)	840 (8.3)	
Occupation status				
Employed	19222 (68.9)	11698 (78.2)	7524 (58.1)	<0.001
Unemployed	8678 (31.1)	3254 (21.8)	5424 (41.9)	
Number of years attended in school				
No	1312 (4.7)	524 (3.5)	788 (6.1)	<0.001
1-6	15756 (56.5)	6793 (45.4)	8963 (69.2)	
6-12	6882 (24.7)	4780 (32)	2102 (16.2)	
>12	3950 (14.2)	2855 (19.1)	1095 (8.5)	
Marital status				
Single	3792 (13.6)	2717 (18.2)	1075 (8.3)	<0.001

Continued.

Variables	Number of participants (n=27900)	SRH (good) (n=14952)	SRH (poor) (n=12948)	P value
Married	18438 (66.1)	10221 (68.4)	8217 (63.5)	
Divorced/separated/windowed	5670 (20.3)	2014 (13.5)	3656 (28.2)	
Chronic disease				
No	19603 (70.3)	13082 (87.5)	6521 (50.4)	
One chronic disease	4995 (17.9)	1310 (8.8)	3685 (28.5)	<0.001
≥Two chronic disease	3302 (11.8)	560 (3.7)	2742 (21.2)	

Table 2: Results from multiple logistic regression.

Variables	Prevalence (%)	OR crude (95%CI)	OR adj (95%CI)
Gender			
Male	43.3 (4843/11195)	1	1
Female	48.5 (8105/16705)	1.32 (1.24, 1.4)	1.1 (1, 1.2)
Age (year)			
45-49	34.6 (1056/3050)	1	1
50-54	44.4 (1547/3484)	1.51 (1.36, 1.67)	1.2 (1.1, 1.4)
55-59	50 (1715/3428)	1.89 (1.71, 2.09)	1.3 (1.1, 1.5)
60-64	61.8 (1994/3227)	3.05 (2.75, 3.38)	1.7 (1.4, 1.9)
66-69	70 (1688/2410)	4.41 (3.94, 4.95)	2.0 (1.6, 2.4)
70-74	78.6 (1256/1597)	6.95 (6.04, 8.01)	2.7 (2.2, 3.4)
≥75	77.6 (840/1082)	6.55 (5.58, 7.7)	2.3 (1.8, 3)
Occupational status			
Employed	39.1 (7524/19222)	1	1
Unemployed	62.5 (5424/8678)	2.51 (2.35, 2.68)	1.4 (1.2, 1.6)
Number of years attended in school			
No	60.1 (788/1312)	1	1
1-6	56.9 (8963/15756)	0.72 (0.62,0.83)	1.1 (0.8, 1.5)
6-12	30.5 (2102/6882)	0.37 (0.31,0.43)	0.8 (0.6, 1.2)
>12	27.7 (1095/3950)	0.29 (0.25,0.35)	0.6 (0.4, 0.8)
Marital status			
Single	28.3 (1075/3792)	1	1
Married	44.6 (8217/18438)	1.08 (0.96,1.22)	1 (0.8, 1.2)
Divorced/separated/windowed	64.5 (3656/5670)	1.91 (1.67, 2.18)	1.2 (0.9, 1.4)
Chronic disease			
No	33.3 (6521/19603)	1	1
One chronic disease	73.8 (3685/4995)	4.17 (3.85,4.51)	3.6 (3.2, 4.1)
≥Two chronic disease	83.0 (2742/3302)	6.74 (6.08,7.48)	4.8 (4.1, 5.7)

DISCUSSION

Our study revealed the rate of a poor self-reported health status across gender, age, occupational status, umber of year attended in a school, marital status, and non-communicable status.

The prevalence rate of self-report health in our study was high when compared to others studies such as 40.1% in Latin America and the Caribbean, 32.6% in Malaysia.^{12,13} Our results SRH has been shown to have a significant association with NCDs. Long-term health conditions known as NCDs include diseases such chronic respiratory diseases, diabetes, cancer, and cardiovascular disorders.¹⁴⁻¹⁷ Numerous studies have found a strong link between SRH and the presence of NCDs. NCDs patients are more likely to report poorer self-rated health compared to those

without such disease.¹⁸ This association holds true across different populations, age groups, and countries. One reason for the relationship between SRH and NCDs is that NCDs patients often experience limitations in their physical functioning, and it might lead to a impact on their perceived health status.¹⁹⁻²² The presence of symptoms, pain, or discomfort associated with NCDs can also contribute to lower self-rated health. Furthermore, patients who have low physical activity and a low quality of life can significantly influence their perception of their health status.^{19,23} The chronic nature of NCDs and the need for ongoing management and treatment can also affect self-rated health, as individuals may experience difficulties in managing their conditions effectively. Furthermore, because it captures both the disease and its influence on the individual's perceived health state, SRH can be a useful indicator for noticing a higher risk of obtaining NCDs.

SRH is influenced by the presence of NCDs, their associated symptoms, limitations in physical functioning, and the overall burden of managing these conditions.^{24,25} Understanding this association can help healthcare professionals and policymakers develop targeted interventions to improve health outcomes and enhance the well-being of individuals affected by NCDs.

There have several limitations in this study. First, this study uses a cross-sectional study and we cannot conclude a cause-effect results. Lastly, there have some variables that was not included for investigated in this study such as quality of life or mental health status. The strength of this study, this data set is a national survey and it represented sample in Thai people.

CONCLUSION

Our analysis reveals that there have a high prevalence of self-rated health and identifies significant factors such as non-communicable diseases, age, and the number of years of schooling attended.

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