

Determinants of Subjective Well-Being among the Elderly Population: A Cross-Sectional Study in Thai Communities

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ABSTRACT

Introduction: Happiness is a crucial quality-of-life indicator for the elderly, aligning with Thailand's core national development goal of well-being.

Methods: This cross-sectional study assessed the happiness levels and associated determinants among 313 elderly individuals in Samut Songkhram Province, Thailand. Data were collected via questionnaires using stratified random sampling and analyzed using descriptive statistics and stepwise multiple linear regression.

Results: The study involved 313 elderly participants (mean age: 72.09 ± 8.14 years). The majority were male (56.87%), married (57.19%), and had attained primary education (56.23%). The median monthly income and expenditure were 5,000 Baht (IQR = 6,000) and 4,000 Baht (IQR = 4,500), respectively. A significant proportion (71.88%) did not have chronic diseases. The mean ADL score was 17.98 ± 2.70 , and the mean self-efficacy score was 27.17 ± 6.31 . Most participants reported moderate levels of enabling factors (51.44%) and reinforcing factors (49.20%). Happiness levels were comparable to the general population (43.45%). Income, ADL score, reinforcing factors, and self-efficacy were identified as significant predictors of happiness ($p < 0.05$), collectively explaining 15.46% of the variance in happiness.

Conclusion: Optimal elderly happiness requires an integrated approach addressing key determinants including income, health, and multi-level social support (family, community, and society).

Keywords: Well-being, Happiness, Elderly, Support

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INTRODUCTION

The well-being and happiness of Thai people and society is one of the national development goals under the National Strategy 2018-2037. This strategy aims to develop people across all dimensions and age groups to be virtuous, capable, and of high quality, while creating social opportunities and equality and promoting growth based on an environmentally friendly quality of life.¹ Quality of life indicators for the population are reflected in varying levels of happiness, which are influenced by differences in physical, mental, and intellectual conditions. These variations depend on different component characteristics, including happiness, sufficiency, neutrality, abundance, goal achievement, accuracy or validity, fairness, and feelings of self-worth and dignity.²⁻⁴ This suggests that creating happiness is one of the mechanisms that can lead to a positive quality of life. According to the World Happiness Report, Thailand's happiness index during 2017-2019 ranked 44th globally, with a happiness index score of 5.93. In the subsequent report covering 2019-2021, Thailand's Happiness Index showed a decline, ranking 61st globally with a happiness index score of 5.891, falling behind the Philippines, which ranked 60th with a happiness index score of 5.9044. According to the 2018 national survey studying happiness levels across Thai provinces, the average happiness score of the Thai population aged 15, and above was 31.32 (out of 45 points), with 81.4% of Thai people having happiness levels equal to or higher than the general population.⁵ The subsequent survey in 2020, using the same instrument, revealed that people in Thailand had an average mental health score of 33.53 points. When analyzing various factors, the survey found that males had higher average mental health scores (33.80 points) than females. The elderly group (aged 60 and above) showed the highest average mental health score at 33.76 points. Married individuals demonstrated the best mental health with the highest average score of 33.96 points, while those with education levels higher than a bachelor's degree had the highest average mental health score of 36.64 points.⁶ According to mental health (happiness) data from the National Statistical Office, Samut Songkhram province recorded the lowest happiness level nationwide in 2010, with an average mental health score of only 28.25 and 47.8% of its population showing below-standard mental health scores.⁷ However, the province's average mental health scores in 2014, 2015, and 2020 were 32.33, 31.78, and 34.34, indicating an improving trend in mental health.⁶

According to the 2022 population statistics, Samut Songkhram province has an elderly population ratio of 24.02%, indicating its full transition into an aging society.⁸ The continuous increase in Thailand's elderly population has resulted in multiple impacts: Economic Impact: There are limited budgets available for elderly care. Health Impact: There has been an

epidemiological transition in elderly illness patterns from acute communicable diseases to chronic non-communicable diseases, leading to irreversible disabilities that require continuous care services.⁹ This has affected service provision related to chronic diseases coupled with physical, and mental deterioration, resulting in increased dependency, and a greater need for health and social services.¹⁰ Social Impact: Changing lifestyles and social patterns have led to smaller family sizes and an increase in nuclear families living separately. Some elderly households are left alone as relatives must work outside the home, resulting in decreased family capacity to care for elderly and dependent family members.¹¹

For the elderly to achieve happiness, they need to take greater care of themselves, especially in creating self-worth and maintaining self-reliance, which leads to quality of life and happiness. This aligns with the concept of characteristics of happy elderly individuals, which includes good physical and mental health, self-pride, self-satisfaction, moderation, self-love, love for others, maintaining their knowledge and abilities, making themselves valuable and beneficial to others, and maintaining social interactions to avoid loneliness and isolation. One key factor in elderly happiness is participation in various activities, social interaction, and contributing to society, which can lead to sustainable happiness.¹² In the literature review, the researcher found that Samut Songkhram Province shows an increasing trend in happiness levels. Population statistics indicate that it has fully entered an aging society. The province has distinctive social characteristics, as all districts are located along rivers, and it has estuarine areas that differ from typical urban societies. Therefore, the researcher is interested in studying factors related to elderly happiness in Samut Songkhram province. This investigation is guided by the Precede-Proceed Model, employing its systematic framework to identify both behavioral and environmental determinants influencing elderly well-being for future health promotion planning. This research aims to provide supporting data for promoting physical and mental health among the elderly in the area and to develop a quality aging society that facilitates elderly living with dignity, stability, prosperity, and sustainability.

METHODOLOGY

Study design and Participants: This cross-sectional study involved elderly individuals aged 60 years and above who were registered residents of Samut Songkhram Province, Thailand, totaling 45,902 persons.⁸ Inclusion criteria: Individuals aged 60 years or older who were registered residents of Samut Songkhram Province, Thailand in 2022 and were able to communicate in Thai. Exclusion criteria: Individuals who were unwilling to provide information or participate in interviews, as well as those who were not present in the study area during the data collection period. The Sample size estimation was con-

ducted using G*Power 3.1. Based on an effect size (f^2) of 0.15, $\alpha = 0.05$, and power = 0.80, the calculated sample size was sufficient to detect a medium effect¹³, resulting in a minimum required sample size of 284 participants. To account for potential data loss and errors, an additional 10% was added, yielding a final sample size of 313 participants. A multi-stage sampling procedure was employed as follows: Stage 1: Stratified sampling was used to select representative samples from all districts based on the proportional population distribution within the province. Stage 2: Cluster sampling was conducted to randomly select representative sub-districts from each district, resulting in the selection of Bang Kaew Sub-district (Mueang District), Bang Nok Kwaek Sub-district (Bang Khonthi District), and Bang Nang Li Sub-district (Amphawa District). Stage 3: Simple random sampling was performed using computer software to select participants from population lists according to the predetermined number required for each area.

Instruments: Data were collected using a four-section questionnaire: The interview form for demographic characteristics includes information on gender, age, religion, marital status, income, expenses, occupation, number of family members, and chronic illness status.

Part 2: Questionnaire on predisposing, enabling, and reinforcing factors, using a four-point scale with the following options: most true, moderately true, slightly true, not true by *Predisposing Factors*: The researcher adapted the self-efficacy questionnaire translated from Schwarzer, R. & Jerusalem, M.¹⁴ The questionnaire consists of 10 items concerning emotions, optimism, and work satisfaction. It has a Cronbach's reliability coefficient of .932. The total possible score is 40 points, with higher scores indicating higher levels of self-efficacy. *Enabling Factors*: The researcher developed this section based on the PRECEDE Model theory. It consists of 11 items concerning direct support from family, community, and society. The questionnaire has a Cronbach's reliability coefficient of .836. Scores are interpreted according to Best criteria¹⁵ as follows: High enabling factors (mean score 3.01 - 4.00), Moderate enabling factors (mean score 2.01 - 3.00), Low enabling factors (mean score 1.00 - 2.00) *Reinforcing Factors*: The researcher developed this section based on the PRECEDE Model theory. It consists of 16 items concerning indirect support from family, community, and society. The questionnaire has a Cronbach's reliability coefficient of .907. Scores are interpreted according to Best criteria¹⁵ as follows: High reinforcing factors (mean score: 3.01 - 4.00), Moderate reinforcing factors (mean score: 2.01 - 3.00), and Low reinforcing factors (mean score: 1.00 - 2.00).

Part 3: Happiness Index Interview Form consisting of 15 items, using the Department of Mental Health's self-assessment happiness evaluation.¹⁶ This was developed under the conceptual framework defining happiness as a state of well-being resulting from the ability to manage life challenges and the potential for

self-development toward a better quality of life, encompassing internal virtues within changing social and environmental conditions. The questionnaire consists of 12 positive and 3 negative items, using a four-point scale: Not at all (0 points), slightly (1 point), much (2 points), very much (3 points) Interpretation is divided into 3 levels: The three levels are poor (less than 26 points), fair (between 27 and 32 points), and excellent (between 33 and 45 points).

Part 4: Activities of Daily Living (ADL) Screening Assessment consisting of 10 items, adapted from the Barthel ADL Index. The scoring criteria for elderly daily living capabilities, based on Department of Health, Ministry of Public Health standards¹⁷, are divided into 3 levels: Dependent elderly (0-4 points), Partially dependent elderly (5-11 points), Independent elderly (12 points and above).

The questionnaire was measured for content validity by three experts. The index of item objective congruence (IOC) for three sets of the questionnaire was 1.00. The questionnaire was pretested with 30 individuals who had similar characteristics to the sample. The reliability of the questionnaire, measured by Cronbach's Alpha Coefficient, was 0.96, 0.89, and 0.94, respectively.

The research project was approved in accordance with international ethical standards for human research, including the Declaration of Helsinki, the Belmont Report, CIOMS Guidelines, and the International Conference on Harmonization in Good Clinical Practice (ICH-GCP). Ethical approval was granted by the Human Research Ethics Committee of the Samut Songkhram Provincial Public Health Office (COA No. 16/2022). Written informed consent was obtained from all participants prior to their inclusion in the study.

Statistical analysis: Data were analyzed using SPSS version 23. Descriptive statistics were employed to summarize the study variables, and stepwise multiple linear regression analysis was conducted to examine the relationships among the variables. Prior to regression analysis, assumptions were checked, including normality (Shapiro-Wilk test), linearity, homoscedasticity, and multicollinearity (variance inflation factor, VIF <5).

RESULTS

The sample consisted of 313 elderly participants, the majority of whom were male (56.87%), with a mean age of 72.09 years (SD = 8.14). Most participants were Buddhist (81.15%), married (57.19%), and had completed primary education (56.23%). The median monthly income was 5,000 baht (IQR = 6,000), and the median monthly expenses were 4,000 baht (IQR = 4,500). The average number of household members was 3.62, with an average of 1.56 children. Most participants did not have chronic illnesses (71.88%). The mean Activities of Daily Living (ADL) score was 17.98 (SD = 2.70), and the mean self-efficacy score

Table 1: General Information, Self-Efficacy, Enabling Factors, and Reinforcing Factors (n = 313)

General Information	Participants (%)
Gender	
Male	135 (43.13)
Female	178 (56.87)
Age (years)	
Mean ± SD	72.09 ± 8.41
Min - Max	60 - 97
Religion	
Buddhist	254 (81.15)
Christian	55 (17.57)
Muslim	4 (1.28)
Marital Status	
Single	63 (20.13)
Married	179 (57.19)
Widowed	71 (22.68)
Highest Education Level	
No formal education	33 (10.54)
Primary education	176 (56.23)
Secondary education	61 (19.49)
Diploma/Vocational Certificate	11 (3.51)
Bachelor's degree	25 (7.99)
Higher than Bachelor's degree	7 (2.24)
Occupation	
Unemployed	84 (26.84)
Farmer	89 (28.43)
Trader	16 (5.11)
Retired Government Pensioner	13 (4.15)
Employee/Worker	2 (0.64)
General Laborer	75 (23.96)
Fisherman	34 (10.86)
Chronic Illness	88 (28.12)
Activities of Daily Living (ADL)	
Dependent (0 - 4 points)	2 (0.64)
Partially dependent (5 - 11 points)	5 (1.60)
Independent (12 points & above)	306 (97.76)
Enabling Factors	
Low (Average Score 1.00 - 2.00)	30 (9.58)
Moderate (Average Score 2.01 - 3.00)	161 (51.44)
High (Average Score 3.01 - 4.00)	122 (38.98)
Reinforcing Factors	
Low (Average Score 1.00 - 2.00)	22 (7.03)
Moderate (Average Score 2.01 - 3.00)	154 (49.20)
High (Average Score 3.01 - 4.00)	137 (43.77)

Table 2: Happiness Levels of Elderly People in Samut Songkhram Province (n = 313)

Happiness Levels	Score	Participants (%)
Poor	1 - 26	102 (32.59)
Fair	27 - 32	136 (43.45)
Good	33 - 45	75 (23.96)

Mean ± SD 28.65 ± 5.08; Min - Max 9 - 41

Table 3. Bivariate Analysis between factor and happiness score using Pearson Correlation

Factor	<i>r_s</i>	p-value
Age	-0.024	0.679
Monthly Income	0.148	0.009*
Monthly expenses	0.176	0.009*
household members	0.075	0.185*
Barthel ADL score	0.073	0.198*
Self-efficacy score	0.282	<.001*
Enabling score	0.287	<.001*
Reinforcing score	0.284	<.001*

*p-value < 0.20 selected for inclusion in the Stepwise Multiple Linear Regression analysis.

was 27.17 (SD = 6.31). Moderate levels were observed for both enabling factors (51.44%) and reinforcing factors (49.20%) (Table 1).

Regarding happiness levels among the elderly in Samut Songkhram province, the majority reported happiness levels equal to the general population (43.45%), followed by those with lower-than-average happiness levels (32.59%). The overall mean happiness score was 28.65 (SD = 5.08) out of 45 points (Table 2).

Based on the preliminary Bivariate Correlation analysis, the following factors were found to have a p-value less than 0.20 and were thus selected for inclusion in the Stepwise Multiple Linear Regression model (Table 3)

The stepwise regression analysis of factors influencing elderly happiness in Samut Songkhram province yielded the following predictive equation (Table 4).

Happiness Score = 14.179 + .122 (reinforcing factors) + .300 (ADL score) + .109 (income (thousand baht)) + .100 (self-efficacy).

Table 4. Determinants of Happiness among Elderly People in Samut Songkhram Province Using Stepwise Method

Predictor	Regression Coefficient(B)	95%CI of B	p-value
Reinforcing Factors	.122	.054 - .190	<.001
Barthel ADL score	.300	.103 - .497	.003
Monthly Income *	.109	.032 - .185	.005
Self-Efficacy score	.100	.000 - .200	.050

R² = .165, R² adj = .155, F = 15.259, Sig. F = <.001

*in thousand at a rate of 1000 THB ≈ 30 USD (Oct '2025)

DISCUSSION

Factors influencing happiness among the elderly in Samut Songkhram province revealed that reinforcing factors, ADL score, income (in thousand baht), and self-efficacy collectively accounted for 15.46% of the variance in elderly happiness. The discussion of these findings is as follows:

Reinforcing factors can predict elderly happiness, suggesting that increased reinforcing factors lead to greater happiness among the elderly. This can be explained by the elderly's sense of being cared for and maintaining their roles in family, community, reinforcing factors can predict elderly happiness, suggesting that increased reinforcing factors lead to greater happiness among the elderly. This can be explained by the elderly's sense of being cared for and maintaining their roles in family and community.¹⁸ Similarly, a study on factors facilitating subjective well-being among Taiwanese elderly found that social connections influenced elderly well-being.¹⁹ Earlier research by Carandang RR et al²⁰ (2020) studying the determinants of subjective well-being among senior citizens in the community-based ENGAGE study found that individuals with greater perceived

social support reported higher happiness levels. This is also consistent with Thai study²¹, the studying factors predicting happiness among older adults in rural Phetchabun Province, which found that perceived social support from family could predict elderly happiness (OR=0.22, 95% CI=.09-.36).

The ability to perform Activities of Daily Living (ADL) can predict happiness levels among older adults. Specifically, higher ADL scores correlate with increased happiness in older adults. This relationship can be attributed to the fact that higher ADL scores indicate greater capacity for independent living and self-reliance. When older adults can perform daily activities independently and move around without assistance, they experience reduced anxiety about being a burden to their children, grandchildren, or caregivers. This finding aligns with the systematic review²², which identified good physical health as one of the key factors contributing to happiness among community-dwelling older adults. Furthermore, these results are consistent with a Thai study²¹, which found that the ability to perform activities of daily living significantly predicted happiness in older adults (OR=0.20, 95% CI=.01-.39).

Income levels can predict happiness among older adults. Specifically, higher income correlates with increased happiness in the elderly population. Elderly people who earn more money are able to access resources, healthcare, and other comforts, which leads to more happiness. This finding aligns with the study²³, which examined happiness determinants among Romanian elderly and found that higher income levels positively influenced happiness in older adults. Similarly, The Determinant Factors of Life Happiness of Elderly in Rural Area, Northeast Thailand²⁴, identified income as one of the key factors determining happiness among rural elderly populations.

Self-efficacy can predict happiness among older adults. Higher levels of self-efficacy correlate with increased happiness in the elderly population. This finding aligns with Bandura's Self-Efficacy Theory²⁵, which explains that an individual's belief in their capabilities influences their thoughts, feelings, motivation, and behavior. When older adults possess high self-efficacy, they demonstrate greater confidence in performing activities, show persistence in facing obstacles, and feel more in control of their situations - all of which are fundamental to life satisfaction.^{26,27} This relationship can be attributed to older adults' enhanced perception of their ability to perform activities independently, which leads to increased self-worth. As older adults recognize their capacity to accomplish various tasks autonomously, their sense of self-value increases, ultimately contributing to greater happiness. This finding aligns with the study²⁸, which found that self-worth could predict happiness among Thai elderly populations - specifically, increased self-worth corresponded with higher levels of happiness. Similarly, research²⁹ demonstrated that self-efficacy was a significant predictor of current

happiness levels among Spanish older adults. A limitation of this study was the relatively low explanatory power of the regression model ($R^2 = 15.5\%$), indicating that 84.5% of the variance in happiness was explained by factors not included in the model. Unmeasured variables such as spirituality, neighborhood environment, or cultural context may play important roles in shaping the well-being of older adults and should be considered in future research.

CONCLUSION

The study revealed that reinforcing factors, ADL score, income, and self-efficacy collectively influenced the happiness of the elderly in Samut Songkhram Province, accounting for 15.46% of the variance. Elderly individuals with strong social support, greater independence in daily activities, higher income, and stronger self-efficacy reported higher happiness levels. Therefore, promoting social support and community involvement is essential to help elderly individuals feel valued and maintain their societal roles. In addition, encouraging independent living through improved functional ability, supporting income generation via skill development and resource access, and fostering self-efficacy through counseling and empowerment opportunities will create a favorable environment that enhances happiness and life satisfaction among older adults.

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