ORIGINAL ARTICLE

Exploring predictive factors of family relationships among older adults: a study in community settings

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ABSTRACT

This cross-sectional study aimed to identify predictive factors of family relationships among older adults in Ban Rong Subdistrict, Ngao District, Lampang Province. A total of 450 older adults were selected using multi-stage random sampling. Data were gathered from May to June 2024 through structured interviews. Descriptive and multiple linear regression analyses were performed to identify predictors of family relationships. Results indicated that the sample was predominantly female (mean age = 70.23 years), educated at the primary level, married, and engaged in agricultural occupations. The most common comorbidity was hypertension, while most participants reported having sufficient income. Social support emerged as the primary predictor of family relationships ($\beta = 0.493$, $p < 0.001$), followed by self-efficacy ($\beta = 0.171$, $p < 0.001$), income sufficiency ($\beta = 0.130$, $p = 0.001$), and leisure activities ($\beta = 0.118$, $p = 0.001$). These factors collectively accounted for 44.2% of the variance in family relationships ($R^2 = 0.442$). These findings underscore the importance of targeting social support to enhance family dynamics among older adults in community settings. Strengthening support mechanisms, advocating for health-promotion policies, and fostering an environment that encourages self-efficacy and leisure activities may collectively improve the quality of life and well-being of older adults in Thailand.

Keywords:
predictive factors, family relationships, older adults, community

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INTRODUCTION

The global population is aging rapidly. By 2030, one in six individuals will be over 60, increasing from 1 billion in 2020 to 2.1 billion by 2050.[1] In Thailand, older adults constituted about 19% of the population in 2021, a figure projected to reach 28% by 2040. This demographic shift has led to an "aging society"[2] and presents heightened challenges in healthcare, social support, and family relationships among older adults.[3]

Family relationships play a crucial role in the well-being of older adults, encompassing physical health, mental health, emotional stability, and overall quality of life.[1,4] Family relationships are multidimensional, encompassing emotional closeness, communication patterns, family roles and expectations, and conflict management.[5] Strong family relationships foster psychological resilience, reduce social isolation, and enhance life satisfaction, whereas fragile or conflict-prone relationships may contribute to psychological distress, depression, and a diminished quality of life. [6,7]

Several factors influence the quality of family relationships among older adults. Family structure and living arrangements are key, with multigenerational households often facing greater intergenerational tensions than nuclear families.[8] Social support is essential for emotional security, reducing stress, and fostering a sense of belonging.[4] Furthermore, the impact of leisure activities and exercise behaviors has been noted in improving mental health and overall family relationships.[9] Self-efficacy, or an individual's belief in their ability to engage with others, plays a significant role in shaping family dynamics. Higher levels of self-efficacy are linked to more effective communication and stronger familial interactions.[10] Economic factors, such as income sufficiency and financial stability, also affect family relationships. Adequate income reduces financial stress and supports mutual caregiving, while financial instability may strain relationships by increasing dependency.[11] Health status is crucial; healthy older adults engage more actively in family life, whereas those with chronic illness or dependency may shift their role from caregivers to care recipients, adding to the caregiving burden and altering family dynamics.[12]

In the Thai socio-cultural context, values such as filial piety and intergenerational expectations play a significant role in shaping family relationships.[13] While existing research has examined family dynamics among older adults, it often focuses on isolated factors without considering the interplay of multiple predictors within community settings.[14] Additionally, studies have predominantly concentrated on urban or institutionalized populations, leaving a gap in research on older adults residing in rural areas.[8] Investigating these factors is essential for informing policies and interventions that strengthen family ties and enhance the quality of life for older adults in Thailand.

METHODS

Study design and population

This cross-sectional descriptive study intended to investigate factors associated with family relationships among older adults aged 60 years and above, residing in Ban Rong Subdistrict, Ngao District, Lampang Province, Thailand. The study focused on community-dwelling older adults accessing services at Ban Sab Pon Subdistrict Health Promoting Hospital.

Sample size and sampling procedure

The sample size was determined using multi-stage cluster sampling, which is appropriate for studies involving group-level variables. Initially, the sample size was calculated using Daniel's formula,[15] resulting in a required sample size of 302 participants. To ensure sufficient statistical

power and account for potential incomplete responses and missing data, the research team increased the sample size by approximately 50%, resulting in a final sample size of 450 participants. This adjustment is based on an anticipated non-response rate of 30%, which aligns with response rates commonly reported in similar community-based studies.[16] By increasing the sample size, the researchers aim to maintain the study's reliability and validity, ensuring that the final number of completed responses remains adequate for robust statistical analysis despite potential attrition and missing data.

Ban Rong Subdistrict, under the service area of Ban Sab Pon Subdistrict Health Promoting Hospital, comprises eight villages. Villages were treated as sampling units, with the sample proportionally distributed based on the number of older adults in each village. Six villages were randomly selected using simple random sampling. The sampling process involved the following steps and considered the following criteria:

Step 1: The total sample of 450 participants was distributed across the selected villages according to the proportion of older adults in each village.

Step 2: A lottery-style sampling without replacement was conducted to randomly select older adults from the official registry of older residents in the selected villages.

Step 3: The randomly selected names were compiled into a list of participants for data collection.

Inclusion Criteria

1. Aged 60 years or older, both male and female
2. Able to communicate in and understand the Thai language
3. Willing to participate in the study
4. Residing in the study area for at least six months before the data collection
5. Not living alone
6. Not burdened by multiple chronic conditions or disabilities that affect daily functioning, including bedridden status or significant dependency.

Exclusion Criteria

1. Residing in the study area for less than six months before the data collection
2. Living alone.
3. Having significant emotional or psychological issues that could impede participation in the study

Measurement instruments

The research employed a structured interview format divided into five sections:

1. General Information Interview: This section gathered personal demographic data, including gender, age, education, marital status, occupation, average family income, adequacy of income, chronic illnesses, type of residence, family structure, type of housing, family roles, education level of the family head, primary income-generating activities, leisure activities, health behaviors, and access to health and welfare information.

2. Thai Mental Health Indicator Short Version (TMHI-15): Developed by the Department of Mental Health, Ministry of Public Health, this 15-item scale demonstrated a Cronbach's alpha coefficient of 0.70 and a validity coefficient of 0.66 compared to the complete version (TMHI-66).[17] It assesses various aspects of mental health, including mental state, mental capacity, mental quality, and supporting factors. Responses are rated on a 4-point Likert scale. Scores are interpreted based on the following: 51–60 points indicate better mental health than average (Good); 44–50 points mean average mental health (Fair); and 43 points or below indicate poorer mental health than average (Poor).

3. Self-Efficacy Perception Interview: Adapted from Pissamorn et al. (2018),[10]

this 10-item scale uses a 5-point rating scale to assess participants' self-efficacy perceptions, measuring their beliefs about their abilities from the least to the most competent. Scoring interpretations are as follows: a mean score between 3.68–5.00 indicates a high level of self-efficacy, a mean score between 2.34–3.67 reflects a moderate level of self-efficacy, and a mean score between 1.00–2.33 signifies a low level of self-efficacy.

4. Social Support Assessment Interview: Developed based on a literature review, and relevant research in accordance with House's (1987) concepts,[18] this 19-item questionnaire evaluates participants' feelings and perceptions regarding social support across several domains: emotional support, resource support, informational support, and appraisal support. Responses are rated on a 5-point Likert scale. The scoring interpretations are as follows: a mean score between 3.68–5.00 indicates high levels of social support, a mean score between 2.34–3.67 reflects moderate levels of social support, and a mean score between 1.00–2.33 signifies low levels of social support.

5. The Family Attachment Changeability Index 8 (FACI8): Adapted for assessing family relationships in this study, as outlined by McCubbin et al. (1996)[19] and further refined by Chompikul et al. (2009),[20] this 41-item rating scale is divided into three levels and covers closed and open-ended questions. The questions address four main areas: time spent engaging in activities together as a family; communication, consultation, and decision-making on important family matters; expression of love and care among family members through actions, words, and feelings; and adherence to appropriate roles and responsibilities within the family. The overall scores were categorized using percentile rankings into three levels: scores below the 25th percentile (34–91) indicate poor relationships, scores between the 25th and 75th percentiles (92–99) indicate moderate relationships and scores above the 75th percentile (100–102) represent good relationships.

Data collection

This study was approved by the Human Research Ethics Committee of Boromarajonani College of Nursing, Lampang (No. E2567-030, April 5, 2024). Following this approval, data collection was conducted from May to June 2024. A list of elderly participants was obtained through non-replacement sampling from six villages serviced by Ban Sab Pon Subdistrict Health Promoting Hospital, in collaboration with the District Health Office and local community leaders. The research team coordinated with community health volunteers (CHVs) to explain the research objectives and details, securing permission for data collection and assistance in scheduling preliminary meetings with participants. Participants were invited to join the study via an explanatory letter and a consent form. Interviews were conducted at the Ban Sab Pon Subdistrict Health Promoting Hospital, lasting approximately 20–30 minutes each. After each interview, questionnaires were reviewed for completeness, and follow-up interviews were carried out as needed to reach the required sample size.

Data analysis

The data analysis began with using statistical software and then applying descriptive statistics, such as frequency, percentage, mean, and standard deviation to summarize the demographic factors. Relationships among variables were examined using chi-square tests for categorical variables and Pearson correlation coefficients for continuous variables. For predictive analysis, multiple linear regression was applied with a significance threshold set at $p < 0.05$. Preliminary checks included tests for multicollinearity, ensuring tolerance values greater than 0.2 and variance inflation

factor (VIF) values below 4, which indicated no multicollinearity issues. The Durbin-Watson statistic was used to test for autocorrelation, while the Shapiro-Wilk test confirmed the normality of data distribution. A stepwise approach was employed to select variables for the regression model based on their theoretical relevance and statistical significance. Variables demonstrating significant linear relationships in univariate analyses were incorporated into the model. Residuals were evaluated to ensure independence and homoscedasticity, with results confirming that the regression model met all key assumptions, thereby supporting its validity.

RESULTS

The study, which included 450 older adults, demonstrated that 54.2% exhibited moderate family relationships, with an average score of 94.8 (SD = 6.1). Most participants were female (59.6%), with an average age of 70.2 years (SD = 7.8). Educationally, 88.9% had received some form of education, and 69.3% were married. Employment data indicated that 48.0% were engaged in agriculture, with an average monthly income of 5,097 baht (SD = 6,907.8), and 72.9% reported having sufficient income. Health assessments showed that 60.0% experienced health problems, while 93.3% lived with family members, primarily in nuclear family structures (73.3%). In terms of family roles, 61.1% identified as heads of households, and leisure activities were dominated by listening to music (37.3%). Health behaviors indicated high rates of non-smoking (90.4%) and regular exercise (90.9%). Most participants (65.6%) had state health insurance, and 49.5% functioned at a normal mental health level. Notably, 54.4% reported high self-efficacy, and 87.1% indicated strong social support. The analysis highlighted that strong family relationships were particularly prevalent among specific demographics: females (59.6%), older adults aged 60–69 years (54.7%), and those with primary education (52.8%). Marital status and employment status were also significant, with married participants (55.1%) and employed participants (54.9%) showing robust familial ties. Income levels were linked to relationship strength, particularly among those earning 4,001–6,000 baht (58.7%). Additionally, individuals without health issues (48.9%) and those living with family (55.5%) reported stronger family dynamics.

The analysis of the preliminary relationships between the examined variables and the levels of family relationships among older adults revealed eight factors with statistically significant associations ($p < 0.05$) . These factors include income sufficiency, medical problems, leisure activities, alcohol consumption, exercise, mental health status, self-efficacy, and social support. Contrarily, several factors, including age, education, marital status, occupation, income, living arrangement, family structure, family role, smoking, and healthcare benefits, lacked significant relationships with family relationship levels. This distinction underscores the complexity of family dynamics in the context of aging and highlights specific areas where interventions may be beneficial (Table 1).

Table 1. Descriptive Statistics of Personal Data and Relationships of Various Factors with Family Relationships among Older Adults (n=450)

Variables	N (%)	Family Relationships			χ^2	p-value
		Poor	Moderate	Good		
Overall $\bar{x}$ = 94.8, SD = 6.06, Min = 64, Max = 102		107(23.8)	244(54.2)	99(22.0)		
Gender					4.073	0.130
Male	182(40.4)	49(26.9)	101(55.5)	32(17.6)		
Female	268(59.6)	58(21.6)	143(53.4)	67(25.0)		
Age $\bar{x}$ = 70.2, SD = 7.8, Min = 60, Max = 99					1.176	0.882
60-69 years	254(56.4)	63(24.8)	139(54.7)	52(20.5)		
70-79 years	135(30.0)	31(23.0)	73(54.0)	31(23.0)		
≥ 80 years	61(13.6)	13(21.3)	32(52.5)	16(26.2)		
Education					3.279	0.194
Uneducated	50(11.1)	8(16.0)	33(66.0)	9(18.0)		
Educated	400(88.9)	99(24.8)	211(52.8)	90(22.4)		
Marital Status					4.256	0.372
Married	312(69.3)	71(22.8)	172(55.1)	69(22.1)		
Single	38(8.4)	7(18.4)	19(50.0)	12(31.6)		
Widowed/ Divorced/ Separated	100(22.2)	29(29.0)	53(53.0)	18(18.0)		
Occupation					0.652	0.722
Unemployed	153(34.0)	35(22.9)	81(52.9)	37(24.2)		
Employed	297(66.0)	72(24.2)	163(54.9)	62(20.9)		
Income (per month $\bar{x}$ = 5,097.0, SD = 6,907.8, Min = 600, Max = 10,000)					11.791	0.067
≤ 2,000 Baht	50(11.1)	18(36.0)	23(46.0)	9(18.0)		
2,001–4,000 Baht	200(44.4)	40(20.0)	104(52.0)	56(28.0)		
4,001–6,000 Baht	143(31.8)	35(24.5)	84(58.7)	24(16.8)		
≥ 6,000 Baht	57(12.7)	14(24.6)	33(57.9)	10(17.5)		
Income Sufficiency					32.881	< 0.001**
Sufficient	328(72.9)	57(17.4)	184(56.1)	87(26.5)		
Insufficient	122(27.1)	50(41.0)	60(49.2)	12(9.8)		
Medical Problems					6.151	0.046*
Yes	270(60.0)	65(24.1)	156(57.8)	49(18.1)		
No	180(40.0)	42(23.3)	88(48.9)	50(27.8)		
Living Arrangement					5.083	0.079
Living with family members	420(93.3)	99(23.6)	233(55.4)	88(21.0)		
Living alone	30(6.7)	8(26.7)	11(36.6)	11(36.7)		
Family Structure					0.149	0.928
Nuclear family	330(73.3)	80(24.2)	178(53.9)	72(21.9)		
Extended family	120(26.7)	27(22.5)	66(55.0)	27(22.5)		
Family Role					3.965	0.411
Head of the family	275(61.1)	65(23.6)	149(54.2)	61(22.2)		

Variables	N (%)	Family Relationships			χ^2	p-value
		Poor	Moderate	Good		
Husband/ Wife of the head of the family	148(32.9)	32(21.6)	81(54.7)	35(23.6)		
Others	27(6.0)	10(37.0)	14(51.9)	3(11.1)		
Leisure Activities					41.012	<0.001**
Exercise	114(25.3)	19(16.7)	52(45.6)	43(37.7)		
Watching movies	90(20.0)	15(16.7)	48(53.3)	27(30.0)		
Listening to music	168(37.3)	44(26.2)	103(61.3)	21(12.5)		
Others	78(17.3)	29(37.2)	41(52.6)	8(10.3)		
Smoking					4.972	0.083
Smoking	43(9.6)	16(37.2)	18(41.9)	9(20.9)		
Non-smoker	407(90.4)	91(22.4)	226(55.5)	90(22.1)		
Alcohol consumption					8.737	0.013*
Drinker	116(25.8)	35(30.2)	66(56.9)	15(12.9)		
Non-drinker	334(74.2)	72(21.6)	178(53.3)	84(25.1)		
Exercise					6.194	0.045*
Never	41(9.1)	6(14.6)	20(48.8)	15(36.6)		
Have exercised	409(90.9)	101(24.7)	224(54.8)	84(20.5)		
Healthcare Benefits					6.199	0.185
Civil servant benefits	56(12.4)	12(21.4)	34(60.7)	10(17.9)		
Gold card benefits	295(65.6)	72(24.4)	149(50.5)	74(25.1)		
Others	99(22.0)	23(23.2)	61(61.6)	15(15.2)		
Mental Health Status $\bar{x}$ = 48.82, SD = 4.90, Min = 1, Max = 3					47.627	<0.001**
Below-normal level	61(13.6)	35(57.4)	21(34.4)	5(8.2)		
Normal level	223(49.5)	43(19.3)	133(59.6)	47(21.1)		
Above-normal level	166(36.9)	29(17.5)	90(54.2)	47(28.3)		
Self-Efficacy $\bar{x}$ = 2.51, SD = 0.55, Min = 1, Max = 3					27.859	<0.001**
Moderate Level	205(45.6)	71(34.6)	103(50.3)	31(15.1)		
High Level	245(54.4)	36(14.7)	141(57.5)	68(27.8)		
Social Support $\bar{x}$ = 2.85, SD = 0.39, Min = 1, Max = 3					78.428	<0.001**
Moderate Level	58(12.9)	40(69.0)	18(31.0)	0(0.0)		
High Level	392(87.1)	67(17.1)	226(57.6)	99(25.3)		

* $p < 0.05$, ** $p < 0.001$

Table 2. Multiple Regression Analysis of Family Relationships in Elderly Individuals (n = 450)

Predictor variables	B	SE	β	t	p-value	Tolerance	VIF
Income Sufficiency	1.768	.526	.130	3.361	0.001*	.839	1.191
Leisure Activities	1.781	.537	.118	3.319	0.001*	.996	1.004
Self-Efficacy	1.870	.483	.171	3.870	<0.001**	.642	1.558
Social Support	5.491	.468	.493	11.725	<0.001**	.711	1.407

Constant = 63.960, R = 0.665, R^2 = 0.442, F = 11.014, * p < 0.05, ** p < 0.001

This study examines the factors significantly associated with family relationships among older adults, concentrating on eight predictor variables: income sufficiency, medical health problems, leisure activities, alcohol consumption, exercise, mental health status, self-efficacy, and social support. Using multiple linear regression analysis, four variables were identified as having a statistically significant positive influence on family relationships ($p < 0.05$). All variables in the model exhibited no signs of multicollinearity, as indicated by tolerance values greater than 0.2 and variance inflation factor (VIF) values less than 4. This suggests that the independent variables are sufficiently independent of one another, thereby ensuring the validity of the regression analysis. The predictive equation developed for estimating family relationships in older adults residing in Ban Rong Subdistrict, Ngao District, Lampang Province, Thailand, is presented in Table 2:

$$\text{Family Relationships} = 63.960 + 1.768(\text{Income Sufficiency}) + 1.781(\text{Leisure Activities}) + 1.870(\text{Self-Efficacy}) + 5.491(\text{Social Support})$$

The analysis identified vital predictors of family relationships among older adults, with social support emerging as the most significant factor ($\beta = 0.493$, $p < 0.001$), greatly enhancing relationship quality. Self-efficacy ($\beta = 0.171$, $p < 0.001$) also positively influenced family dynamics. Other notable predictors included income sufficiency ($\beta = 0.130$, $p = 0.001$) and leisure activities ($\beta = 0.118$, $p = 0.001$). Specifically, older adults with sufficient income demonstrated a 1.768 unit increase in family relationships, while engagement in leisure activities, particularly watching movies, correlated with a 1.781 unit increase. A 1 unit increase in self-efficacy was associated with a 1.870 unit increase in family relationships, whereas a 1 unit increase in social support resulted in a 5.491 unit increase. Overall, social support had the strongest influence, accounting for 44.2% of the variance in family relationships ($R^2 = 0.442$). These findings emphasize the importance of enhancing social support to improve family dynamics among older adults in the region (Table 2).

DISCUSSION

This study identified key factors influencing family relationships among older adults in Ban Rong, a rural community in Lampang Province. Most older adults in this area live in multi-generational households, where community relationships significantly shape family dynamics. Rural settings often exhibit stronger social cohesion than urban areas due to traditional caregiving roles and close-knit social environments.[14] Older adults in these settings experience distinct social and health conditions compared to urban populations, influenced by variations in living arrangements and healthcare

access. Health-related factors, such as chronic illnesses and dependency, were examined, revealing unique patterns. Despite a high prevalence of chronic diseases, older adults in rural areas reported moderate to high levels of family relationships. This contrasts with findings in urban settings, where chronic illness is often linked to lower family relationship quality.[21] The discrepancy may result from the robust family support systems in rural areas, where caregiving responsibilities are shared among family members.[12] Further investigation into living conditions, healthcare accessibility, and traditional caregiving practices can enhance the contextual understanding and generalizability of these findings.

Additionally, income sufficiency significantly correlates with the family relationships of older adults ($p < 0.001$). Older adults with sufficient income tend to have better family relationships compared to those with insufficient income. Financial stability fosters strong family ties by alleviating financial stress, which negatively impacts relationships, especially in families with elderly members.[22] Stronger family relationships can positively predict health outcomes, facilitated by emotional support, practical assistance, and information provided by family members.[23] Economic support from family members also contributes to improved physiological functioning.[11] Moreover, financial assistance correlates with enhanced satisfaction among older adults, reflecting a parent-child relationship characterized by emotional support and life satisfaction.[24] Higher-income and social security reduce loneliness and depression scores, underscoring the necessity for older adults to have a minimum income or appropriate social security.[25] In addition, some studies utilizing multivariable logistic regression indicate that low income, being unmarried, being male, and lower education levels significantly correlate with social isolation.[26]

Leisure activities significantly correlate with family relationships among older adults ($p < 0.001$). Common leisure activities for this age group include listening to music, exercising, and watching movies. Those who are self-sufficient tend to engage in various leisure activities, which fosters better family relationships by creating opportunities for communication and shared experiences.[27] A study of older adults with spouses found that increased marital satisfaction was associated with higher participation rates in physical activities, travel, and volunteering.[28] The quality of relationships between elderly women and their family members is particularly sensitive to the physical health and activity levels of older adults.[29-30]

Self-efficacy in older adults significantly impacts family relationships ($p < 0.001$). Those who perceive themselves as capable tend to have better relationships with family members. This finding aligns with Bandura's self-efficacy theory,[31] which emphasizes that positive family relationships, life skills, and adaptability are statistically significant factors positively correlated with the self-sufficiency of older adults. A strong sense of self-efficacy is essential for fostering healthy family relationships, enhancing the ability to care for oneself, and improving communication with family members.[27] Conversely, negative family dynamics can diminish happiness and self-worth, particularly affecting elderly women.[32] Self-sufficiency in older adults often arises from a robust sense of self-efficacy, contributing to an improved quality of life[31] and facilitating healthier aging compared to merely engaging in health-promoting behaviors.[28]

Social support emerged as a significant predictor of family relationships among older adults, consistent with

previous research.[33] Numerous studies indicate that adequate social support is closely associated with better family relationships, reduced stress, and improved mental health.[4] Conversely, insufficient social support or reduced participation in social activities is linked to loneliness and social isolation, which may lead to depression.[34] The findings highlighted emotional and instrumental support as key dimensions frequently mentioned by participants, reflecting the close-knit family structures in the study area.[4] This aligns with earlier research indicating that rural older adults tend to rely more on family for emotional and practical support, while their access to informational resources remains limited.[35] The social support theory postulates that emotional and instrumental support is crucial for sustaining strong family ties, particularly in caregiving contexts.[18] Emotional support has been found to enhance life satisfaction among older adults, while family support plays a greater role in promoting health and longevity compared to assistance from friends or neighbors.[36-37] Enhancing access to broader social support networks could improve older adults' quality of life.[38] Community-based interventions focusing on providing health information could bridge the gap in informational support and contribute to improved family relationships. Further studies that explore these dimensions using qualitative methods to gain a more comprehensive understanding of social support in rural communities are recommended.

RECOMMENDATION

The study found that income sufficiency, leisure activities, health perception, and social support predict only 44.2% of family relationships among older adults. This suggests that additional factors are at play, warranting further research into elements such as communication quality, emotional support, and the social environment, as these factors significantly influence family dynamics and interactions. Understanding these variables could improve family relationships and overall well-being for the elderly.

CONCLUSION

This study examines the predictive factors influencing family relationships among older adults in Ban Rong, Ngao District, Lampang Province, utilizing a sample of 450 individuals. Key findings indicate that social support is the primary predictor ($\beta = 0.493$, $p < 0.001$), followed by self-efficacy, income sufficiency, and leisure activities. The model accounts for 44.2% of the variance in family relationships ($R^2 = 0.442$). These results underscore the importance of enhancing social support to improve familial dynamics and overall well-being among the elderly. The findings provide critical insights for policymakers aiming to foster a better quality of life and promote social integration for older adults.

AUTHOR CONTRIBUTIONS

Y.T., P.S.: Conceptualization. P.S., N.P.: Methodology. Y.T., S.S., P.R.: Data Curation. P.S., M.M., N.P., T.S.: Formal analysis. Y.T., P.S.: Writing - Original Draft. P.S., N.P.: Writing - Review & Editing. P.S.: Supervision.

ETHICAL CONSIDERATION

This study was conducted in accordance with the ethical principles of the Declaration of Helsinki. The research protocol was reviewed and approved by the Human Research Ethics Committee of Boromarajonani College of Nursing, Lampang, Thailand (Approval No. E2567-030; Date of approval: 5 April 2024). All participants provided written informed consent before participating in the study. Confidentiality and anonymity were strictly

maintained, and all information was used solely for research purposes.

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REFERENCES

1. World Health Organization. Ageing and health [Internet]. 2022 [Cited 2024 Sep 2]. Available from: https://www.who.int/news-room/fact-sheets/detail/ageing-and-health
2. National Statistical Office of Thailand. The 2021 Survey of the Elderly Population in Thailand: Provincial Statistical Tables [Internet]. Bangkok: NSO; 2022 [Cited 2024 Sep 2]. Available from: https://www.nso.go.th/nsoweb/storage/survey_detail/2023/20230731135832_95369.pdf
3. Milkie MA, Bierman A, Schieman S. How adult children influence older parents' mental health: Integrating stress-process and life-course perspectives. Soc Psychol Q. 2008; 71(1):86-105.
4. Thanakwang K, Soonthorndhada K. Mechanisms by which social support networks influence healthy aging among Thai community-dwelling elderly. J Aging Health. 2011;23(8): 1352-78. doi: 10.1177/0898264311418503.
5. Olson DH. Circumplex model of marital and family systems. J Fam Ther. 2000;22:144-167. doi: 10.1111/1467-6427.00144.
6. Li W, Sun H, Xu W, Ma W, Yuan X, Wu H, Kou C. Leisure activity and cognitive function among Chinese old adults: The multiple mediation effect of anxiety and loneliness. J Affect Disord. 2021;294:137-42. doi: 10.1016/j.jad.2021.07.051.
7. Wang J. The longitudinal relationship between leisure activities and depressive symptoms among older Chinese adults: an autoregressive cross-lagged analysis approach. BMC Public Health. 2024;24:763. doi: 10.1186/s12889-024-18293-4.
8. Bražinová I, Chytil O. The family as a source of social support for older adults: Implications for gerontological social work. J Soc Work. 2024;24(3):339-56. doi: 10.1177/14680173231222612
9. Kuang-Chung W, Cheng-En W. Effects of exercise behavior, social cohesion, and social support on health behaviors in older adults: intervention in a multi-component exercise program. J Community Med Public Health. 2023; 7:301. doi: 10.29011/2577-2228.100301.
10. Pissamorn C, Chaipin E, Prasansri A, Thammakawinwong N. Private funding research: application of self-efficacy theory on health behaviors of elderly in Lampang Province [Internet]. Lampang: Lampang Rajabhat University; 2018 [cited 2024 Mar 8]. Available from: https://research.lpru.ac.th/upload/certificate/64a396cff00b51344.pdf.
11. Shu Z, Xiao J, Dai X, Han Y, Liu Y. Effect of family" upward" intergenerational support on the health of rural elderly in China: Evidence from Chinese Longitudinal Healthy Longevity Survey. PLoS One. 2021; 16(6):1932-6203. doi: 10.1371/journal.pone.0253131.
12. Mefteh KY, Shenkute BK. Experience of rural family caregivers for older

adults in co-residential family care arrangements in central Ethiopia: motives of family caregivers in reciprocal relationship. Patient Prefer Adherence. 2022;16:2473-2482. doi: 10.2147/ PPA.S378153.
13. Sringernyuang L, Felix MS, Torut B, Wongjinda S, Chaimongkol U, Wongjinda T. Thailand: case studies of filial piety, family dynamics, and family finances-unexpected findings of a country-wide research of the evaluation of project performance supported by older persons fund. Asia-Pac Soc Sci Rev. 2020;20(1):13. doi: 10.59588/2350-8329.1289.
14. Lalani N, Katare B, Wagle S, Yang S. Rural family caregiving: Promoting self-care and well-being of rural female caregivers of frail older family members. Innov Aging. 2024;8(Suppl 1):560. doi: 10.1093/geroni/igae098. 1831.
15. Daniel WW. Biostatistics: a foundation for analysis in the health sciences: Wiley; 1978.
16. Krejcie RW, Morgan DW. Determining Sample Size for Research Activities. Educational and Psychological Measurement. 1970;30(3):607-610.
17. Mongkol A, Wongphirumthasan Y, Tangseree T, Hattapanom W, Romsai P, Jutha W. Research report on the development and testing of the Thai mental health indicator (Version 2007). Nonthaburi: Department of Mental Health, Ministry of Public Health; 2009.
18. House JS, Kahn RL. Measures and concepts of social support. In: Cohen S, Syme SL, editors. Social Support and Health. San Diego: Academic Press; 1985. p. 83-108.
19. McCubbin H, Thompson A, Elver K. Family attachment and changeability index 8 (FACI8). Family assessment: Resiliency, coping and adaptation: Inventories for research and practice. 1996:725-51.
20. Chompikul J, Suthisukon P, Sueluerm K, Dammee D. Relationship in Thai families. Nakhon Pathom: ASEAN Institute for Health Development, Mahidol University; 2009.
21. Jumneansuk A, Detboon P, Mingmai K, Phophak S, Phoha S, Phanitcharoen S. Quality of life of older adults with chronic diseases in Si Chomphu District, Khon Kaen Province. Ratchaphruek J. 2017;15(2):16-26.
22. Yuanfeng L, Xu Z. Active aging and health among older adults in China: a perspective based on downward intergenerational economic support. Front Public Health. 2024;12. doi: 10.3389/fpubh.2024.1337829.
23. Stevenson C, Wakefield JRH, Kellezi B, Stack RJ, Dogra S. Families as support and burden: A mixed methods exploration of the extent to which family identification and support predicts reductions in stress among disadvantaged neighbourhood residents. J Soc Pers Relat. 2022;39(4): 886-907. doi:10.1177/0265407521105 0071.
24. Peng C, Kwok CL, Law YW, Yip PSF, Cheng Q. Intergenerational support, satisfaction with parent–child relationship and elderly parents' life satisfaction in Hong Kong. Aging Ment Health. 2019;23(4):428-38. doi: 10.1080/13607863.2017.1423035.
25. Aylaz R, Aktürk Ü, Erci B, Öztürk H, Aslan H. Relationship between depression and loneliness in elderly and examination of influential factors. Arch Gerontol Geriatr. 2012;55(3):548-54. doi: 10.1016/j.archger.2012.03.006.
26. Cudjoe TKM, Roth DL, Szanton SL, Wolff JL, Boyd CM, Thorpe RJ, Jr. The Epidemiology of Social Isolation: National Health and Aging Trends Study. J Gerontol B Psychol Sci Soc Sci. 2018;75(1):107-13. doi: 10.1093/ geronb/gby037.
27. Itthichoti N, Sawangsopakul B. Life skill, adaptation, family relationship

and self-reliance of the elderly at the elderly club in Bang Mueang municipal district, Samut Prakan province. Valaya Alongkorn Rev. 2019;9(1):1-17.
28. Kim J. Marital Satisfaction, Gender, and Active Social Engagement in Older Adults: Longitudinal Evidence From South Korea. J Gerontol B Psychol Sci Soc Sci. 2023;78(12):2090-101. doi: 10.1093/geronb/gbad145.
29. Shane J, Luerssen A, Carmichael CL. Friends, family, and romantic partners: Three critical relationships in older women's lives. J Women Aging. 2021;33(4):378-95. doi: 10.1080/08952841.2020.1838238.
30. Czaja SJ, Boot WR, Charness N, Rogers WA, Sharit J. Improving Social Support for Older Adults Through Technology: Findings From the PRISM Randomized Controlled Trial. Gerontologist. 2017;58(3):467-77. doi: 10.1093/geront/gnw456.
31. Bandura A. Self-efficacy: Toward a unifying theory of behavioral change. Psychological Review. 1977;84(2):191-215. doi: 10.1037/0033-295X.84.2.191.
32. Fiori KL, Rauer A. The how, when, and where of women's social relationships later in life. J Women Aging. 2021;33(4):345-6. doi: 10.1080/08952841.2021.1946263
33. Qureshi A, Tariq S, Mubeen B. Social support as predictor of life satisfaction in older adults. J Prof Appl Psychol. 2023;4(1):53-60. doi: 10.52053/jpap.v4i1.121.
34. Tingchum P, Changmai S, Toskulkao T. The Effects of a Social Support Program on the Loneliness and Well-being of Older Persons. NJPH [Internet]. 2022 [cited 2025 Jan 3]. Available from: https://he02.tci-thaijo.org/index.php/tnaph/article/view/257457.
35. Kandee P, Sukwong P, Weiangkham D. Perceived social support of community-dwelling rural elderly in northern Thailand. J Ment Health Thailand. 2016;23(2):88-97 [cited 2025 Jan 5]. Available from: https://he01.tci-thaijo.org/index.php/jmht/article/download/63588/52202/.
36. Ye L, Zhang X. Social Network Types and Health among Older Adults in Rural China: The Mediating Role of Social Support. Int. J. Environ. Res. Public Health. 2019;16(3):1-14. doi: 10.3390/ijerph16030410.
37. Piechota A, Ali T, Tomlinson JM, Monin JK. Social participation and marital satisfaction in mid to late life marriage. J Soc Pers Relat. 2021;39(4):1175-88. doi: 10.1177/0265407521105 6289.
38. Social Capital and Successful Aging: The Role of Senior Housing. Ann Intern Med. 2003;139(5):395-9. doi: 10.7326/0003-4819-139-5_Part_2-200309021-00003.