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Factors Influencing Depression Among Older Adults with Chronic Illnesses in a Rural Subdistrict of Lower Northeastern Thailand

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Abstract:

Objective: This study aimed to investigate the factors influencing depression among older adults with chronic illnesses in a rural subdistrict of Lower Northeastern Thailand.

Material and Methods: A cross-sectional analytical study investigated factors influencing depression among older adults with chronic illnesses. The study was conducted among 229 older adults with chronic illnesses. The data were collected from August to September 2024 using an interview form developed by the researchers. Data were analyzed using descriptive statistics, including frequencies, percentages, means, standard deviations, and medians. Inferential statistics, including Pearson's correlation and stepwise multiple regression analysis were used to identify factors influencing depression.

Results: The results indicated that a majority of the older adults experienced moderate levels of depression (Mean=23.03, S.D.=3.36). The three significant predictive factors influencing depression among older adults with chronic illnesses were 1) psychological factors (β=0.259, p-value<0.001), 2) stressful life events (β=0.222, p-value<0.001), and 3) social support (β=-0.348, p-value<0.001). The combination of these three factors predicted up to 18.1% (adjusted R^2=0.181, p-value<0.001) of depression among older adults with chronic illnesses, with statistical significance at the 0.05 level.

Conclusion: The findings highlight the need for culturally responsive mental health care that strengthens psychological resilience, enhances social support, and helps manage life stressors among older adult Thais with chronic illnesses in the lower Northeast.

Keywords: chronic illnesses, depression, older adults, rural Thailand

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Introduction

Worldwide, people are living longer, and most can now expect to live into their sixties or beyond. Every country is experiencing growth in the number and proportion of older adults. By 2030, one in six people globally will be aged 60 or older, increasing from 1 billion in 2020 to 1.4 billion, and reaching 2.1 billion by 2050. The number of people aged 80 and above will triple to 426 million during the same period. Although population aging first emerged in high-income countries, the fastest growth is now seen in low- and middle-income countries, where two-thirds of the world's older population will reside by 2050[1].

Thailand is undergoing rapid demographic change, with older persons accounting for 10.0% of the population in 2021 and projected to rise to 28.0% by 2035. In 2023, older adults represented 20.08% of the total population, with Lower Northeastern Thailand accounting for a significant proportion at 19.21%[2]. Many older adults, particularly those who are homebound or bedridden, face health problems such as cerebrovascular disease, diabetes, hypertension, dementia, and falls, leading to loss of healthy life years and higher healthcare costs[3].

Mental health is another major concern, with around 14.0% of people aged 60 and above suffering from conditions such as depression and anxiety[4]. Such mental health conditions are often underdiagnosed and undertreated due to stigma and limited access to care[5]. Contributing factors include loss of independence, bereavement, financial hardship, and social isolation[6]. Older adults with chronic illnesses are particularly vulnerable, as physical decline is often compounded by limited support[7]. The COVID-19 pandemic has further increased depression and anxiety in older adults, especially those affected by isolation, low socioeconomic status, or comorbidities[8].

In Northeastern Thailand, the prevalence of depression among older adults with chronic diseases has gradually increased in recent years, influenced by factors such as social isolation, comorbidities, and natural disasters[9]. Previous studies have identified several risk factors for depression in later life, including insufficient income, chronic illness, lack of caregivers, poor family relationships, and limited social engagement[10,11]. Age and fatigue have also been shown to predict depressive symptoms[12]. However, while these studies have provided valuable insights, they have largely focused on individual factors rather than the complicated relationship between psychological, social, and stress-related dimensions within specific cultural settings. This gap is particularly evident in the lower northeastern region of Thailand, where social structures and coping mechanisms may differ from other areas. Therefore, this study aimed to investigate the factors influencing depression among older adults with chronic illnesses in a rural subdistrict of Lower Northeastern Thailand. The findings are expected to provide empirical evidence to support healthcare providers, policymakers, and community stakeholders in designing more targeted and culturally sensitive mental health interventions.

Material and Methods

Study design

This was a cross-sectional study conducted with 229 older adults with chronic illnesses in Kham Nam Saep Subdistrict, Warin Chamrap District, Ubon Ratchathani Province in lower Northeastern Thailand, from August to September 2024. All eligible respondents completing the questionnaires were included in the study. The inclusion criteria were: aged 60 years and over, having chronic diseases, having been screened for depression using the 2 Questions (2Q) Survey in the past year, living in Kham Nam Saep Subdistrict, Warin Chamrap District, Ubon Ratchathani Province for at least 1 year, and having normal intelligence and perception. The exclusion criteria were: having intellectual or cognitive impairment, dementia, inability to communicate, or a severe illness. The sample

size was determined using the Accuracy in Parameter Estimation (AIPE) method, which aims to achieve a specified level of precision in estimating population parameters. Based on previous studies examining factors associated with depression among older adults, an expected medium effect size of 0.30 was assumed, with a desired precision (half-width of the confidence interval) of 0.05 and a 95% confidence level[13]. Using the AIPE formula for multiple regression, the estimated sample size was 100 participants. Considering that this study employed a multi-stage random sampling technique, the sample size was adjusted for the design effect (DE=2), resulting in 200 participants. To account for possible nonresponses and incomplete data, an additional 15% was added, yielding a final required sample size of 229 respondents.

Sampling method

A multi-stage random sampling technique was employed to obtain a representative sample of elderly individuals with chronic illnesses residing in a rural subdistrict of lower Northeastern Thailand. In the first stage, one subdistrict was randomly selected to represent the region's demographic characteristics. In the second stage, several villages were randomly chosen using the official village registry. In the final stage, households with at least one elderly person diagnosed with a chronic disease were identified from community health records, and one eligible participant was randomly selected from each household.

Variables and measures

Data were collected using a semi-structured questionnaire consisting of eight sections: (1) general characteristics (11 items), (2) social norms (10 items), (3) psychological factors (10 items), (4) health behaviors (10 items), (5) social support (10 items), (6) Modified Barthel Activities of Daily Living Index (MBAI, 10 items)[14], (7) stressful life events within one year (20 items)[15], and (8) the Thai Geriatric Depression Scale (TGDS, 30 items)[16].

Social norms were assessed using a five-point Likert scale measuring community expectations and perceived behavioral standards. Psychological factors, also assessed on a five-point Likert scale, included self-esteem, perceived control, and optimism, reflecting an individual's internal psychological resilience and emotional regulation when facing chronic illness and aging-related stressors. Health behaviors had a four-point scale, and social support had a three-point scale. For Likert-scale variables, mean scores were interpreted using equal-interval criteria. For the three-point scale, scores of 1.00–1.67 indicated low, 1.68–2.34 moderate, and 2.35–3.00 high. For the four-point scale, scores of 1.00–2.00 indicated low, 2.01–3.00 moderate, and 3.01–4.00 high. For the five-point scale, scores of 1.00–2.33 indicated low, 2.34–3.67 moderate, and 3.68–5.00 high. The MBAI measured functional independence (total score 0–20), item scores ranged from 0 (unable to perform) to 1–3. Mean scores of ≤4.99 indicated total dependence, 5.00–11.99 indicated moderately severe to severe dependence, and ≥12.00 indicated independence. Stressful life events were evaluated on a four-point scale. This construct referred to stressful life experiences that disrupt emotional balance and daily functioning, such as the loss of a loved one, family conflict, financial hardship, or personal illness. Participants were asked to indicate whether they had experienced any of these events within the past 12 months. Total scores indicated low (0–25), moderate (26–29), and high (30–60) stress levels. The Thai Geriatric Depression Scale (TGDS) was used to assess depressive symptoms. It consists of 30 dichotomous items ("yes/no" format), with total scores ranging from 0 to 30. Based on established Thai norms, scores of 0–12 indicate no depression, 13–18 indicate mild depression, 19–24 indicate moderate depression, and 25–30 indicate severe depression. In this study, the mean TGDS score was 23.03, which falls within the moderate depression range. This classification aligns with previous validation studies confirming that scores above 19 reflect clinically significant depressive symptoms among Thai older

adults[16]. The instruments were developed based on the Health Belief Model[17], social support framework[18], and the PRECEDE–PROCEED model[19].

Face and content validity of the instruments were confirmed by five experts in public health and behavioral sciences. A pilot test with 30 older adults was conducted to ensure the clarity and comprehension of all items. Reliability testing demonstrated acceptable internal consistency, with Cronbach's alpha coefficients of 0.78 for social norms, 0.82 for psychological factors, 0.78 for health behaviors, 0.72 for social support, and 0.80 for the overall MBAI scale. In addition, test–retest reliability conducted two weeks apart among a subsample of 20 participants yielded correlation coefficients ranging from 0.76 to 0.84, indicating good measurement stability. Concurrent validity was supported by significant correlations between the MBAI and related constructs such as depressive symptoms and self–care behaviors, confirming the scale's construct alignment within this study context.

Statistical analysis

Data were analyzed using SPSS Statistics 23.0 for Windows. Both descriptive and inferential statistics were presented in this paper. Categorical variables were described using frequencies and percentages, whereas quantitative variables were presented with means, standard deviations, minimums, and maximums. Continuous variables were summarized using means, standard deviations, and 95% confidence intervals to accurately reflect statistical reporting standards. The correlations between general personal characteristics, social, psychological, health behaviors, social support, daily activities, stressful life events, and depression were analyzed with Pearson's correlation coefficients. Stepwise multiple linear regression was used to determine the factors influencing depression among older adults with chronic illnesses. The accepted statistical significance was at the 0.05 level.

Ethical considerations

The study was conducted in accordance with the Declaration of Helsinki and was approved by the Research Ethics Committee of the Ubon Ratchathani Provincial Health Office (Code: SSJ.UB 2567–122). Informed consent was obtained from all participants. For those with limited literacy, the researcher provided a verbal explanation of the study objectives, procedures, potential risks, and benefits in simple language, and consent was confirmed through verbal agreement in the presence of a witness.

Results

The socioeconomic characteristics of the 229 participants showed that the majority were female (65.5%) with a mean age of 69.46 years (S.D.=7.88). Nearly half were married (49.8%). Most participants had elementary–level education (69.4%), while only 4.3% had university degrees. In terms of occupation, hired workers were the largest group (33.2%), followed by agricultural workers (26.2%). The average monthly household income was 7,975.81 Baht (S.D.=9,473.58), with over half (52.8%) earning ≤5,000 Baht. Most accessed healthcare through national health security (70.3%), while 23.6% used civil servant benefits. Regarding living arrangements, 49.8% lived with a spouse and 32.7% with children. Hypertension was the most common chronic illness (44.1%), followed by those with no chronic disease (24.0%). Most participants (79.0%) were independent in activities of daily living, and only 5.2% reported having a family member with mental illness (Table 1).

The mean scores of the factors influencing depression among older adults with chronic illnesses revealed a mean score for social norms at a moderate level (Mean=3.21±0.58), psychological factors at a high level (Mean=4.37±0.54), health behaviors at a moderate level (Mean=2.43±0.91), social support at a high level (Mean=2.59±0.77), activities of daily living at a moderate

Table 1 Socioeconomic characteristics of the study sample (n = 229)

Socioeconomic Characteristics	n	%
Sex		
Male	79	34.5
Female	150	65.5
*Age (years), Median=67.00, IQR=11, Min=60, Max=94		
60–69	137	59.8
70–79	63	27.5
≥80	29	12.7
Marital status		
Married	114	49.8
Single	11	4.8
Divorced	29	12.7
Widow	75	32.7
Educational levels		
Illiterate	21	9.2
Elementary	159	69.4
Junior high school	21	9.2
High school	18	7.9
University	10	4.3
Occupation		
Agricultural	60	26.2
Merchant	59	25.8
Hired	76	33.2
Civil servant	34	14.8
Average household income per month (Baht), mean±S.D. (7,975.81±9,473.58), Min=600, Max=70,000		
≤5,000	121	52.8
5,001–10,000	53	23.2
>10,000	55	24.0
Medical treatment rights		
National health security	161	70.3
Social security	14	6.1
Civil servant	54	23.6
Living arrangement		
Alone	11	4.8
Spouse	114	49.8
Children	75	32.7
Relatives	29	12.7
Chronic disease		
Diabetes (DM)	18	7.9
Hypertension (HT)	101	44.1
Both DM & HT	26	11.3
Other	29	12.7
No	55	24.0
Activities of daily living		
Total dependence	38	16.6
Moderately severe dependence to severe dependence	10	4.4
Independence	181	79.0
Family member with a mental illness		
No	217	94.8
Yes	12	5.2

*Age is presented as median (Interquartile Range) due to non-normal distribution

Table 2 Mean and standard deviation levels of factors influencing depression among older adults with chronic illnesses (n=229)

Variables	Range (Score)	Mean	S.D.	95% CI	Interpretation
Social norms	1–5	3.21	0.58	3.15–3.26	Moderate
Psychological	1–5	4.37	0.54	4.29–4.44	High
Health behaviors	1–4	2.43	0.91	2.39–2.47	Moderate
Social support	1–3	2.59	0.77	2.54–2.64	High
Activities of daily living	0–20	11.43	2.02	11.29–11.55	Severe dependence
Stressful life events	0–60	30.62	2.57	30.32–30.87	High
Depression	0–30	23.03	3.36	22.57–23.48	Moderate

S.D.=standard deviation, CI=confidence interval

level (Mean=11.43±2.02), stressful life events at a high level (Mean=30.62±2.57), and depression at a moderate level (Mean=23.03±3.36), as shown in Table 2.

The correlations among the key variables affecting depression in older adults with chronic illnesses revealed several statistically significant correlations. Psychological factors were positively correlated with social factors (r=0.715, p–value<0.001) and health behaviors (r=0.605, p–value<0.001). Social support was positively correlated with psychological factors (r=0.331, p–value<0.001) and health behaviors (r=0.367, p–value<0.001). Activities of daily living were positively correlated with social factors (r=0.397, p–value<0.001), psychological factors (r=0.348, p–value<0.001), and health behaviors (r=0.316, p–value<0.001), but were not significantly correlated with social support or stressful life events. Stressful life events were positively correlated with depression (r=0.230, p–value<0.001). Depression was positively correlated with social factors (r=0.165, p–value<0.05) and psychological factors (r=0.143, p–value<0.05), whereas it was negatively correlated with social support (r=–0.268, p–value<0.001), as shown in Table 3.

Stepwise multiple linear regression analysis found that psychological factors (β=0.259, p–value<0.001), stressful life events (β=0.222, p–value<0.001), and social support (β=–0.348, p–value<0.001) were factors that had a statistically significant effect on depression among older adults with chronic illnesses. These factors explained 18.1% of the variance in depression among older adults with chronic illnesses (Adjusted R^2=0.181, p–value<0.001). Model assumptions were verified, with the Variance Inflation Factor (VIF) for all predictors ranging from 1.001 to 1.124, indicating no multicollinearity concern, as shown in Table 4.

Discussion

The important findings were that the factors influencing depression among older adults with chronic illnesses included psychological, stressful life events, and social support issues. These factors explained 18.1% of the variance in depressive symptoms among older adults with chronic illnesses, with the psychological factor having the strongest positive relationship with depression[20,21]. Our sample group resided in rural areas and often relied on traditional healthcare along with modern medicine, which may have resulted in different approaches to coping with mental health problems in other contexts. Northeastern Thailand (Isan) culture, with its beliefs in karma and the Buddhist concept of accepting one's fate, may have led the older adults to have different perspectives on chronic diseases. In addition, where family interdependence remains

Table 3 Correlations between variables and depression among older adults with chronic illnesses (n=229)

Variables	Social	Psychological	Health behaviors	Social support	Daily activities	Stressful life events	Depression
Social norms	1						
Psychological	0.715**	1					
Health behaviors	0.595**	0.605**	1				
Social support	0.231**	0.331**	0.367**	1			
Activities of daily living	0.397**	0.348**	0.316**	0.035	1		
Stressful life events	0.037	−0.003	0.040	−0.024	0.119	1	
Depression	0.165*	0.143*	0.095	−0.268**	0.101	0.230**	1

*=p-value<0.05, **=p-value < 0.001

Table 4 Factors influencing depression among older adults with chronic illnesses (n=229)

Variable	B	SE	β	t	p-value	VIF
Constant	11.496	4.045		19.577	<0.001	
Psychological	0.144	0.036	0.259	4.046	<0.001	1.123
Stressful life events	1.302	0.353	0.222	3.684	<0.001	1.001
Social support	−0.311	0.057	−0.348	−5.448	<0.001	1.124

Adjusted R^2=0.181, $F_{3, 225}$=16.607, p-value<0.001, SE=standard error, VIF=the variance inflation factor

culturally valued despite increasing migration of younger family members, resulted in psychological factors that showed a clear relationship with depression. These findings suggest that despite the different social and cultural contexts, healthcare for older adults with chronic diseases in rural Thailand still needs to pay special attention to psychological factors, in addition to solving the problem of access to health services. In the context of chronic illnesses, older adults often experience loss of independence, physical decline, and changing roles in their family or society, all of which can reduce their self-esteem. When individuals feel that they are no longer helpful or valuable, their psychological vulnerability may increase. These findings are consistent with Beck's cognitive theory of depression, which postulates that negative self-thinking patterns and negative views about the self, the world, and the future contribute to, and persist in, depression[22]. Physical discomfort and chronic illness often lead to feelings of frustration, fear, and uncertainty about the future. Without appropriate psychological coping mechanisms, older adults can become trapped in a cycle of hopelessness. The results of this study are consistent with previous studies, indicating that psychological constructs such as resilience and self-esteem are common but vary by individual, social, and cultural characteristics, and these influence emotional well-being[23,24].

This study contrasts with previous studies that emphasized physical health-related, social, and economic status variables as more dominant predictors. For instance, a study conducted in Europe and Indonesia found that physical functional decline, chronic disease, and socioeconomic factors were the strongest predictors of depression among older adults. This suggests that in some cultural or area contexts, the burden of illness may outweigh psychological factors in determining emotional outcomes[25,26]. Furthermore, using nationally representative data, a large-scale study among older persons in India

revealed that depressive symptoms were linked with socioeconomic level, education, and health status[27]. This difference may be attributed to the culture and strong family ties prevalent in Northeastern Thailand, where psychological well-being is more closely linked to family and community than individual socioeconomic achievement. Interestingly, a systematic review study and meta-analysis of observational studies reveal a connection between religious and spiritual engagement and enhanced mental health outcomes among older adults. Individuals with deeper religious and spiritual commitments consistently demonstrate fewer depressive and anxiety symptoms[28]. This is potentially due to cultural differences in the conceptualization of health and suffering, as their influence may vary depending on local beliefs, religious practices, and health-seeking behaviors.

To address these issues, interventions should focus on promoting mental resilience and modifying negative thought patterns through culturally adapted psychological approaches. For example, Cognitive Behavioral Therapy (CBT) tailored for older adults in the Isan context could help challenge feelings of hopelessness and improve coping with chronic conditions. In addition, community-based mental health promotion programs that strengthen emotional support and enhance stress management skills may further reduce the risk of depression among older adults.

Another key finding of the study was the significant influence of stressful life events on depression among older adults with chronic illnesses. Life stress events, such as the death of a family member, financial hardship, family conflict, or acute illness, can severely impair emotional balance and the sense of stability among older adults. These findings are consistent with previous studies that have established an association between stressful life events and depressive symptoms in later life[29,30]. In previous studies in China, stressful life events resulted in depression, but their effect was reduced after receiving family support, including social support and social activities[29]. This appears even more pronounced in Thai society, especially in the rural areas of the Northeast. The family plays an important role in promoting emotional stability and daily life. Therefore, when stressful life events occur at any point in life, whether personal or family, such as illness or loss of a spouse[31], their psychological impacts may be exacerbated because family members are highly dependent on each other and have strong emotional and mental ties. In addition, in the context of Isan, Thailand, older adults often shoulder multigenerational caregiving roles and feel a strong sense of responsibility towards their children and grandchildren. Life stressors that threaten these roles can significantly challenge their purpose in life, leading to depression[32,33].

Older adults with chronic illnesses face severe emotional challenges, especially if life events have a profound impact on their mood and mental health. Chronic illnesses, such as diabetes, hypertension, or chronic obstructive pulmonary disease (COPD), not only create long-term physical limitations but also require ongoing management, which may lead to feelings of hopelessness, dependence, and reduced quality of life. When physical conditions are combined with chronic illnesses and psychological vulnerabilities, they can further destabilize older adults' emotional balance and make them more likely to suffer from depression than older adults without such conditions[34,35]. Therefore, depression among older adults with chronic illnesses must be viewed, not simply as a symptom of a disease, but as the result of a complex relationship between physiological vulnerabilities and psychosocial distress. Interventions should be holistic, encompassing not only the medical management of chronic conditions but also addressing the life stressors that affect mood. Mental health services must include culturally sensitive counseling, community support groups, and community programs that consider the life experiences and burdens that older adults bear.

This study underscores the need for local health systems to enhance early detection and intervention for

stressful life events among older adults. Community health workers (CHWs) should be trained to recognize the signs of psychological distress following major stressors—such as bereavement, illness, or financial hardship—and provide basic counseling, emotional support, and referrals to mental health professionals. Training should emphasize culturally sensitive communication, simple stress-screening tools, and effective referral networks with primary care units. Community-based support groups, temple activities, and collaboration with local authorities can further create social safety nets that reduce depression and strengthen resilience among older adults with chronic diseases in rural Northeastern Thailand.

As people age and become more susceptible to physical decline and chronic diseases, their reliance on others for emotional and practical support increases. During this fragile life stage, social support is not only an external factor but also an important component of psychological support. Social support provides emotional security, a sense of belonging, and helps combat loneliness in life. This study found that social support was a statistically significant factor influencing reduced levels of depressive symptoms, underscoring the important role of mental health care for aging people with chronic diseases. The results of this study highlight the complex relationship between the social environment and mental health, suggesting that having a caring, helpful, and responsive support system can offset the emotional impacts of physical decline[36,37]. When older adults feel valued and respected by their family members or community, they are more likely to have positive attitudes and be more engaged in their healthcare and self-management. In rural communities in Isan, Thailand, where cultural values emphasize family interdependence and filial piety[38], the absence of a supportive family structure can be detrimental. Older adults who perceive themselves as a burden or neglected by their children or grandchildren may experience heightened emotional distress, even when their chronic illnesses are relatively stable. Conversely, those who receive regular visits, empathic listening, and active support from family members or the community tend to demonstrate more positive health outcomes.

However, in recent decades, the migration of large numbers of people, especially those of working age, to urban centers has gradually diminished these traditional family support structures[39]. Many older adults are left to live alone or care for their grandchildren[40], with little emotional or practical support from their family members who may work far from home. This isolation makes them more vulnerable to depression, especially in the context of chronic disease. Furthermore, while community cohesion and religious participation (e.g., temple activities) still provide some psychological and emotional support, they may not fully replace the close and continuous support often received from family members. In this regard, the current study's finding that social support has a significant influence on depression among older adults in Isan with chronic illnesses reflects both the enduring value of these support systems and the psychological risks that arise when these systems decline.

Therefore, interventions that strengthen and modernize social support systems are recommended. Structured peer-support groups, temple-based community programs, and digital initiatives that allow family members living apart to maintain emotional connection should be prioritized. Integration of these community-driven programs into local health-promotion plans could sustain the traditional sense of social connectedness while adapting to modern mobility patterns. These approaches could help mitigate depressive symptoms and promote psychological resilience among older adults with chronic diseases in rural Isan.

Although psychological, stress-related, and social support factors play a meaningful role, they only partially explain depression among older adults. This suggests

that other unmeasured determinants, such as chronic illness severity and duration, genetic predispositions, neurobiological mechanisms, and cultural or spiritual coping resources, may also contribute to depressive outcomes[5]. Recognizing these multifactorial influences increases the complexity of depression in later life and highlights the importance of integrating biological, psychosocial, and cultural perspectives into future mental health research and interventions. The final model accounted for 18.1% of the variance in depressive symptoms (adjusted R^2=0.181), indicating that while the model identified key modifiable factors, other complex biological and contextual influences likely remain unmeasured.

Limitations

This study employed a cross-sectional design conducted in a single area of Northeastern Thailand, which may limit the generalizability of the findings to other regions with different social and cultural contexts. As data were collected at one point in time, causal inferences cannot be made between variables. Additionally, the relatively low explained variance (Adjusted R^2) suggests that other unmeasured factors may also influence depression among older adults. Furthermore, the use of self-reported questionnaires may be subject to recall or social desirability bias, which could affect the accuracy of participants' responses.

Conclusion

This study identified psychosocial factors associated with depression among older adults with chronic illnesses in rural Northeastern Thailand. Although most participants remained capable of performing daily activities independently, they still experienced moderate levels of depressive symptoms that were associated with psychological distress, stressful life events, and lower levels of social support. These findings highlight the profound interplay between emotional well-being, social connections, and life challenges in later life. To address these issues, local public health authorities, in collaboration with community leaders, should develop culturally grounded and sustainable mental health initiatives. Such initiatives may include empowering village health volunteers with psychological first-aid skills, fostering community-based social spaces to reduce isolation, and integrating mental health screening into routine chronic disease care. Strengthening these community mechanisms can help build resilience, enhance social support, and ultimately improve the mental health and quality of life of older adults in resource-limited rural settings.

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Conflict of interest

There is no conflict of interest, according to the authors.

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