Factors influencing elderly coping with social challenges in Thailand's aging society

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ABSTRACT

Thailand is facing a rapidly aging population, presenting numerous social challenges for the elderly that necessitate effective coping mechanisms to sustain their well-being. This study investigates factors influencing their ability to cope with aging-related challenges and the mechanisms driving their adaptation. A total of 330 participants aged 60 years and older were surveyed. Data analysis involved descriptive statistics, confirmatory factor analysis, structural equation modeling with AMOS, and path analysis. Qualitative data were collected through in-depth interviews and focus group discussions, with participants divided into three age groups: 60-69, 70-79, and 80+. Content analysis was applied to the qualitative data. Findings revealed that cooperation and societal support had the highest factor loading (0.809), while technological proficiency had the lowest (0.513). The structural equation model showed a high coefficient of determination (R^2 = 85%) for adaptation. The results underscore that adaptability is a key factor in coping with aging challenges, enabling physical and mental adjustment. Enhancing technological skills and promoting government policies and sector collaboration are vital for improving quality of life and readiness to address Thailand's transition to a super-aged society.

1. Introduction

The aging process is inevitable and brings about changes in physical, mental, and social aspects. As the global population of older adults increases, understanding and responding to their specific needs becomes increasingly important. The social challenges faced by the elderly are complex and varied, including social isolation, loneliness, and changes in roles and social relationships (Chanakul et al., 2022). These challenges can significantly impact their well-being and overall quality of life. Therefore, effective coping strategies and support systems are crucial to help older adults navigate these changes and maintain their social stability as much as possible (Hülür and Macdonald, 2020). Social isolation and loneliness are common issues among the elderly. Research has shown that social isolation can lead to various adverse health effects, such as an increased risk of depression, cognitive decline, and higher mortality rates (Holt-Lunstad et al., 2015). In addition, the loss of family members or close friends, retirement, and reduced social participation can alter or weaken social networks, exacerbating feelings of loneliness (Donovan and Blazer, 2020). Moreover, societal attitudes towards aging and older adults often promote negative stereotypes and discrimination, further alienating them from social engagement. Addressing these issues effectively requires the development of comprehensive strategies focused on enhancing relationships and social support for the elderly. Interventions such as community engagement programs, social clubs, and technology-based solutions have shown promise in reducing social isolation and promoting social participation (Chen and Schulz, 2016). Understanding the needs and preferences of the elderly population is fundamental to designing effective programs and policies (Fang et al., 2020). Aging causes major social issues in this era and we need comprehensive solutions to live with understanding. The effects of aging on healthcare, social security, and senior well-being. Social isolation, exacerbated by physical limitations, peer

loss, and cultural distance, is a major concern. Social isolation impacts older mental and physical health, increasing the likelihood of chronic diseases and mortality (Victor et al., 2008). Aging populations are under increased financial pressure as the working-age population declines (Lukyanets et al., 2021). This study aims to explore the social challenges of aging and identify coping strategies that align with the needs of older adults by reviewing relevant literature and existing interventions. The goal of this research is to provide insights into effective strategies for enhancing social well-being among the elderly. The findings will contribute to developing more targeted and supportive approaches, enabling older adults to live with dignity and maintain positive social relationships.

2. Method

This study aims to explore the challenges faced by an aging society, focusing on the needs of elderly individuals through a mixed-methods approach. It employs a sequential explanatory design, combining quantitative and qualitative methodologies. The participants were elderly individuals aged 60 and above, residing in Tambon Wokaew, Hang Chat District, Lampang Province—an area with the highest elderly population in Thailand. As of June 2023, Lampang Province had the highest proportion of elderly residents in the country, representing 27.28% of its population. The sample group was drawn from Wokaew Village, which has the largest elderly population in the province. Participants volunteered to provide data for both the quantitative and qualitative components of the study.

For the quantitative data, participants were elderly individuals aged 60 to 98 years. The sample size was calculated based on the rule of using 20 times the number of observable variables plus an additional 10%, resulting in 20 × 15 + 30, which equals 330 respondents. For the qualitative data, in-depth interviews were conducted with 10 to 12 elderly participants aged 60 and above, and focus group discussions were held with three groups, each

consisting of 8 to 12 participants. These groups were divided into three age categories: 60–69 years, 70–79 years, and 80 years and older. Participants were selected through voluntary sampling and were willing to share their experiences and provide relevant information.

The quantitative data was collected using a questionnaire divided into five sections. Section 1 focused on demographic information about the participants. Sections 2 to 5 explored opinions on challenges related to aging, social factors, adaptability, and community relationships. The questionnaire included 4-5 questions for each observable variable, structured on a 5-point rating scale, with 15-20 questions per latent variable. Open-ended questions were also included to allow participants to provide additional comments. To ensure the questionnaire covered all aspects of the research, it was tested with 30 individuals who were not part of the main sample group. Reliability was assessed using Cronbach's alpha to check internal consistency. Items were considered reliable if their Item-Total Correlation (r) exceeded 0.20, and the overall reliability was deemed acceptable with an alpha value above 0.70. The reliability scores ranged from 0.720 to 0.941, with an overall reliability of 0.940. The questionnaire was then refined to enhance its accuracy and relevance.

3. Result and discussion

The regression weights analysis for observable variables show all positive values, ranging between 0.711 and 1.203. All component weights differ significantly from zero at the 0.01 statistically significant level. When examining the standardized factor loadings, the observable variable of the latent variable with the highest factor loading is 'COLL' (Cooperation and Social Support), with a value of 0.809, followed by 'ABIL' (Ability to Maintain Relationships) with a factor loading of 0.779. On the other hand, 'PROF' (Proficiency in Technology) has the lowest factor loading with a value of 0.513. The details can be shown in Table 1 and Fig. 1.

Table 1: Goodness-of-fit analysis of measurement model for each latent variable

Latent variable	Observable variable	Regression weight				Standardized regression weight	R^2
		Estimate	SE	CR	P		
COP	OCCU	1.000	-	-	-	.567	.321
	KNOW	.801	.086	9.318	***	.568	.323
	PROF	1.050	.162	6.492	***	.513	.264
	CONF	1.054	.138	7.619	***	.667	.445
REL	ROLE	1.000	-	-	-	.620	.384
	COLL	.908	.081	11.251	***	.809	.655
	ABIL	1.034	.095	10.905	***	.779	.606
ADA	LIFE	1.000	-	-	-	.587	.344
	SELF	.929	.091	10.218	***	.563	.317
	MAIN	.896	.100	8.987	***	.565	.320
	INVO	1.203	.119	10.072	***	.666	.444
	SUPP	1.000	-	-	-	.746	.556
	HEAL	.711	.066	10.701	***	.543	.295
	PHYS	.960	.098	9.781	***	.618	.381
	EMPO	.934	.084	11.095	***	.708	.502

ABIL: Relationship maintenance abilities; ADA: Adaptability to change; COLL: Collaboration and support for society; CONF: Conflict resolution ability; COP: Social challenges coping ability; EMPO: Empowerment for elderly; HEAL: Elderly health policies; INVO: Social involvement; KNOW: Economic and financial knowledge; LIFE: Lifelong learning; MAIN: Maintaining support networks; OCCU: Suitable income/occupation for elderly; PHYS: Physical environment; PROF: Technology proficiency; REL: Community relationships; SELF: Self-reliance; SOC: Social factors; SUPP: Social support/welfare for elderly; ROLE: Decision-making role in social Activities; ***: P < .01; SE: Standard error; CR: Composite reliability
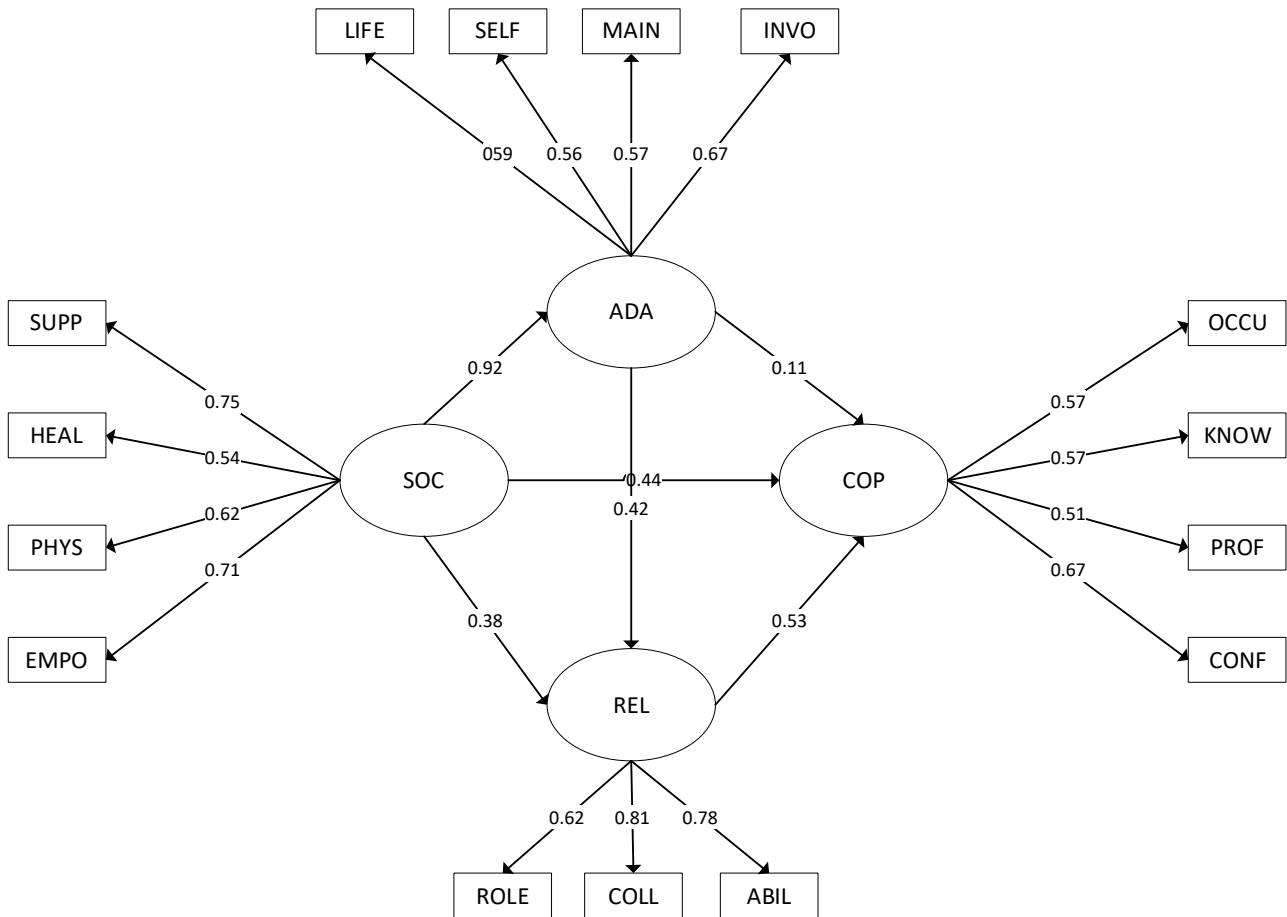
Fig. 1: Standardized regression coefficients

Upon reviewing the image, it was found that the model aligns with the empirical data. Therefore, the researchers proceeded to analyze the causal relationships of variables in the causal model impacting the ability to cope with challenges in later life. This analysis aims to address the research questions, objectives, and research hypotheses using the Maximum Likelihood (ML) principle to estimate the path coefficients for testing the Regression weight or Standardized Regression Weights. These weights represent the influence or weight between pairs of variables and the correlation coefficients between variables. The process of validating and analyzing a causal model related to the ability to cope with challenges in the elderly. It indicates that the proposed model has been tested against actual data. It accurately represents the relationships among the variables. These relationships are essential for understanding how different factors influence the ability to cope with challenges in the elderly (Hülür and Macdonald, 2020; Wenger, 2021). This involves validating a theoretical model with empirical data, analyzing causal relationships by using sophisticated statistical methods, and also interpreting the results. It is important to identify and understand the factors that contribute to resilience and well-being in an aging population. The model fit indices before and after model adjustment can be shown in Table 2.

Table 2: Model fit indices before and after model adjustment

Fit indices	Criteria	Before adjustment		After adjustment	
		Statistical value	Evaluation result	Statistical value	Evaluation result
P	0.05 < p-value < 1	0.000	Did not meet criteria	0.061	Met criteria
Chi-Square/df	0 < Chi-Square/df < 3	4.025	Did not meet criteria	1.292	Met criteria
GFI	0.90 < GFI < 1.00	0.877	Did not meet criteria	0.969	Met criteria
AGFI	0.90< AFGI < 1.00	0.824	Did not meet criteria	0.940	Met criteria
CFI	0.90 < CFI < 1.00	0.869	Did not meet criteria	0.991	Met criteria
RMR	0 < RMR < 0.05	0.035	Met criteria	0.016	Met criteria
RMSEA	0 < RMSEA < 0.05	0.096	Did not meet criteria	0.030	Met criteria

df: Degrees of freedom; GFI: Goodness-of-fit index; AGFI: Adjusted goodness-of-fit index; CFI: Comparative fit index; RMR: Root mean square residual; RMSEA: Root mean square error of approximation

According to Table 2, the analysis results of the model fit indices after the final model adjustment indicate that the model is consistent with the empirical data. The overall model fit indices analysis results, following the final model adjustment, demonstrate that the model meets the specified criteria for all 7 fit indices. Good model fit is essential for drawing valid conclusions from the data. The finding showed that the model meets the fit criteria across multiple indices. That is, it can be reliably used to explore and explain the phenomena under study (León et al., 2020). Elderly individuals cope with social challenges in Thai aging society. A well-fitted model provides a strong foundation for making evidence-based recommendations. It supports the validity of the conclusions drawn and the potential application of the findings in policy or interventions (McGarrigle and Todd, 2020).

According to Table 3, the test of model fit for the structural equation model regarding coping with social challenges in aging, based on the hypothesis and empirical data, indicates that the model is consistent with the empirical data. Lazarus and Folkman's coping theory is a dynamic process influenced by the individual's cognitive appraisal of stressors and the available resources. In aging, social challenges such as loneliness, loss of loved ones, and reduced social roles may require coping strategies like seeking social support or cognitive reframing. SEM could be used to test a model based on this theory, where coping strategies mediate the relationship between social challenges and well-being in elderly individuals (Stallman, 2020). This conclusion is derived from the statistical measures used to assess the model fit, including a Chi-Square/df ratio of 1.292, which is less than 3. This implies that the chi-square value differs from zero significantly, supporting the null hypothesis that the developed structural model for coping with social challenges in aging is consistent with the empirical data. This result aligns with the goodness-of-fit index (GFI) of 0.969, a value approaching 1, and the root mean square error of approximation (RMSEA) of 0.030, a value close to zero.

When examining the causal factors influencing the outcome variables, it was found that social factors (SOC) have a direct influence on adaptability to change (ADA) and both direct and indirect influences on community relations (REL) and coping with social challenges (COP), respectively. Furthermore, ADA directly influences REL and both directly and indirectly influences COP. Concurrently, REL has a direct influence on COP in aging, as shown in Table 4.

Table 3: Influence of latent variables in the causal model

Causal factor	Effect factor								
	ADA			REL			COP		
	DE	IE	TE	DE	IE	TE	DE	IE	TE
SOC	.92	-	.92	.38	.39	.77	.44	.30	.74
ADA	-	-	-	.42	-	.42	.11	.22	.33
REL	-	-	-	-	-	-	.53	-	.53
Structural equation of variables									
	ADA	REL	COP						
R²	.85	.60	.59						

Chi-square: 80.089; Chi-square/df: 1.292; df: 62; p: .061; GFI: .969; AGFI: .940; CFI: .991; RMR: .016; RMSEA: .0030; ADA: Adaptability to change; REL: Community relations; COP: Coping with social challenges; DE: Direct effect; IE: Indirect effect; TE: Total effect; SOC: Social factors

Carstensen (2021) stated that as people age, they become more selective in their social relationships, prioritizing emotionally meaningful interactions. This theory could be integrated into the SEM to understand how changes in social goals influence coping mechanisms in elderly individuals (Carstensen and Hershfield, 2021; Charles, 2022). Considering the coefficient of determination (R²) of the structural equations for the latent variables, it was found that the R² for ADA is 0.85, equivalent to 85%. This is followed by REL and COP with R² values of 0.60 and 0.59, corresponding to 60% and 59%, respectively. In the context of structural equation modeling (SEM) for latent variables, the R² values provide insight into how well the model explains the variability in each latent construct. ADA indicates that 85% of the variance in adaptability to change can be explained by the model. This high R² value suggests a strong explanatory power of the predictors included in the model for adaptability. A high degree of explained variance is indicative of a robust model, implying that the factors influencing adaptability to change are well-captured by the model. This could reflect the effectiveness of interventions or inherent traits among the elderly that facilitate adaptability, such as psychological resilience, social support, and access to resources (Windle, 2011).

Table 4: Correlation matrix of latent variables

Latent variables	COP	REL	ADA	SOC
COP	1			
REL	.534**	1		
ADA	.542**	.704**	1	
SOC	.456**	.487**	.584**	1

**: p < 0.01

The R² value for community relations is 0.60, meaning that 60% of the variance in community relations is accounted for by the model. This moderate R² value indicates a substantial, though not exhaustive, explanatory power. Community relations, as a crucial aspect of elderly well-being,

can be influenced by a variety of factors, including social networks, community engagement opportunities, and neighborhood environments (Padeiro et al., 2022; Zhang et al., 2022). The remaining 40% of unexplained variance indicates the presence of additional factors, such as individual personality traits, specific community programs, or broader social policies. Like community relations, the moderate R^2 value shows that while the model captures many factors affecting the elderly's ability to cope with social challenges, it does not account for all potential influences. Effective coping strategies may include social support, personal coping mechanisms, and access to mental health resources. This unexplained variance emphasizes the complexity of coping behaviors and suggests the potential impact of unmeasured variables, such as cultural factors or individual health conditions.

The R^2 values for ADA, REL, and COP provide a quantitative measure of the model's explanatory power for these latent variables. While high R^2 values indicate a strong fit for adaptability to change, the moderate values for community relations and coping with social challenges suggest areas where additional factors might be explored to fully understand these constructs. The qualitative data analysis from in-depth interviews and focus groups revealed consistent findings. The elderly participants expressed acceptance of life's realities, enabling them to adapt to changes. The community environment was described as traditional, characterized by love, unity, and mutual support among its members. However, as individuals age, their ability to work declines, leading to reduced income (Lobo and Falleiro, 2023). They want the government to increase living allowances and promote careers suitable for the elderly, along with finding a market to distribute products that are products of the elderly. More variety of exercise equipment is needed to motivate the elderly to exercise, including having a coffee house where they can meet and talk, which will help relieve loneliness.

The findings of this study contribute significant insights into the factors that influence how elderly individuals cope with the social challenges associated with aging. Utilizing a mixed-methods approach combining quantitative and qualitative analyses, this research identifies several crucial points. Quantitative analysis revealed substantial correlations and factors affecting the coping mechanisms of the elderly. SEM demonstrated that ADA plays a pivotal role, as evidenced by a high coefficient of determination (R^2=85%). This highlights its significant influence on COP, both directly and indirectly, through its impact on REL (Suardiaz-Muro et al., 2023). These findings suggest that enhancing adaptability among elderly populations could potentially enhance their overall social well-being. Qualitative insights from in-depth interviews and focus group discussions complemented these quantitative findings. Participants emphasized the importance of community support and advocated for societal

adjustments to meet the evolving needs of the aging population. There was a clear call for increased financial support, tailored career opportunities, and improved social engagement platforms such as community centers and exercise facilities. These measures were seen as crucial in alleviating loneliness and fostering a sense of belonging among the elderly (Bruinsma et al., 2022). The integration of quantitative and qualitative findings underscores the multifaceted nature of addressing aging-related challenges. Effective interventions must not only focus on enhancing individual adaptability but also on strengthening community support systems and addressing societal perceptions of aging.

4. Conclusion

This study has provided valuable insights into the coping mechanisms of elderly individuals facing social challenges associated with aging. Through a mixed-methods approach integrating quantitative analysis and qualitative insights, several significant factors have been identified. Quantitatively, adaptability emerged as a critical factor influencing how the elderly cope with social challenges, demonstrating strong direct and indirect effects on community relations and overall coping strategies. Qualitatively, community support was highlighted as essential, with participants emphasizing the need for societal adjustments to better meet the needs of aging populations. Overall, the findings underscore the complex interplay between individual adaptability, community support systems, and societal perceptions of aging. Addressing these factors comprehensively is crucial for enhancing the social well-being of elderly individuals.

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Compliance with ethical standards

Ethical considerations

This study adhered to ethical research standards. Participants provided informed consent, and their confidentiality was safeguarded. No personally identifiable information was collected, and all data were anonymized.

Conflict of interest

The author(s) declared no potential conflicts of interest concerning this article's research, authorship, and/or publication.

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