

Factors Influencing Elderly Life Satisfaction in Thailand: A Comprehensive Study on Socio-Economic, Mental, and Physical Health, and Social Activity

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The Asian Conference on Aging & Gerontology 2024
Official Conference Proceedings

Abstract

This study aimed to assess the life satisfaction of elderly individuals and its associated factors, examining the empirical relationship, direction, and intensity of these variables. The investigation explored the mediating roles of physical and mental health scores on life satisfaction, using data from the fourth wave of the Health, Aging, and Retirement in Thailand (HART) survey conducted in 2022-2023. The sample included 646 individuals aged 45 and older, representing five regions, including Bangkok. Structural equation modeling was employed for data analysis. Results indicated significant effects of mental health and asset ownership on life satisfaction, with mental health mediating the association between asset ownership and life satisfaction. Physical health acted as a mediator for the relationship between mental health and net income. Social activity participation also showed a significant indirect effect on life satisfaction. Among those aged 60-69, mental health was a significant factor influencing life satisfaction and served as a mediator between asset ownership and life satisfaction. For those aged 70 and older, heightened levels of mental health contributed significantly to increased satisfaction, demonstrating an age group moderation effect. In summary, mental health and asset ownership significantly impacted life satisfaction, with mental health mediating the association between asset ownership and life satisfaction. Physical health was considered as a mediator for the relationship between mental health and net income, and social activity participation indirectly influenced life satisfaction. The age group played a moderating role, with mental health being significant for those aged 60-69 and aged 70 and older.

Keywords: Elderly, Mental Health, Physical Health, Social Activity Participation, Socio-Economic, Life Satisfaction

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1. Background

Thailand had a population of over 60 years old amounting to 13,358,751 people, constituting 19.6% of the total population. The elderly population included about 5.97 million males and about 7.38 million females, (Social Statistics Division, 2021) with percentages exceeding 10%, marking Thailand's transition into a full-fledged aging society. Not only Thailand but also the whole world is experiencing significant changes due to the shifting age demographics, particularly among those aged 60 and above. This demographic transition has sparked interest among scholars and researchers exploring its societal and economic implications. With the increasing number of elderly individuals, there is a growing need for society and the government to adapt services to meet their specific needs, emphasizing the importance of thoughtful policy development. Essential factors like living conditions and the availability of welfare services play crucial roles in shaping the quality of life for the elderly. This comprehensive perspective underscores the urgency for thorough studies and strategic policy initiatives to effectively address the evolving landscape of elderly population. Examining the well-being of the elderly, life satisfaction emerges as a multifaceted and vital aspect. It involves a personal evaluation of various life domains, including physical health, mental and emotional well-being, social connections, and the achievement of personal goals. Enhancing life satisfaction among the elderly is crucial, as it directly correlates with their overall quality of life and contributes to successful aging. Factors influencing life satisfaction in this demographic include health status, financial security, social engagement, and a sense of purpose. Tailoring support systems, healthcare interventions, and social programs to address these factors can significantly contribute to promoting and sustaining high levels of life satisfaction among the elderly population. Recognizing the unique needs and experiences of older individuals is essential for developing effective strategies that foster contentment and well-being in their later years.

Numerous studies had concentrated on the life satisfaction of the elderly, and these studies illustrated that the factors influencing life satisfaction among the elderly were multifaceted and interrelated. Household socio-economic status, encompassing elements such as income, wealth, and assets, played a significant role, with studies indicating positive relationships between socio-economic factors and life satisfaction (Srivastava et al., 2022). Physical and mental health were crucial dimensions influencing life satisfaction, with declining physical health associated with aging affecting overall satisfaction (Ng, 2017; Srivastava et al., 2022). The reciprocal relationship between household socio-economic status and health was evident, as socio-economic factors impacted health outcomes (Niedzwiedz et al., 2012; Wang & Geng, 2019). In addition, active participation in social activities appeared as a key contributor to mental health and life satisfaction among the elderly, supporting a sense of purpose and social connection (Wang et al., 2022; Erdem et al., 2019). The intricate interplay of these factors underscored the need for a comprehensive understanding to formulate effective policies and interventions aimed at enhancing the well-being and life satisfaction of the elderly population.

For the aforementioned reasons, it is evident that the elderly face both physical and mental challenges, resulting in poor health that contributes to negative mental states and reduced life satisfaction. Hence, the researcher aimed to assess and explore the factors influencing the level of life satisfaction among the elderly in Thailand. The researcher anticipates that the study's findings will be valuable for related organizations in developing effective plans and assistance strategies to support the elderly in the future.

2. Theoretical Framework and Hypotheses

2.1 Theoretical Framework

The exploration of life satisfaction among the elderly holds paramount importance for informing national policymakers. This study focuses on four key dimensions anticipated to impact life satisfaction, both directly and indirectly. These dimensions include socio-economic factors, participation in social activities, and the influence of physical and mental health. A comprehensive understanding of these aspects could be reflected by this proposed model.

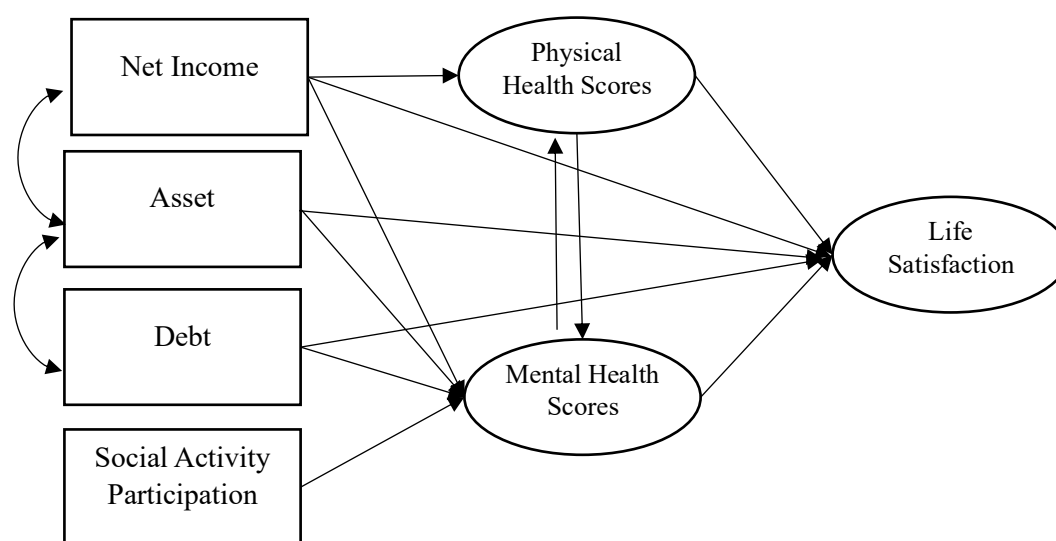


Figure 1: Proposed Model

2.2 Hypotheses

2.2.1 Household Socio-Economic Affect to Life Satisfaction

Life satisfaction considered an essential aspect of successful ageing, the older adults recheck their past life and feel satisfied if their goals and dreams are met and one of the factors influenced is household socio-economic.

Addressing the issues of elderly in their socio-economic arena and factors related to their satisfaction with life has significant research implications. Factors such as, household income, wealth, and asset are often used to reflect socio-economic factors (Kong et al., 2019; Xue et al., 2022). Ren et al. (2022) found that there is a positive correlation between socio-economic and life satisfaction. A study of the socio-economic and life satisfaction relationship in older adults in Finland, Poland, and Spain revealed that socio-economic direct effects explained of life satisfaction variance (Moreno-Agostino et al., 2021). Lack of socio-economic assistance is associated with ageing, affecting life satisfaction among older adults (Ng, Tey, & Asadullah, 2017).

Additionally, assets are another crucial part of the economic factors associated with elderly satisfaction. Several studies showed the significant relate of an increase in life satisfaction

and economic status-related variables included, annual income, annual household income, real estate assets, financial assets, and debt (Park & Kang, 2022). Comparatively, a study showed that Chinese older having a high subjective economic status was positively associated with a high level of life satisfaction (Kim et al, 2021). From these literary works, we propose hypothesis 1: household socio-economic can positively impact to life satisfaction.

2.2.2 Physical and Mental Health Affect to Life Satisfaction

Life satisfaction is related to healthy development into adulthood, because it can be influenced by life events, and it is likely to change in this turbulent life phase. Life satisfaction varies over the life span with an inverted U-shape, remains relatively lower before age 60, increases after some time, and decreases substantially in later life due to increased health problems (Mandi & Bansod, 2023).

Existing literature according to physical health and mental health factor, older adults with declining physical health are associated with ageing, affecting life satisfaction (Ng, 2017; Srivastava et al., 2022). The previous research findings that health was positively related to life satisfaction among the elderly in China (Camacho et al., 2019) and Vietnam (Trinh, 2022). A study in India also showed that physical health and mental health were significantly associated with life satisfaction among urban elderly, elderly having good self-rated health, having higher functional health, and good mental health have been associated with higher life satisfaction (Mandi & Bansod, 2023). However, older adults in Finland, Poland, and Spain revealed that health indirect effect explained of life satisfaction (Moreno-Agostino et al., 2021).

Findings support the idea that an examination of a wider range of health variables (Physical/Mental) could predict life satisfaction among elders, we propose hypothesis 2: health can positively influence life satisfaction.

2.2.3 Household Socio-Economic Affect to Health

Healthy ageing is influenced by an individual's socio-economic position throughout the life course (Niedzwiedz et al., 2012). Generally, individuals with lower socio-economic status (SES) experience worse overall health, higher levels of morbidity, and more premature mortality (Bella et al., 2012). Related research shed light on the point the link between socio-economic status and health. Low household socio-economic status is associated with unhealthy behaviors including poor diet and adverse health outcomes (Were, et al., 2022). Specifically, in terms of the significant of income on health status, elderly with high income level were often associated with better nutrition, housing, and medical care, as well as greater health awareness, leading to better health status (Zhang et al., 2022).

The result from Structural Equation Modeling (SEM) indicated that socio-economic had a significant impact on people's physical health, but the impact of socio-economic on psychological health was not significant (Wang & Geng, 2019). Especially for the elderly with lower socio-economic status, the adverse effects of lower socio-economic status on health status can be mitigated by supporting them to participate in more social activities (Zhang, et al., 2022). Meanwhile, older with higher socio-economic status directly effect on health through access to health services, better quality of care, and access to information that may lead to positive health behavior and enhanced perception of one's own advantage

relative to others of lower economic status (Smith & Goldman, 2007; Park et al., 2009; Falkingham et al., 2011).

Through the previous studies, we mainly found that socio-economic was positively related to health status, it could indeed have a significant effect on the physical and mental health of the elderly. We propose hypothesis 3: socio-economic can positively impact elderly' health.

2.2.4 Social Activity Participation Affect to Mental Health and Life Satisfaction

Older who participating in social activities can slow down the cognitive decline of the elderly and help protect their mental health (Wang et al., 2022). Social participation benefits the mental health of older adults, it is associated with depressive symptoms, but the direction and strength of the association depend on the type of social activity (Croezen et al., 2009). Active participation in social activities is beneficial for improving mental health of older, such as reducing depressive symptoms, and improving life satisfaction (Guo et al., 2018). It suggests that older adults who maintain an active lifestyle are likely to sustain a positive self-concept and improve their self-esteem, thereby contributing to good mental health in later life. Based on activity theory and role accumulation theory, participating in social activities and the number of activities participate in are both crucial to older adults' mental health (Hao, 2008).

The studies have found that active participation in religious or church activities, clubs, and political groups and volunteering are associated with better mental health (Kawachi & Berkman; Croezen et al., 2009; Chiao et al 2011).

Many studies have shown that active social activities can effectively improve older life satisfaction. Elderly in South Korea with superior economic conditions and maintaining physical activity and social relations show higher life satisfaction than others (Roh & Weon, 2020). A study on South Korea showed social activities influenced the life satisfaction of older adults. In the 65–74 age group, factors that statistically significantly increased life satisfaction were meeting children and volunteer activities. In the ≥ 75 age group, factors that significantly increased life satisfaction were talking with friends and children, using senior citizen community centers, and hobby club activities (Park & Kang, 2023). We propose hypothesis 4: social activity participation can positively affect elderly' mental health and life satisfaction.

3. Research Methodology

This study utilizes the dataset from Wave IV of the Health, Aging, and Retirement in Thailand (HART) Project (<https://hart.nida.ac.th/>). The dataset was collected during the period from June 2022 to July 2023 and includes 646 Thais, categorized into three age groups: 184 individuals aged 45 – 59, 238 elderly individuals aged 60 – 69, and 224 individuals aged 70 and over. The variables involved are as follows.

Variable	Meaning	Value
Observed Variable:		
Net income	Value of personal cash earn per year, e.g., income, compensation, pension, reward, heritance	Log of net income
Asset	Value of personal asset at time of observation, e.g., real estate, vehicle, cash saving, deposit, stock & share, life insurance	Log of asset
Debt	Value of personal debt at time of observation, including all kind of loan	Log of debt
Social Activity	Numbers of non-online participated activities	
Constructed Variable:		
Physical Health Score	Total physical impairment in mobility, vision, hearing, speech, and memory	Physical impairment: 1 = Yes and 0 = No (Total score: 0 – 5)
Mental Health Score	Total score of depression: boring, lack of concentration, sadness, anxiety, insomnia, loneliness, dissatisfaction and worthless	Score of depression: Score 1 = None, Score 2 = 1 – 2 days/week Score 3 = 3 – 4 days/week Score 4 = 5 – 6 days/week Score 5 = every day (Total score: 8 – 40)
Life Satisfaction	Total subjective score of satisfaction in physical health, mental health and self-economic status	Score of satisfaction: (1 – 10) Score 1 = very bad ... Score 2 = very good (Total score: 3 – 30)

4. Ethical Considerations

This study was approved by the ethical committee of National Institute Development Administration (COA No. 2023/0072). Informed consent for the data collection and use of information was obtained from all participants.

5. Results

The data were analyzed using the structural equation modeling (SEM) method to assess the outcomes of hypothesis testing. The appropriateness of the structural model was evaluated based on its goodness-of-fit to the hypothesized model. Subsequently, the hypotheses were investigated by examining the path coefficients of the constructs within the alternative (final) model.

5.1 Measurement Invariance

The results pertaining to the related fit statistics of measurement invariance, as well as the fitness indices of the alternative model (final model) and age group models, were examined.

To assess the moderating role of the variable 'age group' in elderly life satisfaction, it is essential to initially compare the fitness indices between the alternative model and the age group model.

Table 1: Model Invariance Test

<i>Model</i>	χ^2	<i>df</i>	<i>CMIN/DF</i>	<i>GFI</i>	<i>AGFI</i>	<i>CFI</i>	<i>RMSEA</i>	Δ <i>CFI</i>	Δ <i>RMSEA</i>
Alternative	357.849	108	3.313	0.941	0.916	0.898	0.060	-	-
Age group	670.475	324	2.069	0.896	0.853	0.861	0.041	0.037	0.019

The model fitness indices used in the current study were GFI (goodness of fit index), AGFI (adjusted goodness of fit index), CFI (comparative fit index), RMSEA (root mean square error of approximation). As were shown in the table, the fitness indices of the alternative model and the age group model were different implying that age of elderly could be moderated to their life satisfaction.

5.2 Model Fitness Indices

The proposed model was illustrated in Figure 1, which includes three constructed variables: physical health and mental health scores, and life satisfaction. Moreover, there are three observables: net income, asset ownership, and debt. Nevertheless, after investigating the significant factors, we discovered that life satisfaction was unaffected by certain factors (as detailed in the next section). Therefore, we developed an alternative model, as well as the age group model, to investigate how the relationships among all factors vary with the age of the elderly, as depicted in Figure 2a to 2d). In examining the model fitness indices across different models, Table 1 presents the results. The fitness indices, providing a comprehensive evaluation of how well the models align with the observed data, were estimated as follows: GFI = 0.941, AGFI= 0.916, CFI = 0.898, and RMSEA = 0.06.

For the age group model, the values were GFI =0.896, AGFI = 0.853, CFI = 0.861, and RMSEA = 0.041.

Table 2: Hypothesis testing: effects of path estimation

		<i>Alternative model</i>		<i>Age group 45-59</i>		<i>Age group 60-69</i>		<i>Age group 70+</i>	
		<i>DE</i>	<i>IE</i>	<i>DE</i>	<i>IE</i>	<i>DE</i>	<i>IE</i>	<i>DE</i>	<i>IE</i>
Net Income->	Physical Health Score	0.129**		-0.101		0.051		0.146	
Asset -->	Mental Health Score	0.115**		0.069		0.145*		0.14	
Net Income->	Mental Health Score		0.039		-0.043		0.022		0.021
Physical Health Score -->	Mental Health Score	0.305**		0.422**		0.445**		0.141	
Social Activity -->	Mental Health Score	-0.099*		-	0.220**	-0.021		0.029	
Social Activity -->	Life Satisfaction		-0.036		-0.069		-0.008		0.005
Asset -->	Life Satisfaction	0.147**	0.042	0.220*	0.022	0.157	0.056	-0.026	0.026
Net Income->	Life Satisfaction		0.014		-0.013		0.009		0.004
Physical Health Score -->	Life Satisfaction		0.111		0.132		0.172		0.027
Mental Health Score -->	Life Satisfaction	0.365**		0.314**		0.386**		0.189**	

These results indicate that both the alternative model and the age group model fit well with the empirical data. It's another important to note that the Chi-square value in Amos, referred to as CMIN, was highly significant, as evidenced in Table 1 ($p < 0.001$).

5.3 Exploring Associations Leading to Life Satisfaction Into the Alternative Model

The SEM analysis revealed several significant relationships among key variables (as the statistical values shown in Table 2). There was a positive association between physical health score and net income (path coefficient = 0.129, $p = 0.004$), indicating the impact of financial well-being on physical health. Additionally, Mental health score displayed positive associations with both asset (path coefficient = 0.115, $p = 0.007$) and physical health score (path coefficient = 0.305, $p = 0.000$), underlining the interrelatedness of financial, mental health and physical well-being. However, mental health score exhibited a negative correlation with social activity (path coefficient = -0.099, $p = 0.019$), this relationship led to a decrease in mental health score as social activity increases may reflect social experiences and cultural influences that impact an individual's satisfaction and mental well-being.

Furthermore, life satisfaction was highly enhanced by both mental health score (path coefficient = 0.365, $p = 0.000$) and asset (path coefficient = 0.147, $p = 0.004$), emphasizing the significance of mental health and asset ownership in positively affecting life satisfaction. The bidirectional relationships between net income and asset highlight their mutual influence (path coefficient = 0.113, $p = 0.004$). These findings provide valuable insights for policymakers and healthcare practitioners working towards enhancing the quality of life for an aging society.

5.4 Exploring Associations Leading to Life Satisfaction Into the Age Group Model

From the SEM results of the age group model, it was evident that age group acted as a moderator, exerting a clear influence on life satisfaction. Upon closer examination, it was noteworthy that the variable asset, which previously had a significant impact on mental health score in the alternative model, was no longer significant in this age group (path coefficient = 0.069, $p = 0.342$). Analyzing life satisfaction for individuals aged 45-59, considered as pre-retirement people, it became apparent that influential factors that significantly contributed to life satisfaction remained mental health score (path coefficient = 0.314, $p = 0.006$) and asset (path coefficient = 0.220, $p = 0.023$), in that order. Likewise, mental health score continued to play a pivotal role as a mediator between physical health score and life satisfaction, as well as between social activity and life satisfaction as shown the path values and their statistics in Table 2.

It effectively conveyed that for elderly individuals in the age groups of 60-69 and 70 and above, only one factor significantly contributes to enhancing life satisfaction, which is the mental health score. (path coefficient = 0.386, $p = 0.003$ and path coefficient = 0.189, $p = 0.005$, respectively). In addition, it was observed that in the 60-69 age group, mental health score acted as a crucial mediating variable that influenced the indirect effects of asset and physical health score on life satisfaction (as shown the path values and their statistics in Table 2). In contrast, for individuals in the 70 years and above age group, such significant mediating relationships were not evident.

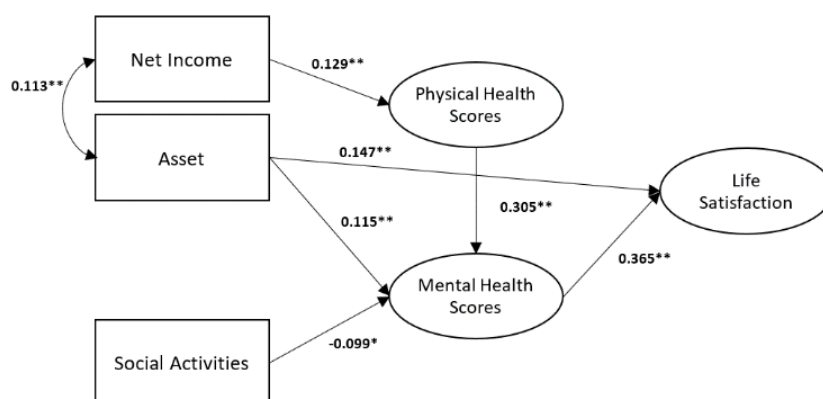


Figure 2.a Standardized regression coefficients
– Alternative model

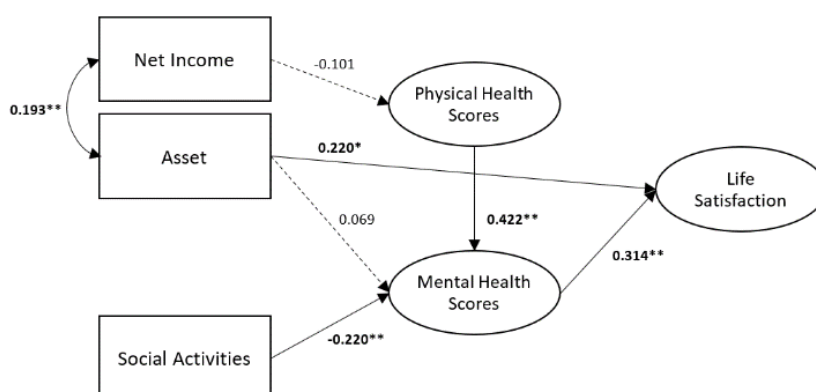


Figure 2.b Standardized regression coefficients –
Alternative model for age 45-59

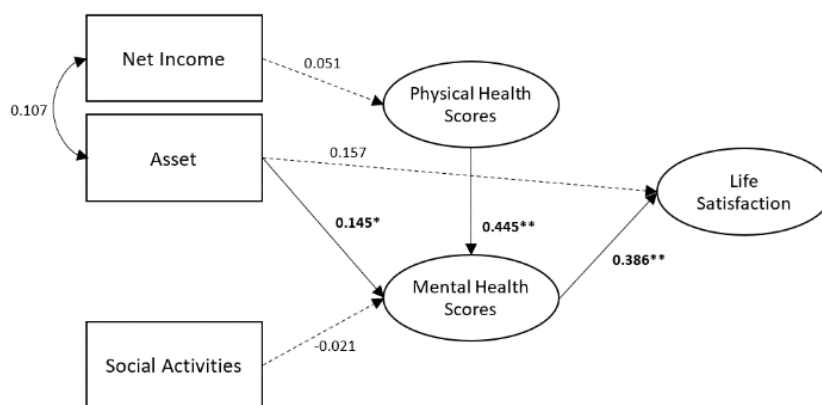


Figure 2.c Standardized regression coefficients –
Alternative model for age 60-69

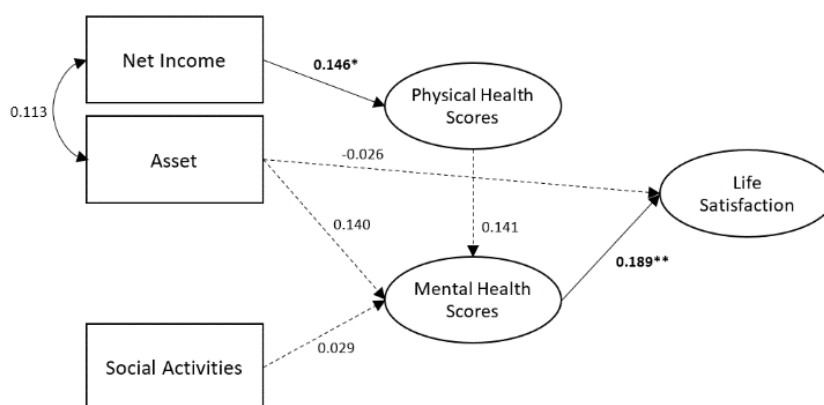


Figure 2.d Standardized regression coefficients –
Alternative model for age 70 and over

6. Conclusion and Discussion

In conclusion, life satisfaction was identified as a crucial factor for elderly people in Thailand, warranting focused attention and insights. The Structural Equation Modeling (SEM) analysis was utilized in this study, shedding light on the various factors that shape life satisfaction across diverse age groups. The alternative model, encompassing the entire population, revealed the intricate relationships between socio-economic, mental and physical health, social activity, and life satisfaction. Notably, socio-economic factors, particularly financial well-being, demonstrated a positive impact on physical health. Concurrently, mental health exhibited positive associations with both asset ownership and physical well-being, aligning with findings from previous research by Niedzwiedz et al. (2012), Bella et al. (2012), Were et al. (2022), and others.

It is noteworthy that social activity exhibited a negative impact on both mental health and life satisfaction. Furthermore, life satisfaction demonstrated a significant enhancement through positive contributions from both mental health and asset ownership. These findings align with the research of Park & Kang (2022), highlighting the positive influence of asset ownership on life satisfaction. Additionally, they support the conclusions drawn by Ng (2017), Srivastava et al. (2022), Camacho et al. (2019), Trinh (2022), and Mandi & Bansod (2023), who have established a positive correlation between good mental health and higher life satisfaction.

Upon delving into age-specific analyses, it became evident that the age group served as a crucial moderator, exerting a distinct influence on life satisfaction. For individuals aged 45-59, mental health and asset ownership emerged as significant contributors, with the former continuing to play a pivotal mediating role. While social activity and physical health score affect life satisfaction indirectly through mental health. In addition, those of aged 60-69 and 70 and above, only mental health significantly contributed to directly to life satisfaction. However, asset ownership appears to have a significant effect on life satisfaction indirectly through mental health for individuals aged 60-69 but not for older adults.

Obviously, before retirement, economic stability seems to be a major factor in life satisfaction. Then the attitude could be changed after retirement, spiritual wellness becomes more and more desirable. At early stages of retirement, financial and physical wellness, still related to elderly life satisfaction obliquely through mental health. Finally, external asset, even physical health, means wastefulness to elderly but inner happiness – no depression does. This is nothing but the truth of life.

The age-specific variations underscored the importance of tailoring interventions to address the unique needs of distinct age cohorts. These findings have substantive implications for policymakers and healthcare practitioners working towards enhancing the overall quality of life for an aging society.

Respectfulness and gratefulness are East Asian culture and tradition, including Thai and many other Asian countries. This could certainly help increase spiritual wellness for the elderly then life satisfaction is consequently increased. This will be a future study.

7. Acknowledgement

The authors would like to express their sincere gratitude to the Health, Aging, and Retirement in Thailand (HART) Project for providing the valuable dataset used in this research. This project significantly contributed to the success of our study by supplying the necessary data for analysis. We extend our appreciation to the entire team involved in the HART project for their efforts in collecting and curating the dataset. Their contribution has been instrumental in advancing our understanding in the field of Aging Society.

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