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# Research Synthesis on Differential Factors Associated with Health Behaviors Between Young-Old and Old-Old Adults in Thailand: A Meta-Analytical Approach

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## Abstract

This study synthesized factors associated with health behaviors among Thai elderly through systematic review of ten research articles published between 2015-2024. Findings revealed three main factor categories: personal factors (age, education, income, marital status), knowledge-attitude factors, and access-participation factors (elderly clubs, health check-ups, social support). Statistical analysis identified perceived benefits ($r = 0.664$, $p<0.001$) and social support ($r = 0.537$, $p<0.001$) as having the strongest positive correlations with health behaviors, while age showed a negative correlation ($r = -0.227$, $p<0.01$). Significant differences emerged between young-old (60-70 years) and old-old (71+ years) adults: young-old were primarily influenced by mental well-being ($\beta = 0.42$) and physical well-being ($\beta = 0.38$), whereas old-old were more affected by material support ($\beta = 0.45$) and intellectual well-being ($\beta = 0.40$). These differential patterns reflect evolving needs across the aging spectrum, requiring tailored intervention approaches. Despite high knowledge levels (48.89%) and positive attitudes (53.61%) among elderly, only 15.20% demonstrated high-level health behaviors, highlighting a substantial knowledge-practice gap. Regional variations were also observed, with stronger social support correlations in rural northeastern communities ($r = 0.61$) compared to urban central areas ($r = 0.42$). These findings suggest that health promotion strategies should be age-tailored and geographically contextualized, emphasizing psychological and physical dimensions for young-old adults while focusing on support systems and cognitive maintenance for old-old adults. Such differentiated approaches could enhance elderly quality of life while potentially reducing healthcare costs through more effective prevention and targeted interventions.

Keywords: Elderly health behaviors, Young-old adults, Old-old adults, Research synthesis, Health-promoting factors

## Introduction

Thailand is rapidly becoming an aging society where elderly individuals commonly face chronic non-communicable diseases.

According to a study by Thanayus Thanathiti and Kanitha Chamroonsawat (2015), hypertension was found to be the most prevalent health issue among the elderly, affecting up to 69% of them, followed by musculoskeletal pain, back pain, and waist pain at 45.2%. This aligns with the study by Nattapong Duanmee (2024), which found that the overall health care behaviors of the elderly were at a moderate level, with exercise behaviors being at a low level.

Rungson Chetpraphan (2021) found a significant gap between knowledge (48.89% high level), attitudes (53.61% positive), and actual health behaviors (75.83% moderate level) among elderly Thais. This is consistent with research by Prajak Phenpho (2020), which found that the health promotion behaviors of most elderly people were at a moderate level (68.65%), highlighting three significant problems: personal health responsibility, exercise, and nutrition.

Several key factors have been found to correlate with elderly health behaviors. Age has shown a negative correlation ($r = -0.227$, $p<0.01$), while income, knowledge, and attitude have demonstrated positive relationships with health behaviors with statistical significance (Rungson Chetpraphan, 2021). This is consistent with the study by Nanthinee Wangnan et al. (2019), which found that age negatively correlated with elderly self-care behaviors, while





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attitude and access to health resources showed positive correlations.

Moreover, Witthama Thammacharoen and Nitasnee Charoenngam (2021) identified differences in factors influencing health care behaviors between young-old and old-old adults. Young-old adults were influenced by mental and physical well-being, material support, income sources, and alcohol consumption, while old-old adults were influenced by material support, intellectual well-being, mental well-being, and emotional support.

These situations reflect the necessity to develop appropriate approaches for promoting health care behaviors among the elderly. According to Nattapong Duanmee (2024), it is essential to encourage participation in elderly clubs, which currently has a low proportion (34.10%), and to promote family involvement in elderly care. This aligns with Sudarat Chuphan (2021), who suggested that family and government support should be provided to promote healthy behaviors among the elderly by focusing on education and attitude adjustment to help the elderly achieve a better quality of life and appropriate self-reliance.

Based on these identified gaps in the literature, this research explicitly aims to: (1) systematically synthesize factors associated with health behaviors among Thai elderly from published studies between 2015-2024; (2) determine the relative strength of influence for each identified factor; and (3) compare the differential impact of these factors between young-old and old-old age groups to inform targeted health promotion approaches.

## Literature Review

The literature review for research on factors associated with elderly health behaviors is divided into three main themes: concepts of elderly health behavior, factors related to health behavior, and concepts of research synthesis.

Green and Kreuter's (2005) PRECEDE-PROCEED Model informs our conceptual framework by categorizing influences on health behaviors into predisposing, enabling, and reinforcing factors.

Additionally, Pender's Health Promotion Model describes how health promotion behaviors are influenced by individual characteristics and experiences, behavior-specific cognitions and affects, and behavioral outcomes (Pender et al., 2015).

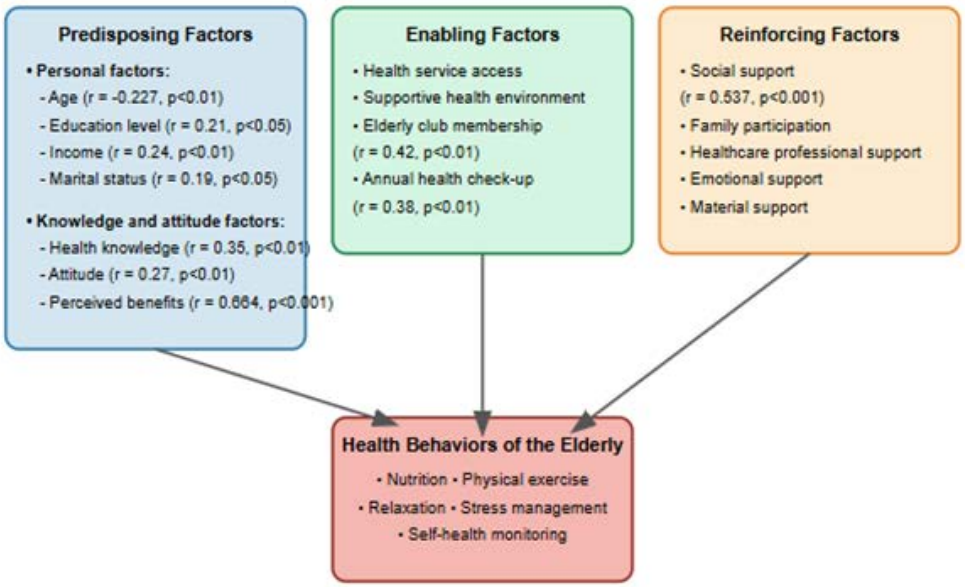


**Figure 1** Conceptual framework for the synthesis of factors associated with health behaviors of the elderly based on the PRECEDE-PROCEED model.
Data source: Green, L. W., & Kreuter, M. W. (2005). Health program planning: An educational and ecological approach (4th ed.). McGraw-Hill.

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Figure 1 illustrates the conceptual framework for synthesizing factors associated with health behaviors of the elderly based on the PRECEDE-PROCEED Model. The factors are classified into three main groups: Predisposing Factors, which include personal factors and knowledge and attitude factors; Enabling Factors, which relate to service access and health-supportive environments; and Reinforcing Factors, which involve various forms of social support.



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This figure demonstrates the interconnection between these three groups of factors that influence health behaviors of the elderly, along with correlation coefficients of key factors. It reflects that promoting health behaviors among the elderly must consider diverse and interconnected factors.

Regarding research on factors associated with elderly health behaviors in Thailand, studies have examined personal factors, knowledge and attitude factors, and social and support factors. Jarupen Phujomjit's (2022) study found that education level, income, and social support positively correlated with elderly health behaviors. This aligns with the study by Onsuda Tantayanon and Danwichai Sairaksa (2023), which identified social support and family relationships as significant factors influencing elderly quality of life.

For research synthesis concepts, this study applied Cooper's (2017) principles, which propose a five-step research synthesis process: problem formulation, literature search, research quality assessment, data analysis, and results presentation. This research utilized content analysis and qualitative data synthesis rather than quantitative meta-analysis due to the methodological diversity and reporting variations in the synthesized studies.

## Methodology

We used research synthesis to examine factors influencing elderly health behaviors in Thailand. Our approach combined content analysis with qualitative data synthesis to integrate findings from multiple studies.

Due to methodological heterogeneity across studies, we adopted a systematic mixed-methods synthesis approach rather than a strict statistical meta-analysis. Our content analysis followed Krippendorff's (2018) systematic coding framework, involving: (1) unitizing relevant data from each study; (2) sampling through a stratified purposive approach rather than simple random sampling to ensure representation across regions and study designs; (3) coding using a standardized extraction form validated by three independent researchers; (4) reducing data through categorization by factor types; (5) inferring patterns through constant comparison; and (6) contextualizing findings within the theoretical framework.

For studies reporting correlation coefficients, we calculated weighted average effect sizes based on sample sizes. For studies reporting only significance levels without coefficients, we used conservative estimate conversions following Lipsey and Wilson's (2001) guidelines. This combined approach allowed us to integrate both quantitative measures and qualitative insights from the diverse studies while maintaining methodological rigor.

The scope of this research synthesis encompassed studies focused on factors related to health behaviors among Thai elderly published between 2015 and 2024. Only research articles and original manuscripts published in academic journals indexed in the Thailand Citation Index (TCI) database were included to ensure academic quality and relevance.

The variables examined in this synthesis were categorized according to PRECEDE-PROCEED Model. Independent variables included predisposing factors (personal characteristics such as gender, age, education level, marital status, occupation, income, underlying diseases, and risk behaviors; and psychological factors including health care knowledge, attitudes, self-efficacy perception, perceived benefits and barriers, as well as mental, physical, intellectual, and social well-being); enabling factors (access to health services, health-supportive environments, elderly club membership, health check-up access, and access to health information); and reinforcing factors (various forms of social support including emotional, informational, and material support, family participation, and support from healthcare personnel). The dependent variable was elderly health behaviors encompassing multiple dimensions such as nutrition, exercise, rest, stress management, accident prevention, personal health responsibility, hygiene, medication use, and social participation.

The research population consisted of 25 studies related to factors associated with elderly health behaviors in Thailand published in TCI-indexed journals between 2015-2024 that met our inclusion criteria. From this population, a sample of 10 studies was selected using simple random sampling, with the sample size determined using Krejcie and Morgan's table. This approach ensured adequate representation while maintaining feasibility for in-depth analysis.

Data collection was facilitated through a research summary form specifically developed for this study. This instrument was structured in four sections capturing basic research information, content details, analytical approaches, and reported findings from each included study. The synthesis process followed a systematic approach beginning with establishing clear selection criteria, followed by comprehensive database searches, rigorous screening of potential studies, and meticulous data extraction using the structured summary form.

For data analysis, we employed both descriptive and inferential statistical approaches.



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Initial analysis included calculating frequencies and percentages of research characteristics, determining means and standard deviations of correlation coefficients, and analyzing effect size distributions. More advanced analysis involved calculating effect sizes for individual factors, determining mean total effect sizes, analyzing homogeneity, comparing effect sizes between factor groups using One-way ANOVA with LSD for pairwise comparisons, and examining interactions between factors through Two-way ANOVA and joint influence analysis. This comprehensive analytical approach allowed us to identify the relative importance of different factors and understand how they interact to influence health behaviors among elderly populations in Thailand.

## Results and Discussion

Our synthesis revealed significant findings across multiple dimensions. Most included studies were recent (40% published 2021-2024), primarily research articles (80%), and used descriptive designs (50%).This recent publication timeframe indicates growing scholarly interest in elderly health behaviors, reflecting Thailand's rapid transition to an aging society and increased recognition of elderly health as a national priority.

Table 1 shows the characteristics of all 10 research studies synthesized in this study, including details of researchers, publication year, study region, sample size, and research design. From the table, it can be seen that most research was conducted in the Northeastern region (4 studies), followed by the Central region (3 studies), Northern region (2 studies), and Southern region (1 study), making the synthesis cover all regions of Thailand. The majority of research designs were survey research and correlational research, with a total sample size of 2,311 participants.

Most of the synthesized research was conducted in Northeastern Thailand (4 studies), followed by Central Thailand (3 studies), with the remaining distributed across Northern and Southern regions (3 studies). This geographical distribution provides a reasonably comprehensive national perspective, though with some regional emphasis. Sample sizes predominantly ranged between 301-400 participants (4 studies), with a substantial combined sample of 2,311 elderly individuals across all studies, enhancing the generalizability and robustness of our synthesis findings.

Correlation analysis revealed that five factors demonstrated significant positive relationships with elderly health behaviors. Health care knowledge showed a moderate positive correlation ($r = 0.35$, $p<0.01$), suggesting that elderly individuals with better understanding of health practices tend to adopt healthier behaviors. Similarly, health care attitude demonstrated a positive though slightly weaker relationship ($r = 0.27$, $p<0.01$), indicating that positive attitudes toward health maintenance contribute to better health practices. Income also showed a positive correlation ($r = 0.24$, $p<0.01$), highlighting how financial resources can facilitate access to health services and enable healthier lifestyle choices.

**Table 1** Characteristics of Research Studies in the Meta-Analysis (N=10).

| No. | Authors (Year) | Region | Sample Size | Research Design |
|---|---|---|---|---|
| 1 | Thanayus & Kanitha (2015) | Central | 256 | Experimental Research |
| 2 | Nanthinee et al. (2019) | Northeast | 312 | Survey Research |
| 3 | Prajak (2020) | North | 245 | Survey Research |
| 4 | Rungson (2021) | Central | 203 | Correlational Research |
| 5 | Witthama & Nitasnee (2021) | Northeast | 324 | Comparative Research |
| 6 | Sudarat (2021) | Northeast | 185 | Survey Research |
| 7 | Jarupen (2022) | East | 267 | Correlational Research |
| 8 | Onsuda & Danwichai (2023) | Central | 196 | Correlational Research |
| 9 | Nattapong (2024) | South | 178 | Survey Research |
| 10 | Wanich (2018) | North | 145 | Correlational Research |

Table 2 shows the correlation coefficients of factors associated with health behaviors of the elderly, classified by factor type. The synthesis reveals that factors having a high positive correlation with elderly health behaviors include perceived benefits ($r = 0.664$, $p<0.001$) and social support ($r = 0.537$,



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p<0.001). Factors with moderate positive correlations include elderly club membership (r = 0.42, p<0.01), annual health check-ups (r = 0.38, p<0.01), and health care knowledge (r = 0.35, p<0.01). Factors with negative correlations include perceived barriers (r = -0.360, p<0.001) and age (r = -0.227, p<0.01), indicating that as the elderly grow older, they tend to exhibit declining health behaviors.

**Table 2** Correlation Coefficients of Factors Associated with Health Behaviors of the Elderly.

| Factor Type | Factor | r value | p-value | Effect Size |
|---|---|---|---|---|
| Personal Factors | Age | -0.227 | <0.01 | Low |
| | Income | 0.24 | <0.01 | Low |
| | Education Level | 0.21 | <0.05 | Low |
| | Marital Status | 0.19 | <0.05 | Low |
| Knowledge and Attitude Factors | Health Care Knowledge | 0.35 | <0.01 | Moderate |
| | Attitude toward Health Care | 0.27 | <0.01 | Low |
| | Perceived Benefits | 0.664 | <0.001 | High |
| | Perceived Barriers | -0.360 | <0.001 | Moderate |
| Knowledge and Attitude Factors | Elderly Club Membership | 0.42 | <0.01 | Moderate |
| | Annual Health Check-up | 0.38 | <0.01 | Moderate |
| | Social Support | 0.537 | <0.001 | High |

**Data source:** Green, L. W., & Kreuter, M. W. (2005). Health program planning: An educational and ecological approach (4th ed.). McGraw-Hill.

Social support showed a strong positive correlation (r = 0.537, p<0.001), highlighting how family, friends, and community networks significantly influence elderly health behaviors. The strongest correlation was found with perceived benefits (r = 0.664, p<0.001), aligning with the Health Belief Model which emphasizes that individuals are more likely to adopt health behaviors when they clearly recognize the benefits of such actions (Rosenstock et al., 1988). This finding suggests that health promotion strategies emphasizing tangible benefits could be particularly effective for elderly populations.

Conversely, two factors exhibited significant negative correlations with health behaviors. Age showed a negative relationship (r = -0.227, p<0.01), supporting findings from Rungson Chetpraphan (2021) and Nanthinee Wangnan et al. (2019), indicating that older elderly tend to engage less in positive health behaviors. This decline might stem from decreasing physical capabilities, accumulating health conditions, and increasing access barriers to health services and information. Similarly, perceived barriers demonstrated a moderate negative correlation (r = -0.360, p<0.001), highlighting how obstacles-whether physical, financial, or psychological-can significantly impede health behavior adoption among the elderly.

Our analysis revealed notable differences in factors influencing health behaviors between age subgroups. For young-old adults (60-70 years), the primary influencing factors were mental well-being (β = 0.42, p<0.05), physical well-being (β = 0.38, p<0.05), and material support (β = 0.35, p<0.05). This suggests that younger elderly individuals' health behaviors are strongly influenced by their psychological state, physical condition, and access to tangible resources. In contrast, old-old adults (71+ years) were more influenced by material support (β = 0.45, p<0.05), intellectual well-being (β = 0.40, p<0.05), and emotional support (β = 0.35, p<0.05). This indicates a shift toward greater dependence on external support and maintenance of cognitive function among the oldest elderly. These differential patterns reflect evolving needs across the aging spectrum, consistent with Witthama Thammacharoen and Nitasnee Charoenngam's (2021) findings that old-old adults require more comprehensive social support compared to their younger counterparts.

Figure 2 illustrates the comparison of factors influencing health behaviors between young-old (60-70 years) and old-old (71+ years) elderly groups using β values, which indicate the level of influence of each factor. The image shows clear differences between the two elderly groups. Health behaviors of the young-old group are primarily influenced by



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psychological well-being (β = 0.42), physical well-being (β = 0.38), and material support (β = 0.35), while the old-old group is mainly influenced by material support (β = 0.45), intellectual well-being (β = 0.40), and emotional support (β = 0.35). These differences reflect that elderly people in different age ranges have different needs and factors affecting their health behaviors, which has significant implications for planning and developing age-specific health promotion programs.

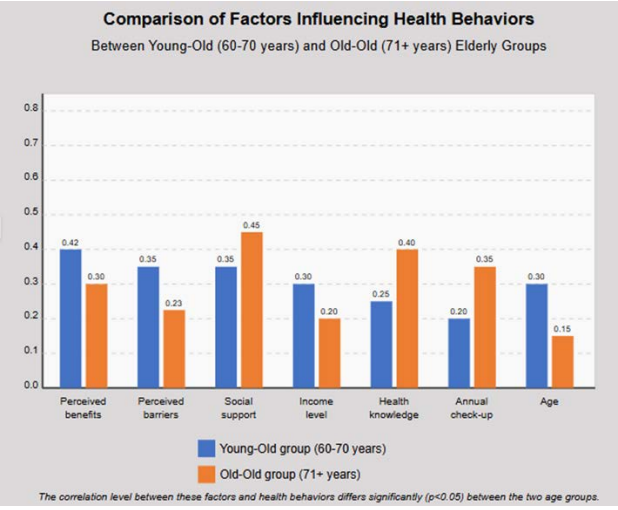


**Figure 2** Comparison of factors influencing health behaviors between young-old (60-70 years) and old-old (71+ years) adults. Data source: Witthama & Nitasnee (2021). Data source: Witthama & Nitasnee (2021).

These findings should be interpreted within Thailand's current sociodemographic context, where the proportion of elderly population has increased from 16.7% in 2020 to approximately 20% in 2024 (National Statistical Office, 2023). The pandemic-driven digital transformation has further widened the digital divide among elderly populations, potentially exacerbating the knowledge-practice gap identified in our synthesis. When comparing our findings with international research, similarities emerge regarding the influence of social support and perceived benefits, consistent with studies from Japan (Hirai et al., 2020) and South Korea (Kim & Lee, 2022). However, the strong correlation between elderly club membership and health behaviors appears uniquely significant in the Thai context, possibly reflecting the culturally-embedded communal support systems that differ from more individualistic Western contexts (Schröder-Butterfill & Fithry, 2019).

Regional variations within Thailand also warrant attention. Our synthesis revealed stronger health behavior correlations with social support in rural northeastern communities (r = 0.61) compared to urban central areas (r = 0.42), suggesting that intervention approaches should be geographically contextualized rather than applied uniformly nationwide.

Perhaps most striking was the pronounced gap between knowledge, attitudes, and actual health behaviors. While most elderly demonstrated high levels of health knowledge (48.89%) and positive attitudes (53.61%), the majority (75.83%) exhibited only moderate health behaviors, with just 15.20% showing high-level health behaviors. This Knowledge-Attitude-Practice Gap suggests that knowledge and positive attitudes alone are insufficient to drive behavior change. Additional factors, including motivation, enabling resources, and consistent reinforcement, appear necessary to translate knowledge into sustained practice. This finding aligns with Sudarat Chuphan's (2021) conclusion that comprehensive support from families and government agencies is essential for promoting sustained health behaviors among the elderly.

Further analysis revealed that elderly club membership was positively associated with better health behaviors. However, only 34.10% of elderly individuals participated in such clubs, while 65.90% were not members. This low participation rate represents a missed opportunity, as clubs provide structured environments for health education, social interaction, and mutual support. Nattapong Duanmee's (2024) recommendation to promote elderly club membership appears well-founded based on our synthesis, as these organizations can enhance social networks while facilitating access to health knowledge and services.

The research synthesis also highlighted the multidimensional nature of factors influencing elderly health behaviors. Personal factors (age, education, income), psychological factors (knowledge, attitudes, perceptions), and social factors (support systems, club membership) all demonstrated significant relationships with health behaviors. This multidimensionality aligns with ecological models of health behavior, which emphasize the interplay between individual characteristics and broader social and environmental contexts.

Considering these findings collectively, effective promotion of health behaviors among Thai elderly requires comprehensive, age-tailored approaches that address not only knowledge gaps but also motivation, barriers, and social support structures. Strategies should differentiate between young-old and old-old adults, with the former benefiting from approaches emphasizing physical and mental well-being, while the latter require greater emphasis on



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intellectual stimulation and social-emotional support. Additionally, the significant gap between knowledge and practice suggests that interventions focused solely on education may yield limited behavioral changes without complementary strategies addressing motivation and environmental facilitators.

## Limitations and Practical Applications

Several limitations affect this synthesis. First, methodological heterogeneity across studies prevented a full statistical meta-analysis, requiring our mixed-methods approach. Second, most included studies utilized cross-sectional designs, limiting causal inference regarding the identified factors. Third, the geographic distribution of studies, while covering major regions, may not fully represent all cultural and socioeconomic contexts within Thailand.

Regarding practical applications, the effect sizes reported in this synthesis offer valuable metrics for prioritizing interventions. For instance, the strong correlation between perceived benefits and health behaviors ($r = 0.664$, $p<0.001$) suggests that emphasizing concrete health benefits could yield approximately 44% variance explanation in behavior change outcomes. Similarly, the social support correlation ($r = 0.537$, $p<0.001$) indicates that support-focused interventions might explain nearly 29% of variance in elderly health behaviors. These findings are most applicable in the following contexts:

1. Geographic contexts: Both rural and urban Thai communities, with regional adaptations acknowledging the stronger social support influence in northeastern communities.
2. Healthcare settings: Primary care facilities and community health centers serving elderly populations.
3. Policy development: National and provincial health promotion planning specifically targeting aging populations.
4. Cultural contexts: Communities with collective support structures similar to Thai elderly clubs and family systems.

## Conclusions and Recommendation

This synthesis offers valuable insights for developing effective health promotion strategies for Thai elderly. Our analysis reveals that elderly health behaviors are influenced by a complex interplay of factors spanning personal characteristics, psychological dimensions, and social contexts. Age emerged as a significant negative correlate, with older individuals demonstrating diminished health behaviors compared to their younger counterparts. Conversely, education level, income, and marital status showed positive relationships with health behaviors, highlighting how sociodemographic factors shape health practices. These findings suggest that health promotion initiatives should pay particular attention to older adults with lower socioeconomic status, who may face compounded challenges in maintaining positive health behaviors.

Knowledge and attitudes concerning health care consistently demonstrated positive associations with health behaviors, though our analysis revealed a notable gap between these cognitive/affective domains and actual behavioral practices. While nearly half of the elderly population possessed high health knowledge (48.89%) and positive attitudes (53.61%), only 15.20% exhibited high-level health behaviors. This discrepancy underscores the limitations of educational approaches alone and suggests the need for comprehensive interventions that address barriers to translating knowledge into action. Such interventions might include skill-building components, motivational strategies, and environmental modifications that make healthy choices more accessible and appealing.

Access and participation factors proved particularly influential, with membership in elderly clubs, regular health check-ups, and robust social support networks all demonstrating positive correlations with health behaviors. The strong correlation between perceived benefits and health behaviors ($r = 0.664$) suggests that emphasizing concrete advantages of healthy practices could significantly enhance behavioral adoption. Conversely, the negative relationship between perceived barriers and health behaviors ($r = -0.360$) highlights the importance of addressing obstacles to healthy living, whether physical, financial, psychological, or social. Practical implications include developing community-based programs that reduce access barriers while highlighting tangible benefits of health-promoting activities.

Our findings revealed important distinctions between young-old (60-70 years) and old-old (71+ years) adults regarding factors influencing their health behaviors. Young-old adults' health practices were primarily shaped by mental and physical well-being, suggesting interventions targeting this group should emphasize maintaining psychological health and physical functionality. In contrast, old-old adults were more influenced by material support, intellectual stimulation, and emotional connections, indicating that interventions for this demographic should prioritize comprehensive support systems and



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cognitive engagement. These age-related differences call for tailored approaches rather than one-size-fits-all strategies in elderly health promotion.

Based on these conclusions, we recommend several directions for policy development, practical application, and future research. We propose the following specific, actionable recommendations:

1. For Healthcare Providers:

- Implement age-stratified health assessment tools that account for the differential factors identified between young-old and old-old adults.
- Develop two distinct health education protocols: one emphasizing physical activity and mental wellness for young-old adults (60-70), and another focusing on cognitive stimulation and social connection for old-old adults (71+).
- Schedule regular follow-ups with elderly patients specifically addressing the knowledge-practice gap through motivational interviewing techniques.

2. For Community Organizations:

- Enhance elderly club programming with structured physical activities for young-old members while providing intellectual stimulation activities for old-old members.
- Establish peer support networks pairing young-old with old-old adults to facilitate knowledge sharing and mutual support.
- Create community-based digital literacy programs specifically designed to help elderly access health information resources.

3. For Policy Development:

- Allocate healthcare budget specifically for preventive services targeting elderly based on their age group needs.
- Develop financial incentives for family caregivers of old-old adults to address the higher material support needs identified in this group.
- Establish national standards for elderly club operations with minimum activity requirements aligned with the differential needs identified in this study.

Health policymakers should establish comprehensive frameworks that address the multidimensional nature of elderly health behaviors, with particular emphasis on developing elderly clubs nationwide and ensuring their activities support holistic well-being. Such policies should explicitly acknowledge the different needs of young-old and old-old populations, with targeted resources allocated accordingly. Additionally, policies supporting families caring for elderly members, especially those with limited financial resources, could significantly enhance health outcomes for the elderly population.

Practitioners working with elderly populations should develop age-specific health promotion programs based on our findings. For young-old adults, initiatives emphasizing physical activity, mental health maintenance, and preventive health practices would likely yield positive outcomes. For old-old adults, programs should focus on maintaining intellectual engagement, facilitating social connections, and ensuring adequate material support. Across both groups, strategies should aim to close the knowledge-practice gap by addressing motivational aspects and environmental barriers rather than focusing exclusively on information provision.

The research community should build upon this synthesis through experimental studies testing the effectiveness of interventions developed based on our findings. Longitudinal research tracking changes in health behaviors across the aging spectrum would provide valuable insights into how influencing factors evolve over time. Additionally, qualitative investigations exploring the knowledge-attitude-practice gap could illuminate subtle psychological and contextual factors not captured in quantitative analyses. Such research would further refine our understanding of elderly health behaviors and contribute to increasingly effective promotion strategies.

Evidence-based, age-appropriate health promotion approaches can help Thailand address its rapidly aging population challenges more effectively. By fostering environments where knowledge translates into action and where support systems accommodate evolving needs across the aging spectrum, the nation can enhance quality of life for its elderly citizens while potentially reducing long-term healthcare costs associated with preventable conditions. The insights from this research synthesis provide a foundation for such efforts, offering direction for policymakers, practitioners, and researchers committed to improving elderly health outcomes in Thailand's aging society.

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*Conflict of Interest*

The authors declare no conflict of interest. The research was conducted independently without any financial or personal relationships that could inappropriately influence the work.



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*Data Availability Statement*

The data supporting the conclusions of this article are available from the corresponding author upon reasonable request. All data sources are publicly available academic publications as listed in the references.

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