# Factors Predicting Health-Promoting Behaviors in Delaying Health Deterioration among the Community-Dwelling Older People in Samut Prakan Province

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**Extended abstract**

**Introduction** Older people experience normal changes in the aging process that lead to health deterioration. Although this health deterioration is unavoidable, it can be prevented and delayed through health-promoting behaviors. Examining factors predicting health-promoting behaviors in delaying health deterioration is therefore important to plan for the proper care of older adults.

**Objective** To investigate factors predicting health-promoting behaviors that delay the health deterioration in older people

**Design** This study employed correlational predictive design.

**Methodology** The participants comprised 148 older people aged 60 to 74 years residing in Samut Prakan province. Systematic random sampling was used. The sample size was determined according to power analysis. The research instruments included questionnaires on factors affecting health-promoting behaviors, and health-promoting behavior in delaying health deterioration. The reliability was tested, obtaining Cronbach alpha coefficients of .86 and .84, respectively. The data were collected from October-December 2023 using self-administration and structured interviews. Data were then analyzed using descriptive statistics and stepwise multiple regression analysis.

**Results** The majority of participants were female (63.51%), with an average age of 66.63 years (SD = 4.74, Min-Max = 60-74). Most of them had a health problem (75.00%) and a caregiver (73.65%). Factors predicting health-promoting behaviors in delaying health deterioration included perceived self-efficacy ($\beta$ = .392, $p < .01$) and situation influences ($\beta$ = .332, $p < .01$) that could together predict a 39.00% variance of health-promoting behaviors in delaying health deterioration. Perceived self-efficacy could explain the participants' highest variance of health promotion behaviors.

**Recommendation** Nurses and the healthcare team should promote perceived self-efficacy and situational influences, increasing health-promoting behaviors and delaying health deterioration among older adults.

**Keywords** health-promoting behaviors/ delaying health deterioration / older people

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# ปัจจัยทำนายพฤติกรรมการสร้างเสริมสุขภาพในการชะลอความเสื่อมถอยทางสุขภาพของผู้สูงอายุในจังหวัดสมุทรปราการ

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**บทคัดย่อขยาย**

**บทนำ** ผู้สูงอายุมีการเปลี่ยนแปลงตามกระบวนการสูงอายุปกติที่ก่อให้เกิดความเสื่อมถอยทางสุขภาพ ความเสื่อมถอยทางสุขภาพนี้แม้ไม่สามารถหลีกเลี่ยงได้ แต่สามารถป้องกันและชะลอความเสื่อมถอยก่อนเวลาอันควรโดยการสร้างเสริมพฤติกรรมสุขภาพ การศึกษาปัจจัยทำนายพฤติกรรมการสร้างเสริมสุขภาพในการชะลอความเสื่อมถอยทางสุขภาพจึงมีความสำคัญในการวางแผนดูแลผู้สูงอายุได้อย่างเหมาะสม

**การออกแบบวิจัย** การศึกษาครั้งนี้เป็นแบบวิเคราะห์ความสัมพันธ์เชิงทำนาย

**วัตถุประสงค์** เพื่อศึกษาปัจจัยทำนายพฤติกรรมการส่งเสริมสุขภาพที่ชะลอความเสื่อมถอยของสุขภาพในผู้สูงอายุ

**วิธีการดำเนินการวิจัย** กลุ่มตัวอย่างเป็นผู้สูงอายุที่มีอายุระหว่าง 60–74 ปี จำนวน 148 คน ที่อาศัยอยู่ในจังหวัดสมุทรปราการ สุ่มตัวอย่างแบบเป็นระบบ กำหนดขนาดตัวอย่างตามหลักการของการวิเคราะห์อำนาจการทดสอบ เครื่องมือวิจัยประกอบด้วย แบบสอบถามปัจจัยที่มีผลต่อพฤติกรรมการสร้างเสริมสุขภาพในการชะลอความเสื่อมถอยทางสุขภาพ และพฤติกรรมการสร้างเสริมสุขภาพในการชะลอความเสื่อมถอยทางสุขภาพของผู้สูงอายุ ตรวจสอบความเที่ยงได้ค่าสัมประสิทธิ์อัลฟาครอนบาคเท่ากับ .86 และ .84 ตามลำดับ เก็บรวบรวมข้อมูลตั้งแต่เดือนตุลาคม ถึง ธันวาคม พ.ศ. 2566 โดยการตอบแบบสอบถามด้วยตนเองและการสัมภาษณ์แบบมีโครงสร้าง วิเคราะห์ข้อมูลโดยใช้สถิติเชิงพรรณนาและการวิเคราะห์ถดถอยพหุคูณแบบขั้นตอน

**ผลการวิจัย** พบว่า กลุ่มตัวอย่างส่วนใหญ่เป็นเพศหญิง ร้อยละ 63.51 มีอายุเฉลี่ย 66.63 ปี อายุต่ำสุด–สูงสุด = 60–74 ปี ส่วนใหญ่มีโรคประจำตัว (ร้อยละ 75.00) และมีผู้ดูแล (ร้อยละ 73.65) ปัจจัยที่ร่วมทำนายพฤติกรรมการส่งเสริมสุขภาพในการชะลอความเสื่อมถอยทางสุขภาพ ได้แก่ การรับรู้ความสามารถตนเอง ($\beta = .392$, $p < .01$) และอิทธิพลของสถานการณ์ ($\beta = .332$, $p < .01$) สามารถทำนายความแปรปรวนของพฤติกรรมการส่งเสริมสุขภาพในการชะลอความเสื่อมถอยทางสุขภาพได้ร้อยละ 39.00 โดยปัจจัยการรับรู้ความสามารถตนเองสามารถอธิบายพฤติกรรมการส่งเสริมสุขภาพของกลุ่มตัวอย่างได้สูงสุด

**ข้อเสนอแนะ** พยาบาลและทีมสุขภาพควรส่งเสริมการรับรู้ความสามารถตนเองและอิทธิพลของสถานการณ์เพื่อนำไปสู่พฤติกรรมการส่งเสริมสุขภาพในการชะลอความเสื่อมถอยทางสุขภาพของผู้สูงอายุให้ดียิ่งขึ้น

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**คำสำคัญ** การสร้างเสริมสุขภาพ การชะลอความเสื่อมถอยทางสุขภาพ ผู้สูงอายุ

วันที่ได้รับ 2 ก.ค. 67 วันที่แก้ไขบทความเสร็จ 30 ส.ค. 67 วันที่รับตีพิมพ์ 23 ก.ย. 67

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## Introduction

Thailand experiences a significant demographic shift as its population ages, with approximately 20% of the older population.[1] The Department of Older Persons[1] reports that there are 13,064,929 older population out of a total of 66,052,615 people, accounting for 20.08%. The consequences of this aging society extend to the older themselves, their families, communities, and society at large. As the proportion of children and the working population decreases, the growing percentage of older adults appears to have challenges. Health consequences associated with aging are inevitable and cannot be entirely prevented.[2] Promoting the well-being of older people is crucial for preventing health deterioration. This holistic approach comprises physical, mental, social, and spiritual aspects. Researchers highlight several key factors that help delay health deterioration in older adults.

Health behaviors include physical and mental health, no substance use and proper medication use, social well-being, safety and prevention, and self-care.[2-6] These comprehensive approaches contribute to maintaining the well-being of older people. Therefore, promoting healthy behaviors in older adults can significantly delay health deterioration and aligns with the United Nations Sustainable Development Goals in Action 3 (SDG3) in promoting good health and well-being. According to Murdaugh, Parsons, & Pender,[7] factors affecting health-promoting behaviors include perceived benefits of action, perceived barriers to action, perceived self-efficacy, activity-related affect, interpersonal influences, and situational influences. These contribute to maintaining healthy behaviors in older people.

The population most likely to benefit from health-promoting behaviors aimed at preventing health deterioration consists of the early and middle older age (60-69 and 70-79 years). The normal aging process indicates that health changes are most observed around 75.[3,4,5]. Therefore, it is vital to improve the health of this population to help delay deterioration and prevent premature health decline, which can lead to illness, disability, and mortality. Thus, it is crucial to strengthen the health of this group so that they can delay the deterioration of their health and prevent premature health decline, which could lead to illness, disability, and mortality.

Nong Prue subdistrict, located in Bang Phli district, Samut Prakan province, is a rural social area adjacent to Suvarnabhumi Airport. The lifestyle of the people in this sub-district exhibits characteristics of both rural and semi-urban communities due to its proximity to urban society. According to the Health Data Center, Ministry of Public Health, [6] the Nong Prue sub-district has a total population of 2,911. Among them, 552, accounting for 18.96%, fall into the older category. Specifically, there are 405 older people aged between 60 and 74, comprising 183 males and 222 females. Regarding health conditions, it was found that the older population aged 60 and over is affected by heart disease, including atherosclerosis (n = 24), high blood pressure (n = 380), diabetes (n = 183), stroke

(n = 18) and chronic obstructive pulmonary disease (COPD) (n = 8). Therefore, promoting healthy behaviors among old people aged 60-74 is crucial to delay the onset of illness and maintain their well-being. This research investigated factors predicting health-promoting behaviors in delaying health deterioration among the community-dwelling older adults in Nong Prue sub-district, Bang Phli district, Samut Prakan province.

**Research objective**

To examine factors predicting health-promoting behaviors in delaying health deterioration among the community-dwelling older adults in Nong Prue sub-district, Bang Phli district, Samut Prakan province

**Research Hypotheses**

Perceived benefits of action, perceived barriers to action, perceived self-efficacy, activity-related affect, interpersonal influences, and situation influences can jointly predict health-promoting behaviors in delaying health deterioration among community-dwelling older adults in Nong Prue sub-district, Bang Phli district, Samut Prakan province.

**Conceptual framework**

Pender's (1996) health promotion model (HPM), as revised by Murdaugh, Parsons, & Pender (2019), offers a framework to integrate nursing and behavioral science perspectives on factors predicting health behaviors. The model provides a way to explore biopsychosocial processes that motivate individuals to engage in behaviors that enhance health and well-being. The revised health promotion model has three parts: individual characteristics and experiences, behavior-specific cognitions and affect, and behavioral outcomes.[7] This study examined "behavior-specific cognition and affect" due to their modifiable nature and connection to health-promoting behaviors. Key factors include perceived benefit of actions, perceived barriers to action, perceived self-efficacy, activity-related affect, interpersonal influences, and situational influences. Understanding and addressing these factors can promote healthier behaviors and improve overall well-being.

Health-promoting behaviors result from "behavior-specific cognition and affect." In older adults, six key behaviors can help delay health deterioration: 1) health responsibility, 2) physical activity, 3) nutrition, 4) interpersonal relations, 5) spiritual growth, and 6) stress management. The researchers also review relevant literature on the components of health promotion aimed at preventing health deterioration in this population. These behaviors can be classified into various categories, including fall prevention, maintaining proper nutritional status, promoting mental and spiritual health, engaging in self-care and health checks, reducing or abstaining from substance use, optimizing sleep practices, physical activity, and behaviors that enhance immunity and prevent disease.[2-5,8-10] Together, these include all six components of the Health Promotion Model's behavioral outcomes[7] (Figure 1).

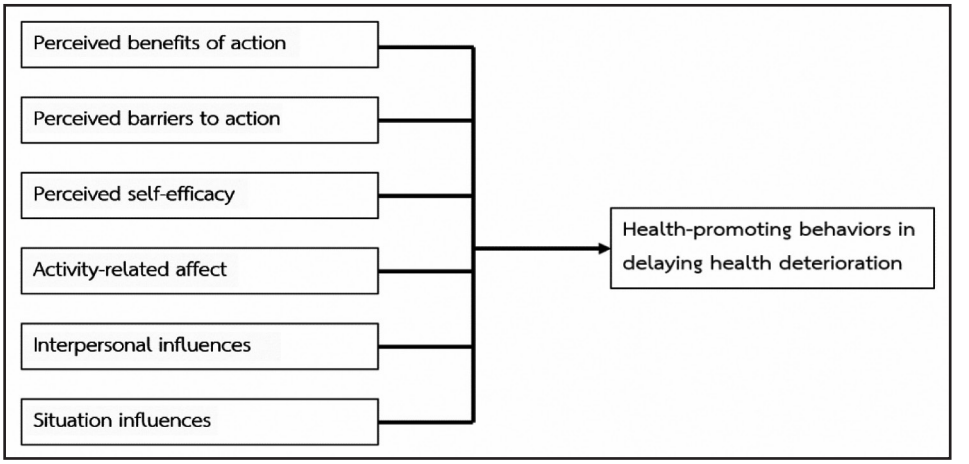


**Figure 1** Conceptual Framework

## Methods

The study employed a correlational predictive design.

**Sample and sampling**

The study population included 405 older adults, aged between 60 and 74, residing in Samut Prakan province. The participants were randomly selected from the Nong Prue subdistrict, Bang Phli district through systematic random sampling. The sampling process included the following steps: 1) Preparation: Compile a comprehensive list of older adults aged 60-74 living in the Nong Prue subdistrict of Bang Phli district, Samut Prakan province; 2) Sampling frame determination: Define the sampling frame; 3) Random sampling: Randomly select participants who meet the inclusion and exclusion criteria.

Inclusion criteria: 1) Reside in the Nong Prue subdistrict, Bang Phli district, Samut Prakan province for at least one year, 2) Possess the ability to communicate and provide information in Thai, 3) Express their willingness and provide written consent to participate in the research, and 4) Exhibit no cognitive impairments based on the Clock Drawing Test assessment with score ≥6.[11] Exclusion criteria: Those who were partially and completely dependent as they may be unable to perform health-promoting behaviors.

The sample size was determined using the G*Power version 3.0.10 package: Multiple Regression: Omnibus ($R^2$ deviation from zero),[12] effect size, ($f^2$) = 0.15 based on a previous study,[13] $\alpha$ = .05, power = .90, and number of predictors = 6. The initial sample size was 123. To address the risk of missing or incomplete responses, an additional 25 were added, representing a 20% increase. Consequently, the total sample size for this research was 148.

**Instruments**

The researchers developed a questionnaire based on the concept described by Murdaugh, Parsons, & Pender,[8] focusing on promoting the health of older people.[2-5,8-10]

**Part 1 General Information** comprised 7 items, including gender, age, religion, education

level, marital status, congenital diseases, and the availability of caregivers.

**Part 2 Factors affecting health-promoting behaviors** consisted of 64 items including perceived benefits of specific behaviors (12 items), perceived barriers to adopting health-promoting practices (12 items), perceived self-efficacy (12 items), impacts related to daily activities (9 items), interpersonal influence (10 items), and situational factors (9 items). Responses were on a 4-point rating scale including disagree, slightly agree, moderately agree, and strongly agree. Interpretation was classified into 3 levels based on mean score: low perception (0.00-1.00), moderate perception (1.01-2.00), and high perception (2.01-3.00).

**Part 3 Health-promoting behaviors in delaying health deterioration** consisted of 64 items, including fall prevention (7 items), proper nutrition (11 items), mental and spiritual health (6 items), self-care (10 items), reducing or abstaining from substance use (6 items), sleeping (10 items), physical activity (7 items), and building immunity and preventing disease (7 items). Responses were on a 4-point rating scale, including never, sometimes, frequently, and always. Interpretation was divided into 3 levels based on mean score: poor behavior (0.00 -1.00), moderate behavior (1.01 to 2.00), and good behavior (2.01 to 3.00).

The content validity of the instrument was assessed by five experts in gerontological nursing and community nursing. Each question was evaluated based on an inter-objective consistency (IOC) score of greater than 0.50.[14] The researchers incorporated the experts' feedback to enhance the quality of the research instrument. Reliability was tested in 30 older persons with characteristics similar to the sample, obtaining the Cronbach alpha coefficients of .86 for Part2, factors affecting health-promoting behaviors, and .84 for Part3, health- promoting behavior in delaying health deterioration.

**Ethical Consideration**

This study was approved by the Human Research Ethics Committee of Huachiew Chalermprakiat University (approval number HCU-EC1379/2566). The study adheres to the following ethical principles. The researchers provided each participant with comprehensive information on the research project, enabling them to make informed decisions. Informed consent and assent were obtained through signed consent forms. Participants made decisions independently without coercion or pressure to participate. The personal information was safeguarded, anonymous, and unlinked to individual identities. The sample recruitment adhered to the principle of probability sampling, ensuring fairness and impartiality. All participants were assured strict confidentiality throughout the research process and the reporting of results.

**Data collection**

Upon receiving approval from the Human Research Ethics Committee at Huachiew Chalermprakiet University, the researchers proceeded to request access for data collection. The data were collected between October and December 2023. The researchers collaborated with a gatekeeper in the areas, who

guided them to meet the participants at their residences. Upon locating each participant, the researchers provided a detailed explanation of the research project. The participants were allowed to ask questions and seek clarification until any doubts were resolved. Subsequently, written consent was obtained from each participant to proceed with data collection. The researchers assessed the Clock Drawing test. Participants who passed the Clock Drawing test with an acceptable score of at least 6 responded to the questionnaire through self-administration. The researchers read the questionnaire and response options through structured interviews for participants who were uncomfortable reading or writing independently. Each response lasted approximately 60 minutes per participant. Participants were provided with time breaks as required during data collection.

**Data Analysis**

Participants' characteristics were analyzed using descriptive statistics, including frequency, percentage, mean, and standard deviation. Correlational analysis was performed using Pearson's product momentum correlation statistics. Factors predicting health- promoting behaviors in delaying health deterioration were analyzed using Multiple linear regression analysis, with a stepwise method. Assumptions were met, including normality, linearity, homoscedasticity, no autocorrelation, and no multicollinearity.

## Results

Most participants were female (63.51%), with an average age of 66.63 years (SD = 4.74, Min = 60, Max = 74). All were Buddhist; 81.08% completed primary school, 69.59% were married. Of chronic diseases, 75.00% had chronic health conditions, and 73.65% had caregivers (Table 1).

**Table 1** Characteristics of the participants (n = 148)

| Characteristics | n | % | M | SD |
|---|---|---|---|---|
| **Gender** | | | | |
| Male | 54 | 36.49 | | |
| Female | 94 | 63.51 | | |
| **Age** (years) | | | 66.63 | 4.74 |
| **Religion** | | | | |
| Buddhist | 148 | 100.00 | | |
| **Education level** | | | | |
| No formal education | 6 | 4.05 | | |
| Primary education | 120 | 81.08 | | |
| Secondary education | 15 | 10.14 | | |
| Bachelor's degree | 2 | 1.35 | | |
| Higher than bachelor's degree | 1 | 0.68 | | |
| Others | 4 | 2.70 | | |
| **Marital Status** | | | | |
| Single | 11 | 7.43 | | |
| Widowed | 23 | 15.54 | | |
| Divorced | 9 | 6.08 | | |
| Coupled | 103 | 69.59 | | |
| Others | 2 | 1.35 | | |

**Table 1** Characteristics of the participants (n = 148) (Cont.)

| Characteristics | n | % | M | SD |
|---|---|---|---|---|
| **Having a disease** | | | | |
| Yes | 111 | 75.00 | | |
| No | 37 | 25.00 | | |
| **Having a caregiver** | | | | |
| Yes | 109 | 73.65 | | |
| No | 39 | 26.35 | | |

The participants had perceived benefits of action, perceived self-efficacy, and situation influences at a high level, while activity-related affect, interpersonal influences were at moderate levels, and perceived barriers to action was at low level. Overall health-promoting behaviors in delaying health deterioration and sub-scales, including fall prevention behavior, behaviors for proper nutritional status, behaviors that create good mental and spiritual health, self-care behavior and health check, behavior of reducing or abstaining from substance use, and sleeping behavior were good while physical activity behavior, and behavior to build immunity and prevent disease were moderate (Table 2).

**Table 2** Description of the study variables (n = 148)

| Variables | M | SD | Level |
|---|---|---|---|
| Perceived benefits of action | 2.54 | 0.49 | High |
| Perceived barriers to action | 0.58 | 0.64 | Low |
| Perceived self-efficacy | 2.53 | 0.43 | High |
| Activity-related affect | 1.53 | 0.51 | Moderate |
| Interpersonal influences | 1.75 | 0.78 | Moderate |
| Situation influences | 2.17 | 0.62 | High |
| Health-promoting behaviors in delaying health deterioration | 2.02 | 0.35 | Good |
| - Fall prevention behavior | 2.69 | 0.46 | Good |
| - Behaviors for proper nutritional status | 2.05 | 0.50 | Good |
| - Behaviors that create good mental and spiritual health | 2.13 | 0.67 | Good |
| - Self-care behavior and health check | 2.19 | 0.54 | Good |
| - Behavior of reducing or abstaining from substance use | 2.44 | 0.65 | Good |
| - Sleeping behavior | 2.23 | 0.54 | Good |
| - Physical activity behavior | 1.10 | 0.66 | Moderate |
| - Behavior to build immunity and prevent disease | 1.33 | 0.55 | Moderate |

The correlation matrix revealed that perceived self-efficacy had the highest correlation with health-promoting behavior (r = .559), followed by situation influences (r = .529), perceived barriers to action (r = .369), perceived barriers to action (r = .358), and interpersonal influences (r = .311), and activity-related affect (r = .263) (Table 3).

**Table 3** Correlation matrix of the study variables (n = 148)

| Variables | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|
| 1. Perceived benefits of action | 1.00 | | | | | | |
| 2. Perceived barriers to action | -.329* | 1.00 | | | | | |
| 3. Perceived self-efficacy | .582** | -.533** | 1.00 | | | | |
| 4. Activity-related affect | .214** | .120 | .163* | 1.00 | | | |
| 5. Interpersonal influences | .108 | -.270** | .293** | .092 | 1.00 | | |
| 6. Situation influences | .383** | -.324** | .504** | .168* | .519** | 1.00 | |
| 7. Health-promoting behaviors in delaying health deterioration | .358** | -.369** | .559** | .263* | .311** | .529** | 1.00 |

* $p < .05$. ** $p < .01$

Multiple regression analysis revealed that perceived self-efficacy ($\beta = .392$, $p < .01$) and situation influences ($\beta = .332$, $p < .01$) could together predicted health-promoting behaviors in delaying health deterioration, accounting for 39% of the variance. Perceived self-efficacy had the strongest predictive power, followed closely by situation influences. While perceived benefits of practice, perceived barriers to practice, impacts related to activities, and interpersonal influence did not significantly explain the variation in health-promoting behaviors in delaying health deterioration (Table 4).

**Table 4** Factors predicting health-promoting behaviors in delaying health deterioration among the participants (n = 148)

| Variables | b | S.E. | β | t |
|---|---|---|---|---|
| Constant | .804 | .137 | | 5.881** |
| Perceived self-efficacy | .320 | .061 | .392 | 5.235** |
| Situation influences | .187 | .042 | .332 | 4.435** |

$R = .628$, $R^2 = .394$, Adjusted $R^2 = .386$, $F = 47.189$ **

* $p < .05$. ** $p < .01$

## Discussion

Results revealed that "behavior-specific cognition and affect" including perceived self-efficacy and situation influences could jointly predict 39% variance of health-promoting behaviors in delaying health deterioration in older adults. In contrast, the other four factors including perceived benefits of action, perceived barriers to action, activity-related affect, and interpersonal influences could not significantly predict health-promoting behaviors in delaying health deterioration. This was partially in line with the hypothesis.

According to the revised Pender's concept of the health promotion model, perceived self-efficacy is an individual's belief in his or her ability to perform behaviors related to judging a person's ability.

The sources of perceived self-efficacy are successful experiences, experiences from others' actions, verbal persuasion, and physical and emotional conditions. The participants in this study had 60-74 years of life experience, both successful and unsuccessful. They decided to engage in health-promoting behaviors through reasoning and past experiences, supporting why perceived barriers were not a significant predictor.

Situation influences describe when older adults have good situation influences; it also affects good health-promoting behaviors in delaying health deterioration. This can be explained by the revised Pender's health promotion model.[7] Situation influences consist of two main resources available to the community and the community's culture. Older adults consider the role of media in providing training in health-promoting behaviors very fundamental. Situation influences are perceptions and cognitions that can facilitate or impede behaviors, including the options available that, given health-promoting or delaying health deterioration, are proposed to occur when holding individual perceptions and thoughts about favorable or inhibited situations significantly influence health behaviors. These perceptions include awareness of the options available. The context in which the behavior is proposed matters; older adults are more likely to act effectively in environments they perceive as compatible, relevant, and safe. For instance, consider information disseminated by the Subdistrict Health Promoting Hospital within the community. This information highlights the prevalence of non-communicable diseases such as diabetes, high blood pressure, and stroke. The substantial occurrence of these conditions serves as a stimulus, prompting the older people in the community to be mindful of adopting proper health behaviors. Consistent practice aligns with certain health promotion activities that harmonize with their lifestyle.

Previous studies have shown that Pender's health promotion model was applied to explain the health-promoting behaviors of older persons,[15] which is consistent with this study revealing that the health-promoting behaviors were related to self-efficacy. On the other hand, a previous study revealed that self-efficacy cannot explain the variation of health-promoting behaviors among older adults.[16] This may be due to the different ages of the participants.

Perceived benefits of action influence the desire to engage in certain behaviors, both intrinsic, including the potential to increase energy, or the perception of attractiveness, and extrinsic, including monetary rewards or social interactions that are possible due to engaging in the behaviors. Although the older adults perceived the benefits of health practices at a high level, these perceived benefits did not sufficiently motivate them to engage in behaviors aimed at maintaining good health or delaying health deterioration.

Perceived barriers include beliefs about anticipated, imagined, or real blocks and the personal costs of understanding a given behavior. Perceived barriers also stimulate motivation to avoid

behaviors. The results of this study show that perceived barriers among older adults are low. Although older people believe they face no obstacles in adopting health-promoting behaviors, their lack of consistent practice aligns with perceived benefits.

Activity-related affect explains that people persistently engage in certain behaviors over time. The emotional experiences they feel before, during, and after these activities are influenced by the specific characteristics of the stimuli associated with those behaviors, resulting in positive or negative outcomes. Based on the study results, despite these positive feelings, the variation in health-promoting behaviors that delay health deterioration may not be fully explained by emotional factors alone.

Interpersonal influence refers to individuals' perceptions regarding the behaviors, beliefs, or attitudes of others, including social norms, social support, and modeling. Key sources of interpersonal influence on behavior include family, friends, and healthcare providers. Interpersonal influences are crucial for health-promoting behaviors. However, this study revealed that older adults had only a moderate awareness of interpersonal influence from family, friends, and health professionals, thus failing to fully account for the variation in health-promoting behaviors to delay health deterioration. It is inconsistent with a previous study revealing that interpersonal influence is a predictor of health-promoting behaviors.[16]

## Limitation of the Study

The questionnaire contains many questions, making it challenging for some older adults to complete independently. As a result, this study utilized both self-administration and structured interviews for data collection.

## Recommendation

Findings from this study highlight the importance of self-efficacy and situational influence in health-promoting behaviors to delay health deterioration among older adults in the Nong Prue subdistrict, Bang Phli district, Samut Prakan province. It is recommended that sub-district health-promoting hospitals' healthcare teams promote self-efficacy along with a healthy environment, particularly for physical activity in older adults aged 60-74, to prevent diseases and complications associated with congenital conditions.

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