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Reasons of exercise and no-exercise in the young-old elderly in Tambon Salaya, Nakhon Pathom

Benjawan Sophonratanapokin*, Pakaratee Chaiyawat*, Yothin Sawangdee**

Abstract

- Objective: To explore the causal factors which are the reasons of exercise and non-exercise and the potential strategies to promote exercise in the young-old elderly. Method: The focus group discussion was a main method. Observation and in-depth interview were employed. Participants were Thai elderly aged 60-69 years, residing in Tambon Salaya. Focus group discussion was conducted with 12 groups. Participants were allocated into groups by genders and exercise behavior. Those allocated into exercise group had to report exercise behavior fitting to the recommendation by American College of Sports Medicine. Questions covered 4 main issues which were perception of exercise, facilitating factors and barriers of exercise, and potential strategies to promote exercise. Content analysis was employed to analyze the data. Results: Motivation and attitude to exercise, routinely exercise, and early-life experience about exercise were found to be individual factors to facilitate exercise. External factors which were social network and support as well as accessibility and availability were also expressed to have facilitating effects. Exercise benefits were recognized as a reward making exercise sustainable. Meanwhile, a range of factors were found to be barriers. Time constraint, perception and attitude to exercise, and health problems were cited to be barriers. Lack of social network and difficulty in transportation were perceived as external barriers. Adverse experience of exercise was cited to block the continuation of exercise.
- **Conclusions:** A range of causal factors cover from individual to external factors found in this study can explain why some elderly adopt exercise behavior as health-promoting behavior and why some elderly do not. In this study, suggestion of strategies to promote exercise was provided based on the findings.

Key words: Reasons, Exercise, Elderly, Focus group discussion

* Faculty of Physical Therapy, Mahidol University

^{**} Institute for Population and Social Research, Mahidol University

Introduction

Thailand is currently facing the ageing society.¹ Ageing is related to the decline in the function of body systems and the change in psychological, emotional, and social aspects.² Promoting healthy ageing society is needed to be highlighted.³ Exercise is the important health behavior to promote healthy elderly⁴. Despite many benefits of exercise4 and adverse effects of non-exercise⁵, approximately 90 percents of Thai elderly did not exercise or exercise insufficiently to be beneficial to health⁶, as recommended.⁷ Thus, health promotion interventions to address this issue are necessary.

Insights about causal factors influencing the elderly to either exercise or not are indispensable to be used in designing effective interventions. According to the studies in the US and $Europe^{8-11}$, a broad determinants have an impact on the exercise behavior. However, different races, cultures, residing location, society, age, and health status have different determinants of exercise behavior.^{8, 11, 12} Only one survey study done in Thai people aged more than 11 years old by using the questionnaire did explain this knowledge.⁶ There is no published study providing this knowledge specifically in the elderly who have relatively low rate of exercise⁶. The young-old age is considered to be an important target. This age starts to face with ageing-related change.² Thus, a wide range of causal factors which either facilitates or impedes exercise are expected. Further, there is no study targeting individuals who exercise and do not exercise. Knowledge gaining from individuals in each group is from their real experience.

Therefore, it is necessary to explore the perspectives of Thai elderly in young-old age about the causal factors influencing them to either exercise or not. Incorporating perspectives of target population about their health behavior in designing health promotion interventions makes interventions tailored to their real needs and culture.¹³⁻¹⁵ It also promotes the participation and acceptance in the interventions.¹⁴

Rationale of the study: Currently, there is an attempt of local sectors i.e. the elderly club and the health promotion hospital to promote exercise in the elderly in Tambon Salaya. However, according to health need-assessment, an important issue raised is that large proportion of the elderly still does not exercise. To address this issue, insights about causal factors are indispensable.

Research purpose and objectives: The well-being of the young-old elderly, who reside in Tambon Salaya is an ultimate aim. To achieve this aim, the objectives of the research are as the following; 1) To explore the causal factors which are the reasons of exercise and non-exercise in the elderly aged between 60-69 years, who reside in Tambon Salaya 2) To explore the potential strategies which should be implemented to promote exercise in the elderly residing in Tambon Salaya.

Definition of term used: The word "exercise" in this research means physical activity that is planned, structured, and repetitive for the purpose to improve or maintain physical fitness.

Methods

Qualitative method was used. The focus group discussion was the main method. The focus group discussion is used to describe perceptions, interpretations, and beliefs of a particular population in a particular topic.^{17,18} To check, observation and in-depth interview were also used. This research was done after the approval from the committee of research ethics in human subjects of Mahidol University.

Study population: Eligible participants were Thai elderly aged between 60-69 years, residing in Tambon Salaya and having the ability to perform daily activities independently. Before conducting focus group discussion, participants were allocated into groups by gender and exercise behavior. The exercise behavior was assessed by using Global Physically Activity Questionnaire (GPAQ) in Thai version, which contains questions about types, intensity, duration, and frequency of exercise.¹⁹ The participants allocated into groups of exercise had to report exercise behavior fitting to the recommendation by American College of Sports Medicine⁷ and there were 8-10 participants in each group. Among 12 groups, 6 were exercise groups: 3 of male and 3 of female groups and 6 were nonexercise groups: 3 of male and 3 of female groups.

Procedures: Before and during the focus group discussion, research of community context and observation was performed. Prior to the commencement of data collection, the informed consent process was organized. The moderator trained in group facilitation conducted each session by using the question guideline as a guide, which was proved by experts in social science research and pilot tested before using. Questions covered 4 main issues which were perception of exercise, facilitating factors, barriers, and potential strategies to promote exercise. The sessions were recorded by a tape recorder and note-taker. Each session lasted approximately one and a half hours. At the end, the main themes rose during the session were reflected back and the participants were given the opportunity to debrief. After completing all focus group discussions, ambiguous issues or some issues which some participants were uncomfortable to talk to in the group were clarified through in-depth interviews with the key informants.

Data analysis: The audio-recordings of the focus groups discussion sessions were transcribed verbatim by the note taker for data analysis. Content analysis was used to analyze the data.

Findings

Context and observation findings: The study area "Tambon Salaya" is a sub-district of

Phuttamonthon district in Nakhon Pathom province. It is a suburb of Bangkok, the capital city of Thailand. The characteristics of Salaya are a combination between rural and urban community. However, increased urbanization is now apparent in this area. Urbanization has changed Salaya in many facets i.e. increased urban lifestyles, more congested area, and higher cost of living.

For the context of health promotion in Salaya, exercise in the elderly has been promoted in Salaya through a number of activities. Community group-exercise has been held with certain schedules at 2 villages out of the total of 6 villages of Salaya, where people are scattered throughout the area of 18.23 square kilometers. One is at health promotion hospital of Salawan village and another is at Salaya fresh market in Ta-pin village. Community group-exercise provides the participants with volunteer instructors, exercise equipments, and places without charge. There are variety types of exercise, such as Rusiedutton, Thai dance, and dance with wood stick by Pa-Boonmee. These activities were primarily supported by village health volunteers, the local elderly club, health promotion hospital of Salawan village, and Mahidol University. There are approximately 15-20 participants in the group and most of them are females who do not earn living. Vehicles are required for some people to join, particularly those in other villages. Despite accessibility by many means of transportation, few participants are from other villages. Moreover, 13 sets of exercise equipments installed at public spaces in all villages by Salaya Municipality are important exercise facilities which are accessible without charge. Also, natural places, such as a street beside natural canal, schools, and Mahidol University are important venues for exercise in the elderly, particularly males. Exercise mostly performed in these venues is individual exercise, such as walking and bicycling. Health education about exercise is also provided by local health sectors and sectors in

Mahidol University. Most sessions are held together with cultural or recreational activities from time to time. It is no doubt that elderly who could access activities mentioned above are those with independent mobility.

Characteristics of participants In focus group discussion There were 56 and 53 participants in exercise and non-exercise groups respectively. Twenty-nine females and 28 males were allocated into groups of exercise. Table 1 shows the types of exercise participants reported. Of 109 participants in the focus group discussion, 3 parlicipants in the in-depth interview

Focus group discussion and in-depth interview findings: The findings will be reported in 3 main issues.

1. Facilitating factors to exercise:

A range of individual factors was found to facilitate exercise in the elderly.

Motivation: Inner desire to exercise was identified as a facilitator in exercisers. Motives driving the elderly to be interested in exercise are the desire to well-being and health problems. Weight reduction and improvement of body image were found to be a driving force in females. In males, less physical fitness and physical activity when becoming ageing were cited as motives to exercise.

Attitude: Positive attitude to exercise was a potent facilitator of exercise in exercisers. Positive attitude is related to perceived benefits of exercise to various facets of health and the enjoyment of exercise.

Routine: It was cited by exercisers that when exercise becomes habituation, it would auto-

matically be kept as a part of life and addicted, which was potent enough to force them to overcome any other barrier.

Early-life experience: In male exercisers, that exercise had been habituation during childhood and adulthood influenced them to automatically continue exercise as a part of life until they got older.

In addition to those individual factors, a range of external factors or factors in the level of population was also found to facilitate exercise in the elderly.

Social environment factors

Social network: Presence of friends to exercise with was a facilitator frequently described in all groups, particularly females. It offered persuasion, greater motivation and enjoyment than individual exercise, encouragement, positive social interaction and friendship, as well as commitment to exercise within groups, as one female exerciser stated. *"I have to always join the* group exercise because I don't want a group of friends to wait. It is like a commitment among us".

Social support: Professional support obtained from local health sectors and the university significantly encourages the elderly, particularly females, to exercise because of the credibility of professional people. The support was offered through health education, exercise prescription, and initiation of variety types of exercise to community group-exercise, as a female exerciser stated. "We ourselves do not have knowledge. They (health personals) have come to teach Thai dance for 3 days and given us a song... We still perform dance

 Table 1
 Types of exercise participants reported, by genders

Males	Females
Walking*, Bicycling*, Running*, Utilization of	Rusiedutton*#, Thai dance*#, Dance with wood stick
public exercise-equipments*, Self-exercise at home*,	by Pa-Boonme*#, Utilization of public exercise-equip-
Rusiedutton#, Dance with wood stick by Pa-Boonme#	ments*, Self-exercise at home, Walking#

* Commonly reported, # Performing in group

in every week." Support from the administration sectors and the local elderly club was also important. They played a role in organizing community group-exercise as well as providing exercise facilities and financial support. This support makes exercise interesting, easy, safe, and sustainable.

Physical environment factors

Accessibility and availability: Group exercise and exercise equipments installed at public space was reported as a facilitator in exercisers. These resources provide alternative choices of exercise. Natural atmosphere of neighborhood with resources, such as benches, was also cited to be a facilitator in males.

Moreover, it was also found that the reinforcing factor which is related to the benefits of exercise could facilitate exercise behavior.

Experience of exercise's benefits: Among exercisers, obtained exercise's benefits were cited to make the elderly greatly appreciated to exercise and make exercise sustainable. Benefits were recognized as improving well-being, managing diseases, reducing weight, improving mobility and function, and emotional benefits. Also, sense of pride of independency in daily activities was recognized as a reward.

2. Barriers to exercise:

A range of individual factors was the barriers of exercise in the elderly.

Time constraint: Earning was the barrier to dedicate time to exercise, particularly those in poor socio-economic status. In non-exercisers, lack of free time made them unable to exercise although they were considering exercise and its benefits. However, exercisers argued that the attempt to allocate time could overcome this difficulty. In females, time was also limited by responsibilities for family as housewives. Females indicated that difference in roles between genders influenced chance to exercise differently. Males were more likely to have free time to exercise because they were generally not involved

in family responsibilities. The statement of a female non-exerciser is presented. "I start my jobs around 4 am and continue them over the day...cannot take a rest until finishing dish cleaning around 8 pm... My husband, he wakes up and goes out to jogging... and come back home to have breakfast with a grandchild."

Perception and attitude: In non-exercisers, perception that performing some types of physical activities in daily life such as housework, active transport, and occupational activities was the same as exercise or sufficient to be beneficial to health impacts on the perception of need to exercise. Body movement, sweat, and tiredness were recognized as the effects of physical activities like those of exercise, as a female non-exerciser stated. "When you wipe out the floor, your shoulders are moved and you walk around the house...also makes you tired." In addition, the perception that exercises was contraindications for the elderly with some diseases, such as heart disease were also found to be the important barrier. According to the in-depth interview to probe this issue, the elderly with ageing-related chronic illnesses should not exercise which causes increased heart and breathing rate as well as sweating. Otherwise, exercise would aggravate symptoms, as a male non-exerciser who has hypertension stated. "It (exercise) is too risky for old people with sickness...I think exercise would increase heart beat and consequently might provoke symptoms. I am afraid to do that...I should not take risk." Also, negative attitude that exercise caused tiredness and musculoskeletal pain was reasonable why some people did not even consider exercise and preferred sedentary lifestyle.

Health status: Heart diseases, asthma, obesity, and arthritis were cited as health conditions which limit physical capacity through pain, tiredness, chest pain, and difficulty in movement. The exercisers were prone to overcome these barriers by adapting exercise's types and intensity.

In the non-exercisers, particularly those with poor education, health problems with lack of knowledge decreased their self-efficacy to exercise. According to the in-depth interview with the informant with arrhythmias, despite recognition to exercise's benefits, fear of symptom aggravation caused by exercise decrease his self-efficacy to exercise. However, these would not occur if knowledge of appropriate exercise had been provided or prescribed by health professionals. His statement is presented. "I know exercise is beneficial for me but I feel unconfident...afraid of angina because of lack of knowledge... I would do (exercise), if he (general practice) prescribed." Also, joint problems, were cited to make females difficult to commute to the groupexercise venue. The exercisers, however, suggested other types of exercise, such as self-exercise at their own houses. Meanwhile, non-exercisers maintained the importance of group exercise.

A range of external factors or factors in the level of population was also found to impede exercise or make it difficult.

Social environment factors

Lack of social network: Without neighbor and friend network to exercise with causes lack of motivation, lack of enjoyment, lack of commitment to exercise within a group of friends, embarrassment, and impossibility to launch new community groupexercise in the non-exercisers.

Physical environment factors

Difficulty in transportation: Difficulty in transportation was found to impede exercise in female non-exercisers whose villages did not have community group-exercise. The concerning of traffic safety and unaffordable expenses impeded them to join others in existing community group-exercise. Urbanization was cited to be the cause of traffic jam and high expenses. Despite recognition of other kinds of exercise which did not require transportation, the group exercise or presence of friends was preferred.

Further, it was also found that the reinforcing factor which is related to the negative experience of exercise could impede exercise behavior.

Adverse experience of exercise: Among non-exercisers, adverse experience that either exercise could not solve their health problems or it brought about adverse effects, such as soreness and injury was recognized as a punishment of exercise. The in-depth interview with a male participant indicated that although he acknowledged appropriate types of exercise for the elderly, all of them could not exercise in the same way. Variation among people in the same age in physical performance and health conditions was mentioned. However, the exercise prescription which was tailored to an individual was neglected.

3. Potential strategies: The participants of the focus group discussion identified potential strategies to recruit and retain the elderly in the community to exercise listed in Table 2.

Discussion

Factors found in the study cover from downstream to upstream factors, according to the health promotion continuum.²⁰ Motivation and attitude are important facilitators. In this study, the exercisers had higher expectation to positive outcomes of exercise and were more positive in exercise meaning, which supports the findings of Sarkinsian et al²¹. This supports the health belief model that the individuals will take specified action to promote health if they perceived its benefits.²² However, this model is deemed to have some limitation to explain the findings. Time constraint and health problems were cited to be a barrier of exercise in some non-exercisers although they were considering exercise and its benefits. Low socioeconomic status is the major underlying determinants. These factors include poor education

Table 2 Potential strategies to recruit and retain the elderly in the community to exercise

- 1. Support the existed community group-exercise and expand to other villages
- 2. Support the monthly recreational and cultural activities held by local elderly club because these activities can recruit a number of elderly to exercise
- 3. Offer a variety of exercises in the community group exercise, particularly those which are culturally appropriate and enjoyable to the elderly
- 4. Advertise the exercise activities held in the community to everyone in the neighborhood in order to acknowledge them what, when, where, why about the activities
- 5. Make exercise competitive and award prizes
- 6. Encourage intersectoral action between health service, academic, and administration sectors
- 7. Encourage the roles of health professionals in promoting exercise
- 8. Promote the peer support to share the experience and knowledge about exercise between exercisers and non-exercisers
- 9. Make exercise as routine treatment or prescription given by the general practitioners
- 10. Provide the public place to exercise, particularly the indoor place
- 11. Organize the groups of exercise by types of exercise, such as bicycle group, Thai dance group in order that the members will have the sense of group belonging and commitment to exercise within groups.
- 12. Make exercise knowledge and skill accessible by the elderly with movement difficulties, such as home visiting by instructors or health professionals

and income. They are negatively associated with access to social services to promote health and ability to adopt health-promoting behavior.²³ Apart from individual factors, lack of social network was found to be a barrier. In this study, friends were important initiation and maintenance of exercise, particularly in females, which is consistent with previous study.9 Level of social network was consistently associated with exercise participation²⁵ and enhancement of self-efficacy to exercise²⁶ which is the most important prerequisite for behavior change²⁷. It is not surprising that without the social network, exercise was difficult to start and continue. According to Salaya's context, leaders either formal or informal and people with public mind are considered important to form the social network through social activities, which is apparent in the villages with community group-exercise. Thus, without those in some villages, it is difficult to build the social

network. Difficulty in transportation, another barrier, was considered by participants to be impacts of urbanization. This is supported by the research and observation of Salaya setting that Salaya is now facing with increased urbanization and it brings about transportation-related change i.e. more congested area and higher cost of living. While transportation was considered more difficult, community group-exercise without need of transportation is not available to all people in all villages of Salata equitably.

Based on the transtheoretical model, the non-exercisers in this study could be divided into two groups, precontemplation and contemplation. Contemplation describes the stage at which an individual considers making a change to specific behavior.²⁸ As mentioned above, although exercise and its benefits were considered, there are a range of barriers. For precontemplation, it describes individuals who are not even considering to change behavior.²⁸ Perception and attitude of exercise were found to be significant barriers for this group. The perception about equal benefits between physical activity and exercise significantly impacts on the perception of need to exercise. It is argued that physical activity and exercise are different although both of them are bodily movement and result in energy expenditure. Exercise is planned, structured, and repetitive and directly aims to improve physical fitness.²⁹ It also has mental and social benefits.²⁹ In contrast, physical activity directly aims to complete specific tasks while physical benefits might occur as unintentional consequences. So, the misunderstanding that physical activity can substitute exercise should be considered by those who develop the health messages. Gender issue has not been reported in previous studies. Interestingly, in this study, participants pointed out that the differences in roles between genders impacted on exercise opportunity differently. In addition, females are more dependent on friends and social support to exercise than males. Female non-exercisers were more likely to identify inability to participate in group exercise as barriers to exercise. This is consistent with observation findings that most of group-exercise participants were females. Meanwhile, males were more likely to perform individual exercise than females. In general, older women have more social resources and informal network than do older men.²⁴ Moreover, the mutuality and voluntary nature of friendships are highly valued.²⁴ Differences in males and female's networks result from gendered experiences within various roles and resulting opportunities for establishing social networks.³⁰ However, the importance of social network on well-being is extensively documented.²⁴

There are some limitations in this study. The elderly who are dependent and those in other age groups, who might have different underlying reasons, were not included. In addition, although the interplay between factors was found, how they interplay each other was not explored clearly.

Implications: Based on the findings, interventions to promote exercise in the elderly should be mixed interventions encompassing a balance of individual and population-wide interventions. Multidisciplinary team is considered important. At the individual level, the stages of behavior change should be concerned about. Raising awareness and encouraging appropriate perception about exercise are considered most useful among those who are not even considering exercise. Social marketing might be useful to shift misperception and negative attitude about exercise in this target. For those in contemplation stage, identifying barriers and finding solutions are deemed the most important. Health education and skill development is also considered important, particularly those with underlying diseases. Health professionals are suggested to play a major role in these types of intervention.

Utilizing social network and support to initiate and maintain exercise is also important. Activities in the elderly club, exercise groups, self-help and support groups, and peer-led program for those with chronic diseases are the examples. To build social network, leadership skill and public mind should not be ignored to encourage among the people in all age-groups. Supportive environment is also suggested to be considered, particularly transportation and equity of accessing to community group-exercise. At least, community group-exercise should be available in every village in Salava to solve the problem of transportation difficulty. Interventions also need to respect the differences between genders in the reasons for exercise and non-exercise.

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บทคัดย่อ

เหตุผลของการออกกำลังกายและไม่ออกกำลังกายในผู้สูงอายุวัยต้นในตำบลศาลายา จังหวัดนครปฐม เบญจวรรณ โสภณรัตนโภคิน*, ภครตี ชัยวัฒน์*, โยธิน แสวงดี** * คณะกายภาพบำบัด มหาวิทยาลัยมหิดล ** สถาบันวิจัยประชากรและสังคม มหาวิทยาลัยมหิดล	
วัตถุประสงค์:	เพื่อค้นหาเหตุผลของการออกกำลังกายและไม่ออกกำลังกาย และยุทธวิธีในการส่งเสริมการออกกำลังกายในผู้สูงอายุ วัยต้น
ວີซีการวิจัย:	ใช้วิธีการสนทนากลุ่มเป็นวิธีหลัก ร่วมกับการสัมภาษณ์เชิงลึกและการสังเกต ผู้ให้ข้อมูลเป็นผู้สูงอายุไทยอายุระหว่าง bo ถึง b៩ ปี อาศัยอยู่ในตำบลศาลายา สนทนากลุ่มทั้งหมดมี ๑๒ กลุ่มซึ่งแบ่งตามเพศและพฤติกรรมการ ออกกำลังกาย ผู้ให้ข้อมูลที่มีพฤติกรรมการออกำลังกายตรงกับข้อแนะนำของ American College of Sports Medicine จะได้รับการจัดให้เข้ากลุ่มผู้ที่ออกกำลังกาย แนวคำถามกรอบกลุมประเด็นหลักได้แก่ การรับรู้เกี่ยวกับการ ออกกำลังกาย ปัจจัยเอื้อและขัดขวางการออกกำลังกาย และยุทธวิธีที่มีศักยภาพในการส่งเสริมการออกกำลังกาย วิเคราะห์ข้อมูลโดยวิธีการวิเคราะห์เนื้อหา
ผลการศึกษา:	พบว่าปัจจัยเอื้อต่อการออกกำลังกายประกอบด้วย ปัจจัยระดับบุคคลได้แก่ แรงจูงใจและทัศนคติต่อการออกกำลังกาย การออกกำลังกายเป็นกิจวัตร และประสบการณ์ชีวิตในช่วงก่อนเกี่ยวกับการออกกำลังกาย ปัจจัยภายนอกได้แก่ เครือข่ายและการสนับสนุนทางสังคม รวมถึงการเข้าถึงบริการและการมีสิ่งอำนวยความสะดวก การได้รับประโยชน์ จากการออกกำลังกายเป็นผลตอบแทนที่ทำให้ยังคงออกกำลังกายต่อไป ในขณะเดียวกันพบว่ามีปัจจัยที่ขัดขวางการ ออกกำลังกาย ได้แก่ความจำกัดของเวลา การรับรู้และทัศนคติเกี่ยวกับการออกกำลังกาย รวมถึงปัญหาสุขภาพ ซึ่งเป็นปัจจัยระดับบุคคล ปัจจัยภายนอกได้แก่การไม่มีเครือข่ายทางสังคมและความลำบากในการเดินทาง ส่วนการ ได้รับผลที่ไม่พึงประสงค์จากการออกกำลังกายเป็นอุปสรรคที่ขัดขวางการออกกำลังกาย
สรุปผลการศึกษา:	เตรบผลทเมพงบระดงคง เกการขอกกาดงกายเบนอุบดรรคทงดง เงการขอกกาดงกาย เหตุปัจจัยซึ่งครอบคลุมตั้งแต่ระดับบุคคลถึงปัจจัยภายนอกที่พบในการศึกษานี้สามารถใช้อธิบายได้ว่าทำไมผู้สูงอายุ บางคนจึงออกกำลังกาย และทำไมผู้สูงอายุบางคนจึงไม่ออกกำลังกาย และจากข้อค้นพบดังกล่าว การศึกษานี้ได้ นำเสนอข้อเสนอแนะเกี่ยวกับกลยุทธ์ในการส่งเสริมการออกกำลังกาย
คำสำคัญ:	เหตุผล, การออกกำลังกาย, ผู้สูงอายุ, การสนทนากลุ่ม