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Self-efficacy, family support and physical-social functioning activity among Thai elderly under a community QOL program, Kanchanaburi province, Thailand

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Abstract

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This study describes the physical-social functioning activity of the elderly and examines the relationship between self-efficacy, family support and physical-social functioning activity among elderly living in a community under QOL program in Kanchanaburi province, using cross-sectional design. A total of 289 self-administered questionnaires for Thai elderly were used to collect data using stratified sampling.

About 48% of the studied elderly had good physical-social functioning activity. However, household-activity and leisure time activity predominated over regular exercise. Over half (60%) of the respondents had either high or moderate self-efficacy while 51.9% had high family support. Self-efficacy and family support were positively correlated with the physical-social functioning activity of the elderly. Multiple linear regression analysis predicted self-efficacy and family support as significant predictors of physical-social functioning activity ($p<0.001$, R-Sq (adj) =43.0%), when adjusted with other factors.

This finding suggests higher level of the self-efficacy and family support, higher level of the physical-social functioning activity of the Thai elderly involving in a QOL program. The authors recommended that several interventions to increase self-efficacy and family support should be strengthened and continued for health promoting behavior targeting the elderly people.

Keywords: self-efficacy, family support, physical-social functioning activity, elderly

วารสารสาธารณสุขและการพัฒนา
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การรับรู้ความสามารถของตน การสนับสนุนจากครอบครัว และการมีกิจกรรมทางสังคมและกายภาพของผู้สูงอายุภายใต้โครงการคุณภาพชีวิตจังหวัดกาญจนบุรี ประเทศไทย

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และกายภาพของผู้สูงอายุภายใต้โครงการคุณภาพชีวิตจังหวัดกาญจนบุรี ประเทศไทย
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วัตถุประสงค์ของการศึกษานี้เพื่ออธิบายกิจกรรมทางสังคมและทางกายภาพของครัวเรือนของผู้สูงอายุภายใต้โครงการคุณภาพชีวิตจังหวัดกาญจนบุรี และเพื่อศึกษาความสัมพันธ์ระหว่างการรับรู้ความสามารถของตน การสนับสนุนจากครอบครัว กับการมีกิจกรรมทางสังคมและทางกายภาพของครัวเรือนของผู้สูงอายุโดยใช้วิธีการวิจัยแบบสำรวจเชิงตัดขวางและใช้แบบสอบถามที่สร้างขึ้นเป็นเครื่องมือในการเก็บข้อมูลจากผู้สูงอายุภายใต้โครงการคุณภาพชีวิต สุ่มตัวอย่างแบบชั้นภูมิโดยใช้ขนาดตัวอย่าง 289 คน

ผลการวิจัยพบว่า ร้อยละ 48 ของผู้สูงอายุภายใต้โครงการคุณภาพชีวิตจังหวัดกาญจนบุรี มีกิจกรรมทางสังคมและกิจกรรมทางกายภาพครัวเรือนที่ดี เมื่อพิจารณาเฉพาะการมีกิจกรรมทางกายภาพครัวเรือนองค์ประกอบที่เด่นเป็นกิจกรรมทางกายภาพครัวเรือนมากกว่ากิจกรรมด้านการออกกำลังกาย มากกว่าร้อยละ 60.9 การรับรู้ตามความสามารถของตนของผู้สูงอายุ อยู่ในระดับปานกลางถึงระดับสูง ในขณะที่ร้อยละ 51.9 ของผู้สูงอายุมีแรงสนับสนุนจากครอบครัวในระดับสูง การวิเคราะห์การทดทอยพหุคูณพบว่า การรับรู้ความสามารถของตน และแรงสนับสนุนจากครอบครัวมีความสัมพันธ์ทางบวกอย่างมีนัยสำคัญที่ <0.001 กับการมีกิจกรรมทางสังคมและกิจกรรมทางกายภาพครัวเรือน

การรับรู้ความสามารถของตน และแรงสนับสนุนจากครอบครัวเพิ่มสูงขึ้นจะส่งผลให้การมีกิจกรรมทางสังคมและกิจกรรมทางกายภาพของครัวเรือนของผู้สูงอายุเพิ่มขึ้นด้วย กิจกรรมการส่งเสริมและการพัฒนาคุณภาพชีวิตของผู้สูงอายุควรมีมาตรการสร้างความมั่นใจในความสามารถของตนและส่งเสริมให้มีแรงสนับสนุนจากครอบครัวร่วมด้วย

คำสำคัญ การรับรู้ความสามารถของตน การสนับสนุนจากครอบครัว กิจกรรมทางสังคมและกายภาพของครัวเรือนผู้สูงอายุ

Introduction

Increasing proportion of older and its influence on quality of life is a growing and emerging concern worldwide. Ageing is increasing not only in Western society where sedentary lifestyle is taken as luxury but also is rapidly emerging in Asian region. The evidence in context of South-East Asia, particularly Thailand, shows increasing trend of ageing even faster than others in South-East Asia.[1] Increasing number of lonely elderly is yet another problem threatening physical-social functioning status including health and QOL of the elderly people.[2, 3] Physical and social activity are important components of QOL.[4-7] The existing evidences show that health promoting behavior is influenced by a variety of factors, both personal and contextual characteristics. Self –efficacy is recognized as a determinant for participation in physical and social functioning activity among the elderly. In turn, self-efficacy can also be a predictor of the quality of life of the elderly.[8] In addition, individuals with high family supports are more likely to participate and take benefit from the QOL programmes than those with low supports.[9] Nevertheless, quality of interactions with family members, whether positive or negative, is crucial to daily living of older people.[10]

Social cognitive theory (SCT) imply that self-efficacy is the crucial and nearer predictor of behavior.[11] Bandura's self efficacy theory (1997) suggests that the stronger that individual's efficacy expectations (self efficacy and outcome expectations), the more likely to engage in healthy behaviors, to maintain them, and to recover after setbacks in older adults.[11-13] There are several psycho-social factors enforcing the confidence of physical exercise behavior that includes: strong motivation, emotional supports from their peers and frequent doings of particular behavior for a long time.[8]

Active engagement in life is one of the main aspects of healthy ageing that refers to a person's involvement in community life, social roles and social relationships or the contribution to others such as participation in work, whether paid or not paid, care giving, volunteering and social participation ,including religious activities.[14] These activities are also referred to as productive ageing.[15] This study, therefore, was conducted to describe the physical-social functioning activity of elderly people living in community under a QOL program, Kanchanaburi Province. The study also examined association of personal socio-demographic characteristics, self-efficacy and family support with physical-social functioning activity of elderly people.

Methods

This study was a cross-sectional study that examined association of physical-social functioning activity with personal socio-demographic characteristics, self-efficacy and family support of the elderly people living under a QOL program. The study was approved by the Institutional Review Board of Social Sciences; Mahidol University (COA No.MU-SSIRB 2012 / 032.1302), Kanchanaburi Provincial Chief Medical Office and informed consent was obtained from all participants. Briefly, eligible participants for study were people aged 60 years and older, and under a QOL program. The total number of elderly people who were in a QOL program in Kanchanburi was 25,682 in 2010. The estimated sample size was 273 using 95 % confidence interval and a proportion of elderly participating in a QOL program in 2010 of 0.23. Simple random sampling was used to select

Muang district while for selecting participants, stratified sampling was used, with each club as a stratum. The number of participants was selected proportional to the size of each club members. Out of 295 self-administered questionnaires distributed, 289 were identified as fully complete. The questionnaire was divided into four parts: personal socio-demographic characteristics, which included personal information regarding age, gender, educational level, marital status, occupation, income, sources of income, adequacy of income, perceived health status and health problems of the respondents.

Self-efficacy was assessed with 13 item of barrier self-efficacy measure.[16,17] The measure assessed the degree of confidence that the participants had in their ability to perform/participate in specific physical-social functioning activity in different situations (e.g., when being tired, when being ill, when too busy, etc). The responses ranged from 1 (Not at all confident) to 3 (Highly confident). Examples of the items are "You can exercise at least 30 min per day for 5 days a week" and "You believe that you can continue exercising at least 1month further". Score ranged from 13 to 39. The total score was classified into three categories: "low" if scores were <60% of the total score; "moderate" if from 60 to 79%; and "high" if ≥ 80%. The Cronbach's alpha of this main research tool was 0.89.

Family support scale was modified from the work of Krause.[18] It consisted of 5 items to measure provision of supports, including information, emotional and instrumental supports that older persons received from their family members. Reponses were made into 5 point Likert rating 0 (never) to 4 (regularly). Score ranged from 0 to 20. The total score was categorized into two groups: "high support" (equal to or more than mean score) and "low support" (less than mean score). The Cronbach's alpha was 0.60.

Physical-social functioning activity consisted of four parts such as household activity, leisure time activity, exercise and social functioning activity. Household activity referred to daily routine activities which included sweeping, cooking, etc. Leisure time activity referred to recreational activities of elderly people in their free time for ease and relaxation such as watching TV, gardening, travelling while exercise referred to jogging/running, Tai chi, aerobic exercise. Social functioning activity referred to getting together with friends, attending social functions, participation in voluntary activities. This part consisted of 24 items to measure activity performed in a typical week within a last month based on Community Healthy Activities Model Program for Seniors Institute for Health and Aging (CHAMP) questionnaire[19] and American College of Sports Medicine and the American Heart Association (ACSM/AHA) guideline[20] for exercise. Frequency of each activity was measured by using five point rating: 0 (Never) to 4 (regularly). Score ranged from 0 to 96. The total score was grouped into two groups: "good" (equal to or more than mean score) and "poor" (less than mean score). The Cronbach's alpha was 0.87.

Descriptive statistics (such as frequency, percentage, mean, median, quartile deviation, minimum and maximum range) were used to describe the distributions of the variables. Simple linear regression was carried out to find out the relationship between studied independent variables, such as age, gender, marital status, education, occupation, income, adequacy of income, perceived health status, health problem, self-efficacy,

family support and the physical-social functioning activity. In addition, correlation between independent variables (such as self-efficacy, family support, and age) and physical-social functioning activity was evaluated by Pearson correlation coefficient. Multiple linear regression analysis was carried out to find out the significant predictors for the physical-social functioning activity.

Results

Out of 295 self-administered questionnaire distributed, 289 were identified as fully completed. In the study, female respondents comprised higher figure which was 60%. Many of the respondents (60.5%) fell under 60-69 age group with median age 67 years and 63.3% were married. The respondents attaining bachelor and higher education were 29.1% and 46.7% were government employees. Above half of the respondents (55.4 %) had income more than 10,000 baht per month, and major income source was governmental pension followed by their children/ grandchildren supports. The incomes were adequate (with or without savings) for 82% of the respondents. Two-third of the respondents rated their perceived health status as fair and good/excellent while 33.2% rated as being poor and very poor. Among the respondents, almost 70% had health problems and reported health problems were chronic diseases like diabetes, hypertension (Table 1).

Table 1 Distribution of respondents by personal socio-demographic characteristics

Personal characteristics	Number (n=289)	Percent
Gender		
Male	114	39.5
Female	175	60.5
Age (years)		
60-69	175	60.6
70-79	72	24.9
>=80	42	14.5
Median=67, QD=5, Min=60, Max=88		
Marital status		
Single	16	5.5
Married	183	63.3
Widowed/divorced/separated	90	31.2
Occupation		
Government worker/Semi-government	135	46.7
Employee with private firms/ Self employed	81	28.0
House-wife	30	10.4
Laborer/Wages/Farming	43	14.9

Table 1 Distribution of respondents by personal socio-demographic characteristics (Cont.)

Personal characteristics	Number (n=289)	Percent
Education		
Primary and no education	102	35.3
Secondary school and Diploma	103	35.6
Bachelor and higher	84	29.1
Income		
Less than 5,000 Baht	70	24.2
5,000-10,000 Baht	59	20.4
More than 10,000 Baht	160	55.4
Main source of income		
Children/Grandchildren	59	20.4
Governmental pension	178	61.6
Paid work	21	7.3
Business/Trade/House rent	31	10.7
Adequacy of income		
Adequate with saving	139	48.1
Adequate without saving	98	33.9
Inadequate without debt	23	8.0
Inadequate with debt	29	10.0
Health perception		
Excellent/Good	91	31.5
Fair	102	35.3
Poor /very poor	96	33.2
Health problems		
Yes	200	69.2
No illness	89	30.8

Table 2 shows that over half (60.9%) of the respondents had either high or moderate self-efficacy levels and 39.1% had low self-efficacy level. In regard to family support, 51.9% had received high family support for joining or doing activities. Nearly half of the participants had good activity level.

Table 2 Distribution of respondents by self-efficacy, family support and physical-social functioning activity level

	Number	Percent
Self-efficacy level		
High	45	15.6
Moderate	131	45.3
Low	113	39.1
Mean=25, Min=13, Max=39		
Family support level		
High	150	51.9
Low	139	48.1
Mean =6, Min=0, Max=20		
Physical-social functioning activity		
Good	141	48.8
Poor	148	51.2
Mean =39, Min=4, Max=92		

In addition, when each part of physical-social functioning activity (such as household activity, leisure time activity, exercise and social functioning activity) was examined, more than half of participants comprised good household activity and leisure time activity.

By using simple regression and correlation analysis, self-efficacy ($r = 0.525$, $p<0.001$) and family support ($r= 0.406$, $p< 0.001$) were found to have positive association with physical-social functioning activity. Age had negative correlation ($r= -0.201$) with physical-social functioning activity significant at $p= 0.001$. Besides, personal socio-demographic characteristics such as marital status, educational level, occupation, income, adequacy of income, perceived health status and health problems had significant relationship with physical-social functioning activity However, there was no significant difference for gender.

Table 3 shows that marital status, educational level, perceived health status, self-efficacy and family support as predictors for the outcome variable. The variation in the physical-social functioning activity score by all predictors was explained by coefficient of determination (R –square (adj) which was 43.0%. The regression model was adjusted for age, marital status, education and health perception. By controlling other variables, self-efficacy explained around 27% of the influence on physical-social functioning activity. On the other hand, the influence of family support was 25.9% on physical-social functioning activity. In sum, higher the self-efficacy and family support together with higher activity of elderly people was found.

Table 3 Multiple linear regression analysis for predictors of physical-social functioning activity

Factors	β	T-value	p-value
Age (years)	-0.067	-1.33	0.184
Marital status			
Single[a]			
Married	-0.252	-2.64	0.009**
Widowed/separated/divorced	-0.130	-1.33	0.186
Educational level			
Primary and no education	-0.245	-4.06	<0.001***
Secondary school and Diploma	-0.039	-0.72	0.473
Bachelor and higher[b]			
Perceived health status			
Excellent/Good	0.115	2.20	0.029*
Fair[c]			
Poor /very poor	-0.116	-2.14	0.034*
Total self-efficacy score	0.274	4.78	< 0.001***
Total family support score	0.259	5.46	< 0.001***
R-Sq(adj)=43.0%	s.e.=12.6	n=289	

a, b, c are referent groups.

* Significant at p-value <0.05, **p-value <0.01, ***p-value < 0.001

In addition, when multiple linear regression was done by using household activity as dependent variable, final model of regression predicted age, gender, perceived health status and self- efficacy as predictors with R-square (adj) 29.2%. By controlling other variables, self-efficacy explained around 29.6% of the variance on household activity.

Similarly, when social functioning activity was used as dependent variable in a final regression model, gender, education, perceived health status, self-efficacy and family support were predicted as predictors with R-square (adj) which was 28.8%. By adjusting other variables, self-efficacy explained around 29.4% of the influence on social functioning activity. On the other hand, family support explained around 23% effect on it.

Discussion

More than half (60.5%) of the participants were female. The major age-group was 60-69 years old. Major income source of the participants was governmental pension as many of the participants

were former government/semi-government employees. In contrary, children/grandchildren were major income source for elderly people found in the study done in Chiang Mai province, Thailand.[21] In this study, age was negatively correlated with physical-social activity of the elderly which suggests activity decreases with age. This finding was supported by previous studies conducted in the United States and Europe which also found that participation in physical activity would decrease with age.[22,23] However, some studies in Asia showed that participation might increase with age.[24, 25]

In this study there was no significant gender difference found in the physical-social functioning activity. Income and adequacy of income were also found to have effect on physical-social functioning activity of the elderly suggesting that high income and having adequacy might increase physical-social functioning activity. This finding is similar to previous studies demonstrating income and adequacy have been predictors or indicators of QOL , that is most related to social function and satisfaction of elderly.[24] Perceived health status and presence of health problems were found to have relationships with physical-social functioning activity of the elderly. It was therefore consistent with previous studies that showed the presence of diseases or poor health leading to inactivity and thus affecting QOL of older population.[23,26]

Physical-social functioning activity was measured in terms of household activity, leisure time activity, exercise and social functioning activity following ACSM(American College of Sports Medicine and the American Heart Association) guideline.[20] focusing only on frequency of activity. In accordance to recommended level, household activity and leisure time activity were more common and performed more frequently among Thai elderly rather than exercise. This was consistent with other studies done in Thailand which found that relatively few older adults regularly engaged in exercise in comparison to household activity.[21,23,26] This should suggest household activity could be an alternative strategy to enhance activity of older adults. A cohort study done in Chinese women demonstrated that physical activity domains, other than sports and exercise, were important contributors to total energy expenditure.[24] Similarly, study done in Korean immigrant women reported lower rate of regular participation in exercise. Also, mentioned that Korean immigrant women's lives are full of physical activities, although they may not be regular exercisers, thus the exclusive assessment of exercise would misjudge overall physical activity in Korean immigrant women.[27]

The analysis demonstrated self-efficacy as a predictor of physical-social functioning activity among the elderly people. This provides good support for Bandura's self-efficacy theory and is consistent with previous studies. McAuley's study (1993) on examining the roles played by self efficacy implicated exercise self-efficacy as a significant cognitive mediator in the maintenance of exercise at follow-up.[17] Similarly, another done study by White et al., demonstrated self-efficacy as a mediator for linking relationship between physical activity and QOL.[28] David et al. also showed self-efficacy predicted HRQL(Health related quality of life) suggesting that higher self- efficacy of older adults could lower health risk behavior such as exercise, dietary fat intake, weight control, alcohol and promotes better health.[29]

Indeed, in primary care, one goal of preventive services for older is to increase individuals' preventive self-efficacy to promote health behavior and reduce risk. Therefore, elderly, under a QOL program in general, have high self-efficacy to do the physical-social functioning activity.

Family support had a positive relationship with the physical-social functioning activity of the elderly people and this finding is consistent with Yuan's study which also found a positive correlation between family support and participation in physical activity mentioning that even sick elderly people were willing to engage in the activities when supported and encouraged by their family members.[3] Family support have directly positive influence on health promoting behavior in Thai context.[30] Quality of family relation and social support have been found be a good predictor that explains well for the QOL of elderly people.[31] However, family support could not predict the household activity while it significantly predicted social functioning activity. This should suggest that elderly people might not need family support to do indoor activity while to do outside home activity they would need more supports from their family members.

Moreover, this study showed that spouse was the most common source of encouragement for the elderly to participate in exercise or any activity. Previous findings from a cross-cultural study of older persons in the United States and India also showed that emotional support from a spouse was more important in determining well-being than is supported from one's children.[32]

With respect to the of data collection, Kanchanburi province, this study had some limitations. Generalization of the findings might be limited only to the particular province. Besides, this study was focused to self-efficacy and family support as important factors that predicted physical-social functioning activity among the elderly people; however, there might be several other factors that could have direct or indirect effects on the dependent variable, which were not included in this study.

In conclusion, this study revealed high levels of self efficacy and family support among the elderly living under a QOL program. Self-efficacy and family support predicted physical-social functioning activity of the elderly. However, adherence to exercise seemed to be low. Therefore, interventions that encourage and increase strong participation of elderly to exercise regularly should be implemented. In addition, emphasis should be given for strengthening continuation of such programs that could uplift QOL of elderly people. Family support programs, to facilitate the interrelationship within the family, should be encouraged and promoted so that it will boost confidence among elderly for promoting health behaviors subsequently. The success of this program should be emulated by neighboring villages, local leaders, governmental and non- governmental organizations together with relating volunteers to support the elderly and their families in these villages.

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หลักสูตรศิลปศาสตรมหาบัณฑิต สาขาวิชาวิทยาการเสพติด
สถาบันพัฒนาสุขภาพอาเซียน มหาวิทยาลัยมหิดล

หลักสูตรใหม่ พ.ศ. 2547

ชื่อปริญญา

ชื่อเต็ม: ศิลปศาสตรมหาบัณฑิต (วิทยาการเสพติด)

ชื่อย่อ: ศศ.ม. (วิทยาการเสพติด)

ปรัชญาของหลักสูตร

มุ่งผลิตบัณฑิตให้เป็นผู้นำของสังคมในด้านการศึกษาและการวิจัยทางด้านวิทยาการเสพติด เพื่อให้เกิดประโยชน์แก่สังคมในการป้องกัน และแก้ไขปัญหาการเสพติด รวมทั้งการบำบัดรักษา และฟื้นฟูสมรรถภาพทั้งทางร่างกายและจิตใจของผู้ที่ติดสิ่งเสพติด

คุณสมบัติของผู้เข้าศึกษา สำเร็จการศึกษาระดับปริญญาตรีหรือเทียบเท่าทุกสาขา และมีคุณสมบัติตามข้อต่อไปนี้อย่างน้อย 1 ข้อ

1. ได้แต้มระดับคะแนนเฉลี่ยสะสมไม่ต่ำกว่า 2.50

2. มีประสบการณ์การทำงานที่เกี่ยวข้องกับการเสพติด ไม่น้อยกว่า 1 ปี

3. คณะกรรมการบริหารหลักสูตรเห็นสมควรให้สมัครเข้าศึกษาได้

ระบบการศึกษาแบบหน่วยกิตทวิภาค

1. รายวิชาภาคทฤษฎี

2. รายวิชาภาคปฏิบัติ และการฝึกงาน

3. วิทยานิพนธ์

ระยะเวลาการศึกษาในการศึกษาตลอดหลักสูตรไม่น้อยกว่า 2 ปีการศึกษาและไม่เกิน 5 ปีการศึกษา

การลงทะเบียนเรียน นักศึกษาต้องลงทะเบียนเรียนแบบเต็มเวลา (Full time)

การวัดผลและการสำเร็จการศึกษา เป็นไปตามข้อบังคับมหาวิทยาลัยมหิดล ว่าด้วยการศึกษาระดับบัณฑิตศึกษา