

FACTORS RELATED TO SELF-CARE ABILITY AMONG ELDERLY WOMEN IN SEMI-URBAN COMMUNITIES, KHON KAEN, THAILAND

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ABSTRACT: This research study aims to describe factors related to self-care ability among elderly women in semi-urban communities around Khon Kaen, Thailand. A cross-sectional study was conducted on an elderly woman over 60 years old in the Banped Municipality of Khon Kaen, Thailand. From 317 participants 268 valid questionnaires were received. Participants were selected using a simple random sampling method. Study measurements used interview questionnaire constructs included self-care ability, demographics, chronic disease, health status and mental health. Descriptive statistics, i.e. frequency, percentage, mean, standard deviation (S.D.), median and interquartile range (IQR) were conducted to describe initial results. Furthermore, inferential statistics for bivariate analysis, chi-square, odds ratio and multivariate analysis using multiple logistic regression, were performed. The self-care ability level of all individual participants was assessed by the Self-care Ability Scale for the Elderly (SASE). The individual's mental health level was assessed by the Thai Geriatric Depression Scale-15 (TGDS-15). After the results of the SASE were analyzed, 166 elders were found to have a high level of self-care ability while 102 elders had a low level of self-care ability. Self-care ability was found to be highly associated with demographics, chronic disease, health status, and mental health. Factors that were significantly related to a high level of self-care ability included age, chronic disease, perceived health status, and mental health: depression (p -values < 0.05).

Keywords: *Factors, Self-care ability scale for the elderly, Elderly women, Semi-urban communities*

1. INTRODUCTION

A global aging crisis is imminent. The world population aged 65 and older is projected to grow from approximately 524 million in 2010 to nearly 1.5 billion in 2050, with most of the increase in occurring in developing countries [1]. In Asia, over the next 30-year period, this number will increase even more significantly. For instance, the proportion of Chinese persons aged 60 and over is estimated to increase from 12.4 to 28.1 percent [2].

Thailand has the fastest growing aged population than any other countries in South East Asia. As the proportion of Thai elders rapidly increase, Thai society is rapidly becoming an aged society. The proportion of elderly in Thailand has risen from 10.5% in 2005 to 11.2% in 2009 and will be close to 30% in 2050. Additionally, Thailand's oldest population group (> 80 years old) will sharply increase from approximately 12.7 percent to almost 20 percent in 2035 [3].

This rapidly aging population is changing the socio-economic structure and health status of the labor force. This age shift in the population coupled with decreased family size has created a top-heavy economy; a shrinking population of the employed must support an expanding population of elderly and retired persons [4].

Several studies found that the growth rate of the elderly population could become both a social and public health problem. Almost half of the elders had an insufficient income, and only two-thirds of them were in moderately good health. The most common disorders were back pain, rheumatoid arthritis, high blood pressure, gastritis, and heart disease. Furthermore, these health problems resulted in lower income for these elders. Specifically, most of these elders had to live alone or apart from their spouse due to this lower income [5].

Many people in Thai society believe the elderly have poor health and can contribute little to their community, and thus, should not work. This results, in part, from a Buddhism-based belief about gratitude, particularly for parents, grandparents, and other elderly family members. In other words, descendants have to take care of older people in their family. With this ideology, even some elders who have an ability to take care of themselves expect their descendants to take care of them in order to avoid the criticism from society. This lack of support for self-care may be a major cause of self-care ability declining in some elders.

There are few studies focus on self-care ability in elderly. A study by Soderhamn and Porn found

that studying abroad is mainly a study of self-care ability among home-dwelling older people.[6] According to Self-Care Ability Scale for the Elderly (SASE), self-care ability scale was categorized into three groups; Group I: age 65-74 years old, Group II: 75- 84 years old, and Group III: 85 years old and above. Soderhamn et.al reported the mean SASE score for Group I, II and III as 73.89, 66.55 and 78.00 points, respectively. Additionally, the same study also found that those who had lower self-care ability had a mean SASE score of 57.4 points.[10]

There are no studies about self-care ability in elderly in Thailand. Therefore, this study will identify the level of SASE among community elderly as well as the factors related to SASE. In addition, most studies show only self-care behavior [11]. There is no study of self-care assessment. For that reason, a study was conducted to assess the self-care ability among elderly women. This reason shows the elderly should have self -care ability.

2. METHODS

2.1 Design and Setting

A cross-sectional study was conducted on individuals who were over 60 years old in Banped Municipality of Khon Kaen, Thailand.

2.2 Population and Sample Size

The total number of elderly women in the target population from all twenty-three villages was 3000 people. A simple random sampling method was used to select 350 elderly women who registered for healthcare at Banped Health Promoting Hospital. The women were from four villages of the twenty-three villages under the supervision of Banped Municipality; Moo 1, Moo 2, Moo 3, and Moo 18 in 2014. The sample size of elderly women was calculated by WINPEPI. Assumed proportion was 0.79 [10]. The required sample size was 317 (inflated to compensate for a loss of 15% of subjects). Response rate was $268/317 = 84.50\%$. Total of sample size was 268 elderly women.

2.3 Research Instrument

Study measurements, used interview questionnaire constructs, included self-care ability demographics, chronic disease, health status and mental health. The self-care ability level of all individual participants was assessed by Self-Care Ability Scale for the Elderly (SASE) [6]. The individual's mental health level was assessed by Thai Geriatric Depression Scale-15 (TGDS-15).

2.4 Data Collection

Data were collected by trained interviewers between February and March 2015. Face-to-face interviews were conducted in a comfortable environment for each individual participant, usually at their home.

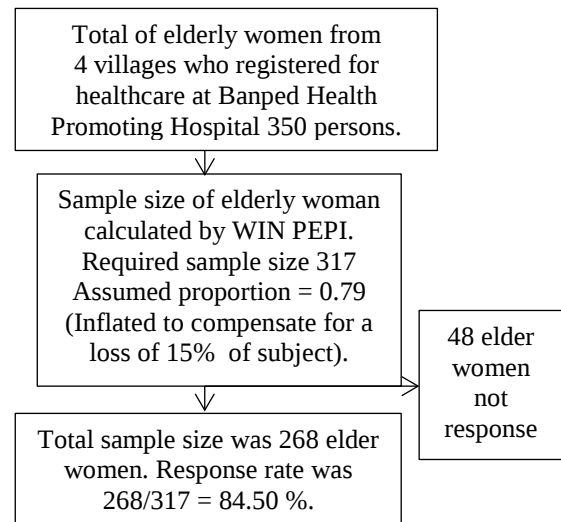


Fig. 1 A sample size diagram

3. DATA ANALYSIS

After the data was gathered, all forms and data were checked for completeness. All data were entered twice and validated in EPI INFO for DOS before being transferred into SPSS for Windows. Data were analyzed using SPSS version 19 (IBM Corp. Released 2010. IBM SPSS for Windows version 19.0. Armonk, NY: IBM Corp. Under Licensed by Khon Kaen University). Descriptive statistics, i.e. frequency, percentage, mean, standard deviation (S.D.), median and interquartile range (IQR) were conducted to describe initial results. Furthermore, inferential statistics for bivariate analysis (chi-square, odds ratio and multivariate analysis using multiple logistic regression) were performed. Only a probability (p -value) less than 0.05 was considered to be statistically significant.

4. RESULTS

4.1 Demographic Characteristics

This study response rate was 84.50%. The median age of participants was 67 years old (IQR ± 11). The highest education of most participants was primary school. The majority of participants were widows (48.9%) and married (42.9%). Most participants worked, had a caregiver, stayed connected with a close friend(s) and joined

religious activities. More than half of the participants received home visits. (As shown in Table 1)

Table 1 Demographic characteristics of the sample

Characteristics	(n= 268)	Percentages (100)
Age 60 – 69	157	58.6
70 – 79	80	29.9
80 above	31	11.6
Median	67	
IQR	11	
Max – Min	95 – 60	
Education		
Bachelor	1	0.3
Secondary school	10	3.7
Primary school	264	91.8
No school	6	2.2
Marital status		
Single	22	8.2
Married	115	42.9
Widow	131	48.9
Working		
Yes	196	73.1
No	72	26.9
Caregiver		
Yes	223	83.2
No	45	16.8
Close friend		
Yes	233	86.9
No	35	13.1
Joined religious activities		
Yes	223	83.2
No	45	16.8
Home visits		
Yes	153	57.1
No	115	42.9

4.2 Self-Care Ability

After the self-care ability of participants using the SASE was measured, the results indicated that the average score for the 268 study participants was 72.4 points (S.D. = 10.9). When dividing the participants into two groups, this study showed that 102 participants (38.10%) had a low level of self-care ability and 166 (61.90%) had a high level of self-care ability. The low-level self-care ability group (with scores ranging from 50 to 85 points) had a statistically significant relationship with more advanced age participants. (As shown in Table 2)

Table 2 Proportion of SASE among the elderly

SASE	(n = 268)	Percentages (100)	95%CI
Low level	102	38.10	
High level	166	61.90	70.50-73.64
Mean score = 71.82 SD = 10.94			

4.3 Self-Care Ability and Health-Related Variables

Results showed that self-care ability levels were related to variables: age 70-79, age 80 and above, marital status, having a caregiver, living arrangement, having a close friend, joining religious activities, received home visits, having professional care, perceived good health, perceived poor health, having chronic disease, had a fall (in the last 6 months), Time Up & Go (TUG) Test, and Thai Geriatric Depression (TGD) Test (suspected depression). (As shown in Table 3).

Table 3 Factors related to SASE

Factors related SASE	Higher SASE Scores > 69 (n = 102)	Low SASE Scores ≤ 69 (n = 166)	P
Age			
60-69	46(45.1)	111(66.9)	
70-79	38(37.3)	42(25.3)	0.006
80 above	18(17.6)	13(7.8)	0.002
Marital status			
Single	67(65.7)	86 (51.8)	0.026
Married	35(34.3)	80(48.2)	
Caregiver			
Yes	70(68.6)	153(92.2)	<0.01
No	32(31.4)	13(7.8)	
Living arrangement			
Yes	66(64.7)	153(92.2)	<0.01
No	36(35.3)	13(7.8)	
Close friend			
Yes	75(73.5)	158(95.2)	<0.01
No	27(26.5)	8(4.8)	
Joined religious activities			
Yes	76(74.5)	147(88.6)	0.003
No	26(25.5)	19(11.4)	
Home visit			
Yes	68(66.7)	85(51.2)	0.013
No	34(33.3)	81(48.8)	
Professional Care			
Yes	45(44.1)	155(93.4)	<0.01
No	57(55.9)	11(6.6)	
Perceive good health			

Factors related SASE	Higher SASE Scores > 69 (n = 102)	Low SASE Scores ≤ 69 (n = 166)	P
Good	50 (49.0)	95 (57.2)	
Moderate	42(41.2)	66 (39.8)	0.470
Poor	10(9.8)	5(3.0)	0.014
Chronic disease			
Yes	88(86.3)	29 (17.5)	<0.01
No	14(13.7)	137 (82.5)	
Fall (last 6 months)			
Yes	38(37.3)	28(16.9)	<0.01
No	64(62.7)	138(83.1)	
TUG			
Yes	91(89.2)	74(44.6)	<0.01
No	11(10.8)	92(55.4)	
TGDs			
Normal	26 (25.5)	161(97.0)	
Suspect	65 (63.7)	4 (2.4)	<0.01
Depress	11(10.8)	1(0.6)	<0.01

4.4 Predictors for Self-Care Ability

Among several health variables, five predictors emerged from this study's logistic regression equation. These five predictors included age 70-79, having chronic diseases, and Thai Geriatric Depression (TGD) test (suspected depression). (As shown in Table 4).

Table 4 Summary of multiple regression analyses for variables predicting SASE

Variable	P	COR	AOR	95%CI
Age				
70-79	0.03	0.46	0.42	0.20 - 0.93
Chronic disease	<0.01	0.03	0.04	0.02 – 0.09
TGDs				
Suspect	<0.01	0.01	0.01	0.00 - 0.03
Depression	0.01	0.01	0.01	0.00 - 0.18

These results indicate that people in North East Thailand appreciate and have an interest in elderly care. The average score of the sample regarding self-care was high, which shows that the women around age 67 are capable of taking care of themselves. The predictors of self-care ability included age 70-79, having chronic diseases, and Thai Geriatric Depression (TGD) test (suspected depression).

5. DISCUSSION

This research aimed to describe factors related to self-care ability among elderly women in semi-urban communities. The outcome of the demographic data study confirmed the results of previous research by Kuhirunyaratn, Prasomrak, & Jindawong [18] which shows that the number of elderly who list themselves as their main caregiver was higher than it was three years ago. This result shows people in North East Thailand appreciate and have an interest in elderly care.

In this study, the factors found to be related to self-care ability among elderly women are similar to those found in several studies [8, 9, 10]. The SASE average scores of this study's sample (participants who resided in Khon Kean's semi-urban communities) were at a high level. This result indicated that the participants, in general, manage well in performing self-care ability. This result supports previous research on self-care ability among home-dwelling older people in Norway.[10][9] This result also corresponds with findings regarding the self-care behaviors of Thai elderly; those findings showed most Thai elderly perceived their own health status to be good because of Thailand's health promotion policies which were established under the healthcare reform enactment of the 2002 National Health Security Act and the 2003 National Senior Act [12].

This comparable result also appeared in among seniors in Norway who used the same SASE instrument to assess elder self-care ability. In Norway, the average high level of self-care ability was 83.3% while an average low level of self-care ability was 16.7% with an overall average score of 78.2 points. This is comparable to an overall average score of 78.4 points for the Banped Municipality's elderly. The slight differences between these numbers may result from different demographic characteristics, e.g. average life expectancy and a higher chronic illness rate in developed countries [13]. Additionally, Norwegian elderly received a regular health support from the government that they could practically apply to their lifestyle. The same study showed that Norwegian people 65 and above had enhanced their learning skills and appropriately adapted their lifestyle to be in harmony with their surrounding environment and social conditions.

Although the Thai elderly yielded a comparable result in terms of an overall average score, the proportion of Thai elderly who had high-level self-care ability (as measured by SASE) was lower than the same proportion of Norwegian elderly. This lower proportion reveals that Thailand still has difficulties in enhancing senior learning ability to diminish rising healthcare costs

and challenges of an aging population. Therefore the development of a model for enhancing senior learning skills for increasing self-care ability is needed for Thai senior citizens.

After evaluating the level of factors related to enhancing self-care ability, these factors turned out to be adverse factors or an obstacle for the over 70 group as indicated from the results that these factors in the over 70 group had a higher statistically effect than those factors in the 60-70 years old group (OR= 0.42, 95% CI = 7 – 80, p -value < 0.05). This may indicate that at older ages the elderly's health has declined, thereby diminishing their physical capacity for self-care [14]. This supposition corresponds with two other studies in 2001 and 2003 [15], [16]. Additionally, the self-care ability of the elderly is gradually decreased by as they age. Therefore, aging is a statistically significant impediment to maintaining self-care ability (OR = 0.946, 95% CI = 0.901–0.993 in 2012[13] and R^2 = 0.18, p -value < 0.001 in 2001 [16].

Having a chronic illness was a higher impediment to maintaining their self-care ability than not having a chronic disease (OR = 0.04, 95% CI = 0.02 – 0.09, p -value < 0.001). This result was influenced by lack of confidence as well as anxiety regarding their health brought on by their physical illnesses and possible disease complications. As a result, these elderly tended to overlook or minimize their own healthcare. Together with their dementia or partially skipping medications, elderly with chronic diseases were more likely to have their illnesses worsen or to develop more complications and become dependent on their caregiver than healthy elders. This corresponds with a study by Yu-Ling , Chou-Ping , & Yong which indicated that individuals in a good health who has no inherited disorders or chronic diseases are likely to have a high level of self-care ability (R^2 = 0.356, p -value < 0.001) [17].

Furthermore, the results also showed that, statistically, depression was the worse significant impediment for elderly with chronic diseases than for those without any (OR= 0.01, 95% CI= 0.00 - 0.03, p -value < 0.001). This corresponds with two other studies in China and Sweden which concluded that depression caused by isolation was an impediment to maintaining proper self-care ability (r = -0.299, p -value < 0.001 in 2009 [17]. and R^2 = 0.25, p -value < 0.001 in 2000) [8]. In other words, the loss of a loved one might be a significant cause of sorrow, self-isolation, lack of social interaction, resulting in separation anxiety and depression, and ultimately diminished self-care ability.

6. CONCLUSION

The findings of the study show that age, chronic disease, perceived health status, and mental health (e.g., depression) had a greater impact on female elderly self-care ability. Therefore, more public awareness, such as culturally appropriate policies and programs, is needed to support senior women in coping with their challenges. Policies and programs should focus on preventing chronic diseases in this age group and address methods for increasing self-care ability. Programs should also provide basic information on health promotion, should empower the elderly to become self-reliant, and should work to reduce the cost of health care,. In addition, improving the elderly's self-care can certainly reduce the medication cost of the country.

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8. REFERENCES

- [1] United Nations, Department of Economic and Social Affairs, Population Division, World Population Ageing, 2013, New York: United Nations, 2013, pp. 30-34.
- [2] Xun Z., Population Aging and Economic Growth: Will the Population Aging Reduce Household Saving in China?, Major Paper Presented to the Department of Economics of the University of Ottawa in Partial Fulfillment of the Requirements of the M.A. Degree. Ottawa, Ontario, 2015, pp. 1-39.
- [3] United Nations, Department of Economic and Social Affairs, Population Division World Population Prospects: The 2004 Revision, volume III: Analytical Report, New York: United Nations, 2005, pp. 1- 404.
- [4] National Statistical Office (NSO), The Elderly Population Survey in Thailand 2007, Bangkok, Texand Journal Publication Co., Ltd, 2014, pp. 1- 153.
- [5] Vipap P., Health Promotion with the International Year of the Elderly in 1999, College of Population Studies Chulalongkorn

- University, Bangkok, 1999, pp. 1- 4.
- [6] Soderhamn O., & Ek, A.-C., Porn I., The Self- Care Ability Scale for the Elderly, *Scandinavian Journal Occupation Therapy*, 1996, Vol. 3, Issue 2, pp. 69-78.
- [7] Soderhamn O., Lindencrona C., & Ek A.-C., Validity of Two Self-Care Instruments for the Elderly, *Scandinavia Journal Occupation Therapy*, 1996, Vol. 3, Issue 2, pp. 172-179.
- [8] Soderhamn O., Lindencrona C., & Ek A.C., Ability for Self-Care Among Home Dwelling Elderly People in a Health District in Sweden, *International Journal of Nursing Studies*, 2000, Vol. 10, Issue 1, pp. 361-368.
- [9] Sundsli K., Söderhamn U., Espnes G. A., & Soderhamn O., Ability for Self-Care in Urban Living Older People in Southern Norway, *Journal Multidiscipline Health*, 2012, Vol.5, 85-95.
- [10] Bjorg D., Soderhamn U., & Soderhamn O., Self-Care Ability Among Home Dwelling Older People in Rural Areas in Southern Norway. *Scandinavia Journal Caring Science*, 2012, Vol. 26, Issue 1, pp. 113-122.
- [11] Klainin P., & Ounnapirok L., A Meta-Analysis of Self-Care Behavior Research on Elders in Thailand: An Update, *Nurse Scien Quess*, 2010, Vol. 23, Issue 2, pp. 156-163.
- [12] Jittapunkul S., Wivatvanit W., Panyacheewin J., & Kangkanpanich P., Population and Health System: A profile of Thailand In World Health Organization (Ed.), *Developing Integrated Response of Health Care Systems to Rapid Population Ageing (INTRA) Thailand Survey Report*, Bangkok, Thailand: World Health Organization, 2003, pp. 15-18.
- [13] United Nations, Department of Economic and Social Affairs, Population Division *World Population Ageing 1950-2050*, New York: United Nations, 2013, pp. 1- 348.
- [14] Nordenfelt L., *On the Nature of Health, An Action-Theoretic Approach*, Second revised and enlarged edition, Dordrecht: Kluwer Academic Publishers, 1995. pp. 1-19.
- [15] Haveman-Nies A., de Groot L.C.P.G.M., & Van Staveren W.A., Relation of Dietary Quality, Physical Activity and Smoking Habits to 10 year changes in Health Status in Elder Europeans in the SENECA Study, *American Journal of Public Health*, 2003, Vol. 93, pp. 318 – 323.
- [16] Soderhamn O., & Cliffordson C., The Structure of Self-Care in a Group of Elderly People, *Nurse Sciences Q*, 2001, pp. 55-58.
- [17] Yu-Ling B., Chou-Ping C., & Yong - Yuan C., Self-Care Behavior and Related Factors in Older People with Type 2 Diabetes, *Journal of Clinical Nursing*, 2009, Vol. 18, Issue 23, pp. 8-15.
- [18] Kuhirunyaratn P., Prasomrak P., & Jindawong B., Factors Related to Falls Among Community-Dwelling Elderly, *Southeast Asian Journal Tropical Medicine Public Health*, 2013, Vol. 44, Issue 5, pp. 906-915.

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