

# KNOWLEDGE REGARDING AN ACCESS TO UNIVERSAL COVERAGE SCHEME AMONG THE ELDERLY IN MUANG DISTRICT, RATCHABURI PROVINCE, THAILAND

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## ABSTRACT:

**Background:** Not only the population who lack to access the health facilities but the ageing population also are the big global problem with the significantly affect to every system, especially health care system. The purposes of this study were access the level of knowledge regarding an access to universal coverage and examine the association between socio-demographic characteristics factor and knowledge regarding an access to universal coverage among the elderly, Muang district, Ratchaburi province, Thailand.

**Methods:** A cross-sectional study was conducted during April – July 2015, to assess and examine the level of knowledge regarding an access to universal coverage scheme among the 440 elderly > 60 years old. The participants were selected by using simple random sampling technique and structure questionnaire for interview. One-way analysis of variance was used to analyze the association between independent and dependent variables.

**Results:** The study showed that aged ranged 60 – 92 years old, most age group was 60 – 90 years old (61.9%). For the level of knowledge regarding an access to universal coverage scheme among the elderly was in moderate and high level (55.7%). The association showed occupation ( $p$ -value = 0.010), highest education level ( $p$ -value = 0.000), and number of people in family ( $p$ -value = 0.020) had the statistically significant with the level of knowledge regarding access to universal coverage scheme among the elderly at  $p$ -value level < 0.05.

**Conclusions:** This study suggested improvement in health education and health promotion among the elderly about the benefits to access the universal coverage to improve quality of elderly and improve the effectiveness of the universal coverage scheme.

**Keywords:** Access to health care, Universal Coverage Scheme, Elderly, Thailand

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## INTRODUCTION

One point three billion people have the deficiency of accessing to reasonable and proficient health care organization worldwide [1]. The space of social health protection, those are mostly occurred in low-income countries [2]. Not only the population who lack to access the health facilities but the ageing population also are the big global problem with the significantly affect to every system, especially health care system. After ten years of Thailand's

universal coverage experiences, transparent criteria for deciding to use universal coverage scheme are required where one has to be concerned about political pressure and people acceptability [3]. Of importance, an association between insurance status and health care use, while socioeconomic factors and consumer preference played a key role in the inequity of health care utilization [4]. As such, universal coverage scheme inappropriate use becomes a critical public issue where user's knowledge should be one of the key public policies. The aims of this study were to assess the level of knowledge about the Universal Coverage Scheme (UCS) and examine the factors

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associated with the knowledge about the UCS among the elderly in Muang District, Ratchaburi Province, Thailand.

## MATERIALS AND METHODS

A cross-sectional survey was conducted to evaluate the knowledge regarding an access to universal coverage scheme among the elderly in Muang District, Ratchaburi Province, Thailand was carried out from October 2014 to July 2015. The total of participants in this study was 440 elderly who aged 60 years old and above. Researcher and 15 local research assistants (Village Health Volunteers in Ratchaburi Province) were trained before the face-to-face interview at participant's home.

### Questionnaire design

Structure-Questionnaire was used to interview the participants to access and examine the knowledge regarding an access to universal coverage scheme among the elderly in Muang, Ratchaburi Province, Thailand which consisted of 2 parts: Socio-demographic characteristics and knowledge regarding an access to universal coverage. Participants answered in three categories: true, false and don't know in positive and negative statement [5]. The score ranging was 0 – 20 that converted to 100% to classify into low level (< 60%), moderate level (60 – 80%), and high level (81 – 100%) [6].

### Pilot test

The questionnaire was conducted on a pilot test for 40 respondents in Muang District, Kanchanaburi Province, Thailand in order to find out the reliability and the validity of the survey questionnaire. Knowledge contained 20 items had Cronbach alpha = 0.814.

### Data analysis

After the data collection, the descriptive statistics (frequency, percentage, and mean, standard deviation, minimum and maximum values) was used to describe the general characteristics for all population in this study. For analytic statistics, One-Way ANOVA test was also used to describe the association of the dependent variable and independent variables in part of knowledge of benefits in universal coverage scheme with the statistically significance of mean level 0.05 by the SPSS program for window version 17, licensed for Chulalongkorn University.

### Ethical consideration

This study was approved by the Ethics Review Committee for Research Involving Human Research Subjects, Health Sciences group, Chulalongkorn

University, Thailand (certificated code number No.064.01/2015).

## RESULTS AND DISCUSSION

### Socio-demographic characteristics of participants

The proportion between male and female participants from this study was 40.5% and 59.5% respectively. The sole religion was Buddhist (100.0%). As shown in the Table 1, the majority result of the age ranking of respondents in this study was 60 - 69 years old (61.8%) with the most common groups were at aged 60 and 65 years old (8% both). The main result of marital status was marriage (59.3%). The majority of present number of people in each family was more than 5 people in each family (27.7%). The total number of the participants who have children was 389 participants, shown the main number of children that participation had was 2 people (28.3%). Almost 87.7% graduated in elementary school that was their highest education level.

Most of the elderly are no longer working anymore at this age (33.0%). The monthly family income was less than 10,000 bath/month (60.7%). In the average of the elderly had their care taker (mostly was their descendants) was 93.4%. And 80.5% played majority were self-dependent in routine activities (Table 1).

### Knowledge regarding an access to universal coverage scheme

In the area of this study, Muang District, Ratchaburi Province, Thailand, the elderly had the knowledge regarding an access to universal coverage scheme. The questionnaire information contained 20 questions, which were 13 positive questions, and 7 negative questions. The raking score was 0 to 19 (minimum was 0 and maximum was 19). The average score of the knowledge regarding an access to universal coverage scheme among the elderly was 12.46 (SD = 3.398). Top three of the positive questions with right answers were about people can use the ID card as a substitute for the Gold card (5), in case of general illness, patient has to go to primary medical care (health promoting hospital) first (2), and when people intention to use the UCS, the ID card or Birth card (for children aged < 15 years old) and Gold card all must be presented. Top three of the negative question with right answer were about UCS covers expenses on special room at the hospital (In-patient) (17\*), in general illness, patients have limited access to health care organization participating the UCS program (4\*), and in emergency cases, patients have limited access to health care organization

**Table 1** Socio-demographic characteristics of participants

Characteristics		Number	%
<b>Gender</b> (N=440)	Male	178	40.5
	Female	262	59.5
<b>Religion</b> (N=440)	Buddhist	440	100.0
<b>Age</b> (N=440)	60-69 years	272	61.8
	70-79 years	115	26.2
	80-89 years	48	10.9
	> 90 years	5	1.1
	Other	1	0.2
<b>Marital status</b> (N=440)	Single	43	9.8
	Married	261	59.3
	Windowed	127	28.9
	Divorced	3	0.7
	Separated	5	1.1
	Other	1	0.2
<b>People in family</b> (N=440)	1 people	26	5.9
	2 people	75	17.0
	3 people	79	18.0
	4 people	55	12.5
	5 people	83	18.9
	> 5 people	12	27.7
<b>Children</b> (N=389)	1 people	48	12.3
	2 people	110	28.3
	3 people	91	23.4
	4 people	68	17.5
	5 people	38	9.8
	> 5 people	34	8.7
<b>Highest education</b> (N=440)	Elementary school	386	87.7
	Secondary school	18	4.1
	High school	6	1.4
	Diploma	1	0.2
	Bachelor's degree	7	1.6
	Not study	22	5.0
<b>Occupation</b> (N=440)	Agriculture	109	24.8
	Employee	137	31.1
	Business/Trader	47	10.7
	Not working	154	33.0
	Other	2	0.4
	Family income (Monthly/ Baht) (N=440)	< 10,000	267
10,000 – 20,000	114	25.9	
20,001 – 30,000	28	6.4	
> 30,000	19	4.3	
Other	12	2.7	
<b>Care taker</b> (N=440)	Have	411	93.4
	Don't have	29	6.6
<b>Self-dependent</b> (N=440)	Some activities	86	19.5
	All activities	354	80.5

participating the UCS program (8\*). And top five from “don't know” answer from both statement question were about people can change main health care center 3 time per year (15)\*, in case of a car accident, patient can use the UCS right after using the car insurance fund (Por Ror Bor Rot Yon) first (7), and Benefit from the USC is including end-stage renal disease (12) as shown in Figure 1.

Overall of the participants in this study had “moderate level of knowledge” (45.5%) regarding

an access to universal coverage scheme among the elderly in Muang, Ratchaburi Province, Thailand. The study's result from Factors Influencing Health Promoting Behaviors among the Elderly Under the Universal Coverage Program, Buriram Province, Thailand was aligned by Kanittha Chamroonsawasdi [7] that mainly elderly had health promotion behavior at moderate level (53.7%), in the straightway with Samita Pokhrel, in the study of Factors influencing annual health checkup among

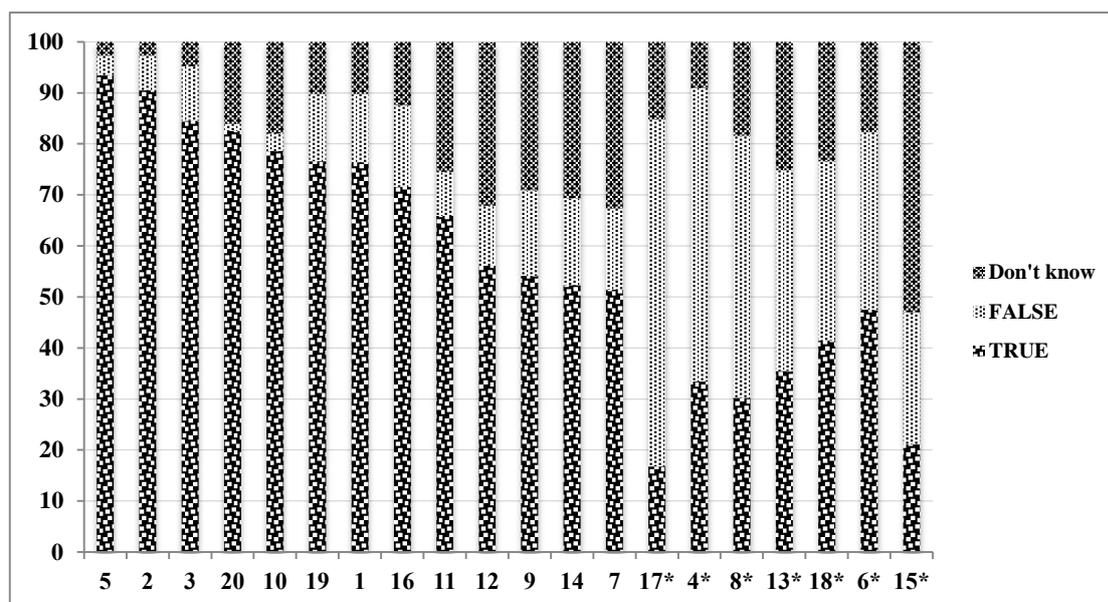


Figure 1 Percentage of answering in each question from the participants

Table 2 One-Way ANOVA test that shows the association between socio-demographic characteristics of the study population and knowledge regarding an access to universal coverage scheme

Characteristic	Sum of squares	df	Mean square	f	Sig.
<b>People/Family</b>					
Between group	153.190	5	30.638	2.705	0.020*
Within group	4916.073	434	11.327		
Total	5069.264	439			
<b>Highest education</b>					
Between group	184.146	2	92.073	8.236	0.000*
Within group	4885.117	437	11.179		
Total	5069.264	439			
<b>Occupation</b>					
Between group	153.279	4	38.320	3.391	0.010*
Within group	4915.985	435	11.301		
Total	5069.264	439			

Table 3 The statistical different between highest education and level of knowledge regarding an access to universal coverage scheme among the elderly

(I)	(J)	Mean difference (I-J)	Std. Error	Sig.	95% CI	
					Lower bond	Upper bond
Elementary	> Elementary	.619	.615	.944	-.86	2.10
	Not study	2.923 <sup>*</sup>	.733	.000*	1.16	4.68
> Elementary	Elementary	-.619	.615	.944	- 2.10	.86
	Not study	-2.304 <sup>*</sup>	.926	.040	.08	4.53
Not study	Elementary	- 2.923	.733	.000*	- 4.68	- 1.16
	> Elementary	- 2.304	.926	.040	- 4.53	- .08

\* The mean difference is significant at the 0.05 level

older adult in Kanchanaburi demographic surveillance system, Thailand that stated that “health information” in the participation revealed the health information that 70.9% in past one year and rest of them 29.1% didn’t not got the health information [8].

One-Way ANOVA test showed the association

between socio-demographic characteristics of the study population and knowledge regarding an access to universal coverage scheme. It was found that people in each family, highest education, and occupation were significantly associated with the knowledge level regarding an access to universal coverage scheme among the elderly in Muang,

**Table 4** The statistical different between people/family and level of knowledge regarding an access to universal coverage scheme among the elderly

(I)	(J)	Mean difference (I-J)	Std. Error	Sig.	95% CI	
					Lower bond	Upper bond
1	2	1.570	.766	.614	-.69	3.82
	3	1.798	.761	.278	-.45	4.04
	4	1.186	.801	1.000	-1.18	3.55
	5	1.246	.756	1.000	-.99	3.48
	> 5	2.323 <sup>*</sup>	.727	.022*	.18	4.47

\* The mean difference is significant at the 0.05 level

**Table 5** The statistical different between occupation and level of knowledge regarding an access to universal coverage scheme among the elderly

(I)	(J)	Mean difference (I-J)	Std. Error	Sig.	95% CI	
					Lower bond	Upper bond
<b>Agriculture</b>	Employee	.223	.431	1.000	-.99	1.44
	Business/trader	1.891 <sup>*</sup>	.587	.014*	.24	3.55
	Not working	.887	.426	.379	-.32	2.09
	Other	-.982	2.399	1.000	-7.75	5.79
<b>Employee</b>	Agriculture	-.233	.431	1.000	-1.44	.99
	Business/trader	1.668 <sup>*</sup>	.568	.035*	.06	3.27
	Not working	.665	.401	.978	-.47	1.79
	Other	-1.204	2.394	1.000	-7.69	5.55
<b>Business/Trader</b>	Agriculture	-1.891 <sup>*</sup>	.578	0.14*	-3.35	-.24
	Employee	-1.668 <sup>*</sup>	.568	0.35*	-3.27	-.06
	Not working	-1.003	.564	.761	-2.60	.59
	Other	-2.872	2.427	1.000	-9.72	3.98

\* The mean difference is significant at the 0.05 level.

Ratchaburi Province, Thailand ( $p$ -value= 0.020, 0.000, and 0.010) respectively (as shown in Table 2, 3, 4, and 5).

The result of this study was in contrast with the study of "Attitude and knowledge regarding health care policy and systems: a survey of medical students in Ontario and California" by Sherif Emili [9] that support for universal health care coverage was higher in Ontario (86.8%) than California (51.1%)  $p < 0.001$ . The result of community perception of health insurance and their preferred design features: implications for the design of universal health coverages in Kenya by Stephen Mulupi [10] described that there was high awareness of health insurance scheme but limited knowledge of how health insurance functions as well.

While Nathalie et. al. [11] found that result was significantly associated with household income in US but not in Canada. The roles of access to health care and socioeconomics inequality in US and Canada had the positive linear relationship. Revealed with Kanittha et al. [7] mentioned factors that can predict the health promotion behaviors of the elderly were occupation, knowledge, current illness, knowledge information from health personnel and family (all factors shown  $p$ -value

$< 0.01$ ), that went along with Samita who also found that health behaviors, health literacy, economic status, education, and sex associated significantly at  $p$ -value  $< 0.001$  [8]. Similarly with Magan et al. [12] that sex played association statistically significant ( $p < 0.05$ ) in hospitalization in the elderly in Spain.

## CONCLUSION

The participants in this study were both male and female. Most of them were female (59.5%), buddhist (100%), and their most aged rank was 60 – 69 years old (61.8%). More them half of them were marriage (59.3%) and graduated in elementary school (87.7%). Majority of the participants in this study do not work anymore (33.0%), so the concerning about family income of the participants in this study was less than 10,000 baht/monthly (60.7%) even the generally participant have number of family member who lived in present time more than 5 people (27.7%) and most of them had 2 children (28.3%) in each family then affected that mostly of the participants had the care taker like a daughter, nephew/niece, son and child-in-law (93.4%) even most of the participants have their care taker but mainly they were self-dependent by doing in all routine activities (80.5%). The level of

knowledge regarding an access to universal coverage scheme among the elderly in Muang, Ratchaburi Province, Thailand was in high and moderate level (50.7%). Most of them known about the general benefits regarding an access to universal coverage scheme and small percentage who did not know in some specific benefits related in regarding an access to universal coverage scheme among elderly. The socio-demographic characteristics that associated with level of knowledge regarding an access to universal coverage scheme of this study population were number of people in family ( $p$ -value = 0.020), occupation ( $p$ -value = 0.010), and highest education ( $p$ -value = 0.000). Base on the finding of this study, the researcher provided some of the policy recommendations related to universal coverage scheme, as the following: Health education about the benefits regarding an access to universal coverage scheme must be considering in the elderly with the low or no education, have the family member > 5 people and have business or being the trader to improve the knowledge regarding an access to universal coverage scheme of them. So they can access to health care facilities when they got sick and deserve their quality of service and have better elderly life. Health promotion should be emphasize on the specific benefits regarding an access to universal coverage scheme that related to the elderly. That were plastic's base denture in oral health, health promotion benefits, health rehabilitation in cancer, heart surgery, and end-stage of renal disease (< 60% of right answer) that can be ensuring and improving in their quality of life.

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