



CHAPTER IV

RESULTS

Results of data analysis are divided into 2 section :

Section 1: Data analysis of 30 key community leaders in Kao Din sub-district, Kao Panom district district, Krabi province which can be divided into 5 parts as follows;

Part 1: General data

Part 2: Comparison of knowledge about hypertension and diabetes mellitus

Part 3: Comparison of self-efficacy expectations

Part 4: Behaviors in providing knowledge and influencing other people to have screening for hypertension and diabetes mellitus

Section 2: Data analysis of research populations aged 40 and older, residing in Kao Din sub-district, Kao Panom district, Krabi province which can be divided into 3 parts as follows;

Part 1: General data

Part 2: Comparison of knowledge about hypertension and diabetes mellitus

Part 3: Proportion of behaviors in taking hypertension and diabetes mellitus screening

Section 1: Data analysis of the key community leaders

Part 1: General data

Thirty key community leaders, residing in Moo 5, Kao Din sub-district, Kao Panom district, Krabi province, were selected and invited to attend the empowerment training program. These key community leaders were village headmen, assistants to the village headmen, members of Tambol Administration Organization, public health volunteers and members of woman occupational groups

Age: the mean of their age was 40 years.

Sex: the number of male participants (80%) was higher than female (20%).

Education: the majority of the key community leaders graduated with Matayom 1-3 (63.33%), followed by those with Pratom 1-6 (26.67%).

Occupation: most of the key community leaders worked in agriculture (86.67%), followed by the business sector (10%).

Income: eighty percent of the key community leaders earned 10,000 baht per month, followed by 5,000-9,999 baht (20%).

Roles and responsibilities in the community: seventy percent of the key community leaders were public health volunteers and 16.27% were sub-district headmen, village headmen and assistants to the village headmen.

Time duration on community services: the majority of the key community leaders (90%) served their community for more than 6 months while 10% had taken the responsibilities for community services in less than 6 months.

Table 2: Frequency and percentage of the key community leaders' general information categorized by sex, education, income, roles and responsibilities in the community and time duration on community services

Data	N	%
Age		
▪ 20 – 29 years	1	3.33
▪ 30 – 39 years	17	56.67
▪ 40 – 49 years	10	33.33
▪ 50 – 59 years	1	3.33
▪ 60 + years	1	3.33
Sex		
▪ Male	24	80.00
▪ Female	6	20.00
Occupation		
▪ Not attend school	0	0
▪ Pratom 1-6	8	26.67
▪ Matayom 1-3	19	63.33
▪ Matayom 4-6/ vocational certificate	3	10.00
▪ Certificate/ high vocational certificate/ diploma	0	0
▪ University's degree or higher	0	0
Occupation		
▪ Unemployment	0	0
▪ Agriculture	26	86.67
▪ Business	3	10.00
▪ Freelance/ contractual employment	1	3.33
Income (bath/month)		
▪ < 5,000 baht	0	
▪ 5,000 – 9,999 baht	6	0
▪ ≥ 10,000 baht	24	20.00
		80.00
Roles and responsibilities in the community		
▪ Sub-district headmen, village headmen, assistants to the village headmen	5	16.67
▪ Members of Tambol Administration Organization	2	
▪ Public health volunteers	21	6.67
▪ Members of woman occupational groups	2	70.00
		6.67
Time duration on community services		
▪ < 6 months	3	
> 6 months	27	10.00
		90.00

Part 2: Comparison of the key community leader's knowledge about hypertension and diabetes mellitus

2.1 Regarding before training score of the knowledge about hypertension and diabetes mellitus, results showed that 76.67% was at the moderate level, followed by the high level (16.67%) and the low level (6.67%). But after the training, the majority (76.67%) could increase the score to the high level and 23.33% at the moderate level as shown in table 3. In addition, after the experimental period, more than half of them (53.33%) still remained their high level score and 46.67% at the moderate level.

Table 3: Comparison of the key community leader's knowledge about hypertension and diabetes mellitus before and after the experimental periods

Data/Scores	High		Moderate		Low	
	N	%	N	%	N	%
▪ Before training	5	16.67	23	76.67	2	6.67
▪ After training	23	76.67	7	23.33	0	0
▪ After experimental	16	53.33	14	46.67	0	0

2.2 The mean of the key community leader's knowledge of hypertension and diabetes mellitus prior to the training was 13.10 points and increased to 18.50 points after the training. Statistically, after training mean score of the hypertension and diabetes mellitus knowledge had a significant increase from before training score (P-value<.001; 95% confidence interval). In addition, it was found that the mean score of the knowledge after experiment period was statistically significantly higher than before experimental (P-value<.001; 95% confidence interval) as shown in table 4.

Table 4: Comparison of the mean score of the key community leaders' knowledge about hypertension and diabetes mellitus before and after training and after the experimental periods

Knowledge of HT and DM / Measurement	Mean	SD	T-value	P-value
▪ Before training/ experimental	13.10	3.14		
			-9.67	< .001
▪ After training	18.50	2.21		
▪ Before training/ experimental	13.10	3.14		
			-5.64	< .001
▪ After experimental	16.63	1.85		

Part 3: Comparison of self-efficacy expectations of the key community leaders

Results showed that the mean score of their self-efficacy expectations prior to the training was 12.57% and it increased to 16.90% after the training. A comparison of the mean scores of the self-efficacy expectations revealed a statistical significant difference between before and after training periods (P-value<.001; 95% confidence interval) as presented in table 5.

Table 5: Comparison of the mean score of the key community leader's self-efficacy expectations before and after training periods

Data/Measurement	Mean	SD	T-value	P-value
Self-efficacy expectations				
▪ Before training	12.57	1.56		
			-13.14	< .001
▪ After training	16.90	0.96		

Part 4: Behaviors in influencing other people to have screening for hypertension and diabetes mellitus

Results showed that prior to the experimental period, 43.30% of the key community leaders had provided knowledge and the number increased to 96.70% after experimental. Regarding their behaviors in influencing other people to have the screening, 36.70% had done so before experimental period and the number soared to 83.30% after experimental and the comparison between the key community leader's behaviors before and after experimental periods showed a statistical significant difference of the behaviors in providing knowledge between before and after experimental periods (P-value<.001; 95% confidence interval). In addition, there was also a significant difference of their behaviors in influencing others to have the screening between before and after experimental periods (P-value<.001; 95% of confidence interval) as shown in table 6.

Table 6: Frequency, percentage and comparison of the key community leader's behaviors before and after experimental periods

Behavior	Before		After		p-value
	N	%	N	%	
To provide knowledge					
▪ Ever	13	43.30	29	96.70	< .001
▪ Never	17	56.70	1	3.30	
To influence others to have screening					
▪ Ever	11	36.70	25	83.30	< .001
▪ Never	19	63.30	5	16.70	

Section 2: Data analysis of research populations aged 40 and older

Part 1: General information

Data in this part were collected from questionnaires completed by the experimental group consisting of 100 people aged 40 and older residing in Moo5, Kao Din sub-district, Kao Panom district, Krabi province and also the control group of 100 people in Moo 4 of Kao Din sub-district. Results showed that the average age of the experimental group was 49 years and the group was comprised of 54% of men and 46% of women. And for the control group, the average age was 50 years and the ratio of men and women was 52% versus 48% as shown in table 7.

Table 7: Frequency and percentage of research populations aged 40 and older categorized by age and sex

Data	Experimental group		Control group	
	N	%	N	%
Sex				
▪ Male	46	46.00	52	52.00
▪ Female	54	54.00	48	48.00
Age				
▪ 40 – 44 years	31	31.00	30	30.00
▪ 45 – 49 years	23	23.00	25	23.00
▪ 50 – 54 years	20	20.00	15	20.00
▪ 55 – 59 years	14	14.00	14	14.00
▪ 60 ⁺ years	12	12.00	16	12.00

Part 2: Comparison of knowledge about hypertension and diabetes mellitus

2.1 Results of the comparison analysis of the experimental and control groups' knowledge of hypertension and diabetes mellitus before and after experimental periods showed that prior to the experimental, most people (84%) in the experimental group had the knowledge at the moderate level and after the experimental period, 55% had the knowledge at the moderate level. For the control group, most of them had the knowledge before the experimental at the moderate level (85%) and after the experimental, 85% of them remained at the moderate level as shown in table 8.

Table 8: Frequency and percentage of the experimental and control groups' knowledge of hypertension and diabetes mellitus before and after experimental periods

Sample group	High		Moderate		Low	
	N	%	N	%	N	%
Experimental group						
▪ Before experimental	8	8.00	84	84.00	8	8.00
▪ After experimental	42	42.00	55	55.00	3	3.00
Control group						
▪ Before experimental	6	6.00	85	85.00	9	9.00
▪ After experimental	7	7.00	85	85.00	8	8.00

2.2 Concerning the mean comparison on knowledge of hypertension and diabetes mellitus before and after the experimental periods, results showed a statistical significant difference between before and after experimental for the experimental group (P-value<.001; 95% confidence interval) but there was no significant difference in the control group between before and after experimental as shown in table 9.

Table 9: Comparison of the experimental and control groups' knowledge of hypertension and diabetes mellitus before and after experimental periods

Knowledge of HT and DM	N	Mean	S.D.	T-value	P-value
Experimental Group					
▪ Before experimental	100	12.15	2.74		
				-12.72	<.001
▪ After experimental	100	15.73	2.37		
Control Group					
▪ Before experimental	100	12.24	2.87		
				-1.58	.118
▪ After experimental	100	12.60	2.62		

2.3 Results of the mean comparison regarding knowledge of hypertension and diabetes mellitus between experimental and control groups before and after experimental periods revealed that prior to the experimental, there was no statistical significant difference between the experimental and control groups. But after the experimental, there was a significant difference between these two groups (P-value<.001; 95% confidence interval) as shown in table 10.

Table 10: Comparison of the mean score of hypertension and diabetes mellitus knowledge between experimental and control groups before and after experimental periods

Knowledge of HT and DM	N	Mean	S.D.	T-value	P-value
Before experimental					
▪ Experimental group	100	12.15	2.74		
				-0.23	.817
▪ Control Group	100	12.24	2.87		
After experimental					
▪ Experimental group	100	15.73	2.37		
				8.88	< .001
▪ Control Group	100	12.60	2.62		

Part 3: Behaviors in taking hypertension and diabetes mellitus screening

3.1 Results of hypertension and diabetes mellitus screening among people aged over 40 indicated that prior to the experimental period, 42% of the experimental group had the screening and after the experimental, the percentage soared to 71%. On the other hand, as shown in table 13, 40% of populations in the control group had the screening prior to the experimental and it slightly increased to 45% after the experimental.

Table 11: Frequency and percentage of hypertension and diabetes mellitus screening taken by the experimental and control groups before and after the experimental periods

Sample Group	HT and DM Screening			
	Never		Ever	
	N	%	N	%
Experimental group				
▪ Before experimental	58	58.00	42	42.00
▪ After experimental	29	29.00	71	71.00
Control group				
▪ Before experimental	60	60.00	40	40.00
▪ After experimental	55	55.00	45	45.00

3.2 Regarding the comparison of proportions on screening behaviors of over-40-year-old people's between the experimental and control groups before and after experimental periods and, results showed significant differences for the experimental group's screening behaviors between before and after experimental periods (P-value<.001; 95% confidence interval). On the other hand, no significant difference was found for the control group's screening behaviors between before and after experimental as shown in table 12 and 13.

Table 12: Comparison of proportions of the experimental group's behaviors in taking hypertension and diabetes mellitus screening before and after experimental periods

Behaviors in taking screening HT and DM Before Experimental	Behaviors in taking screening HT and DM After Experimental		Total
	Ever	Never	
	▪ Ever	37	
▪ Never	34	24	58
Total	71	29	100

$X^2=20.103$ $df= 1$ $P\text{-value} < .001$

Table 13: Comparison of proportions of the control group's behaviors in taking hypertension and diabetes mellitus screening before and after experimental periods

Behaviors in taking screening HT and DM Before Experimental	Behaviors in taking screening HT and DM After Experimental		Total
	Ever	Never	
	▪ Ever	13	
▪ Never	32	28	60
Total	45	55	100

$X^2= 0.271$ $df= 1$ $P\text{-value} = .603$

3.3 Results of the comparison of proportions of hypertension and diabetes mellitus screening between the experimental and control groups before and after experimental periods revealed that prior to the experimental, there was no significant

difference in the proportion of the hypertension and diabetes mellitus screening between the experimental and control groups. But after the experimental period, there was a statistically significant difference between these two groups (P-value<.001; 95% confidence interval) as shown in table 14.

Table 14: Comparison of hypertension and diabetes mellitus screening proportions between the experimental and control groups before and after experimental periods

Data	N	Proportion of Screening	Z	P-value
Before experimental				
▪ Experimental group	100	4/58	0.32	.746
▪ Control group	100	40/60		
After experimental				
▪ Experimental group	100	71/29	4.03	< .001
▪ Control group	100	45/55		