CHAPTER IV

RESEARCH RESULTS

This is a cross-sectional descriptive and analytical study at a point in time concerning consumer's need on home visit by health workers in Nuea Khlong district, Krabi province. It is conducted in attempt to study the level of consumer's need on home visit according to the marketing mix in aspect of product/service, place, price and promotion. It also elucidate the level of consumer's need on home visit in each aspect sorted by sex, age, marital status, religion, occupation, household's monthly income, household's attribute, health conditions of the household members, type of health insurance, and villages. The sample populations are the head of households in Nuea Khlong district, Krabi province for 377 persons from 12,950 households (2.9%), 25-30 samples from each different village and 13 out of 56 villages. The samples were randomly assigned by using systematic sampling. The data had been gathered during October to November 2004 by the researcher through the interview according the questions in the questionnaire form that designed by the researcher. The content of questionnaire had been validated by three experts, then adjusted and corrected accordingly. The instrument was initially tested by 30 samples in different areas that similar to the study group to find its reliability. The reliability had been calculated by using Cronbach's alpha coefficient formula. The final result is 0.89. Using a descriptive statistic, which consisting of frequency, percentage, mean, standard deviation and test statistics did data analysis. The difference of defined factors was tested by use non-parameter (two-independent-Sample Test: Mann-Whitney in case of comparing 2 sets of data, and more than 2. independent samples: Kruskal-Wallis in case of comparing more than 2 sets of data.) A processed SPSS v.10 program was used to analyze the data. The result was illustrated in the form of tables with description. The result can be categorized into 4 parts.

Part 1	General Data of the subjects and households
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Part 2 The level of consumer's need on home visit

Part 3 Compare the differences of average scores of the need in home visit in aspect of product/service, place, price and promotion which sorted by sex, age, marital status, religion, occupation, household's monthly income, household's attribute, health conditions of the household members, type of health insurance and villages.

Part 4 Conclusion, proposals, suggestions and opinions of the samples

The details can be illustrated as below

Part 1 General data of the subjects and households:

It can be categorized into 6 sections which consisting of

1. General data of the subjects sorted by the relationship with the head of the household, sex, age, marital status and educational background. The general data of the subjects' families will be sorted by religion, occupation, household's monthly income, type of accommodation, household's attribute, health conditions of the household members and health insurance.

2. Data of home visit received.

- 3. Data of a home visit needed in aspect of day and time.
- 4. Ranking the first three target groups and
- 5. Sources of health information in the villages

1.1 General data of the subjects and households

According to the result of data collection, it was found that most of respondents were heads of household and follow by their spouses (51.5 % and 36.3% respectively). Most of heads of households were female with the ratio of male to female at 1:1.5. The average age is 43.0 years old (SD= 15.23). There were 80.6 % of subjects married and living with their spouses and 68.4 % completed the highest education at the primary school level. For the data of household, there were 70.3% of subjects were Buddhists and 29.7% were Muslim. In respect of occupation, the subjects are agriculturists (Para rubber and oil palm)(72.9%) The average monthly income was at 8,085.94 baht (SD =6,758.89). The type of accommodation was a single household with 4-6 members (95%). Most of subjects are the owners of the house (98.9%) and the houses were rather permanent and durable (95.8%). It was found that the households have a patient or handicap (27.3%). When looking at the health insurance and welfare aspect, most of households were eligible to have the universal healthcare scheme or "30-baht healthcare scheme" (82.0%) as illustrated in tables 4.1 and 4.2

Table 4.1 shows the numbers and percentages of general data of the subjects sorted by the relationship with the head of the family, sex, age marital status and level of education.

General characteristic of the subjects	Numbers (n=377)	%
The relationship with the head of the household		
Head of the household	194	51.5
Spouse (wife/husband)	137	36.3
Children	40	10.6
Parents of the household's head	6	1.6
Sex		
Male	154	40.8
Female	223	59.2
Ratio Male to Female = 1:1.5		
Age		
15-34 years old	114	30.2
35-54 years old	184	48.8
Over 54 years old	79	21.0
Mean = 43.0, median = 42.0, SD= 15.2, min=15, max		
=91		
Marital status		
Single. Separated, Divorced, Widow or widower	73	19.4
Married	304	80.6
Educational background		
Primary school or lower	258	68.4
High school or higher	119	31.6

Table 4.2 shows the numbers and percentages of the general data of the subjects' families sorted by religion, dominant occupation, monthly income, type of accommodation, type of family, the status of health of the family members.

Gener	al characteristic of the subjects	Numbers (n=377)	%
Religion			
Buddhism		262	70.3
Muslim		112	29.7
Occupation			
Service and	d/or commerce	102	27.1
Agriculture	e (Para rubber, oil palm)	275	72.9
Family's mont	thly income		
Less than 5	5,000 baht	189	50.1
5,001 baht	- 10,000 baht	117	31.0
More than	10,001 baht	71	18.8
Mean = $8,085$.94, median= 5.000, SD= 6.758.89.		
min=1,500, ma	x = 50,000		
Type of accom	ımodation		
Ownership	Owned	373	98.9
	Rented	4	1.1
Condition	Built with permanent materials	361	95.8
	Built with non-permanent materials	16	4.2
Household's a	ttribute		
Numbers of he	ousehold		
Single hou	sehold	358	95.0
Extended h	ousehold (more than 2 households)	19	5.0
Number of the	e family members		
1 - 3 men	nber(s)	99	26.3
4 – 6 me	mbers	241	63.9
More than	6 members	37	9.8
Mean = 4.4, mean = 4.4	edian= 4, SD=1.72, min=1,max =11		

Table 4.2 (continued)

General characteristic of the subjects	Numbers (n=377)	%
Type of health insurance of the household members		
Civil servant's welfare/ State enterprise, Social	68	18.0
security		
Universal Health care Scheme (Gold card 30 baht)	309	82.0
Health conditions		
Household with a patient/ a handicap	103	27.3
Household without any patient/ handicap	274	72.7

1.2 Data of home visit received

As can be seen from table 4.3, most of the target group could give the name of the family care unit (69.2%), and occasionally received a home visit service from the public health personnel within the past 6 months 31.6%, mostly received one visit. The other unit, which paid them a home visit, was the public health volunteers (63.7%).

Table 4.3 Show the numbers and percentages of home visit received by the subjects.

General characteristic of the subjects	Numbers (n=377)	%
Give the name of the family care unit		
Correctly	261	69.2
Incorrectly/ Unable to tell/ Unsure	116	30.8
A home visit conducted by the public health officer		
from the primary care unit within the past 6		
months		
Yes	119	31.6
No	222	58.9
Not known	36	9.5
Frequency of home visit	(n = 119)	
1-3 times	104	87.4
≥ 4 times	15	12.6
Mean = 1.8, median= 1, SD= 1.6 $\min = 1, \max = 8$		
Home visit conducted by other units within the past	(261)	(69.2)
6 months (can give > 1 answer if necessary)		
Public health volunteer	244	64.7
Infections disease by insect control unit	65	17.2
Agricultural officer	13	3.4
Social worker	5	1.3
Teacher	5	1.3
Never	(104)	(27.6)
Not know	(12)	(3.2)

1.3 Data on home visit needed in aspect of day and time

As illustrated in Table 4.4, the subjects prefer to receive a home visit by the health officers in the primary care unit (89.9%). In term of the frequency of visit, most of them prefer to have a home visit any day (69.9%), followed by some days (30.1%). Friday was highest at 31.4%, followed by weekends at 25.5%, Tuesday at 12.7% and Monday at 10.8% respectively. In aspect of time, most of all subjects prefer to receive a home visit at a certain time (66.1%) and afternoon period (1.00 – 4.00 pm) was highest at 58.9%.

Table 4.4 shows the numbers and percentages of the need of a home visit of the subjects sorted by date and time

The need on home visit	Numbers (n=377)	%
The need on a home visit		
Yes	339	89.9
No	38	10.1
The need for a home visit in the matter of date	(n=339)	
Any day	(237)	(69.9)
Some days	(102)	(30.1)
- Monday	11	10.8
- Tuesday	13	12.7
- Wednesday	3	2.9
- Thursday	5	4.9
- Friday	32	31.4
- Saturday	26	25.5
- Sunday	26	25.5
The need for a home visit in the matter of time.	(n=339)	
Anytime (8 AM – 6 PM)	(115)	(33.9)
Some period of time	(224)	(66.1)
In the morning (8.00 AM – 12.00 PM)	32	14.3
At noon (12.00 – 1.00 PM)	34	10.0
In the afternoon $(1.00 \text{ PM} - 4.00 \text{ PM})$	132	58.9
In the evening (4.30 PM – 6.00PM)	26	11.6

1.4 Ranking the first three target groups

The elderly group has the highest need on home visit, followed by mother and infant group, and patient and handicap group respectively as shown in Table 4.5.

Table 4.5 the need on home visit of the subjects group sorted by the ranking.

The subjects group	The First	rank	The secon	d rank	The third rank		
	Numbers	0/0	Numbers	%	Numbers	%	
	(366)		(311)		(273)		
Elderly	153	41.8	96	30.9	40	14.7	
Mother and infant	87	23.8	107	34.4	122	44.7	
Patient/handicap	83	22.7	70	22.5	61	22.3	
School age children /	43	11.8	38	12.2	50	18.3	
teenagers							

Criteria:

1st Rank

(1) Select the most among 1st rank

2nd Rank

(1) Select the most among 2nd rank

And (2) if it is not the group selected from 1st rank, consider the next most groups

3rd Rank

(1) Select the most among the third rank

And (2) if it is not the group selected from the first and second rank, consider the next most groups.

1.5 Sources of health information in the village

The target groups can receive the health information and knowledge through the public health volunteers most, then the community information center and their neighbors respectively. The most convenient way to communicate with the members in the family is to contact through a public health volunteer in the village (67.4%) as shown in the table 4.6

Table 4.6 the sources of the information about health in the village

Sources	The First	rank	The second	d rank	The third	rank
	Numbers	0/0	Numbers	%	Numbers	%
	(374)		(246)		(153)	
Sources						
- Public health volunteer	236	63.1	77	31.3	13	8.5 ·
- Community	81	21.7	61	24.8	11	7.2
information Center						
- Neighbors	34	9.1	92	37.4	65	42.5
- Public health officers	13	3.5	11	4.5	60	39.2
- Others (e.g. the	10	2.7	5	2.0	4	2.6
village's headman/ sub-						
district administration						
office/clubs)						
Communication channel	(377)					
- Public health volunteer	254	67.4				
- Telephone	116	30.8				
- Others (e.g. the	7	1.8				
village's headman/sub-						
district administration						
office clubs)						

Part 2: The level of subjects' need on home visit categorized by each aspect of the marketing mix

The finding shows that the level of need on home visit in all aspects, which comprised product/service, place, price and promotion, was at high level (44.8%), followed by moderate level (32.9%) respectively. The average score of all aspects was $(\overline{X}) = 3.73$ (SD = 0.70). The result can be categorized into each aspect as below.

Product/service:

Most of all subjects need a home visit at high level (42.4%). The average of total score in this aspect was $\overline{X} = 3.80$ (SD = 0.76). When looking at the health promotion, disease control and prevention item, the need was at high level (35.8%) and the average score was $\overline{X} = 3.66$ (SD = 0.89). In term of nursing and health rehabilitation, 39.3 % of all subjects need it at highest level. The average score was $\overline{X} = 3.88$ (SD = 1.10). For miscellaneous service item, 44.0% of all subjects need a home visit at high level and the average score was $\overline{X} = 3.84$ (SD = 0.78).

When considering the detail in each item of the health promotion, disease control and prevention, it shows that the subjects want to have the home visit conducted in the purpose of general visit including getting to know about the household's way of life, visiting elderly group, visiting school age children and teenagers and visiting mother and infant after giving birth at the highest level. In addition, most of all subjects wanted to have a home visit for the group of pregnant women and pre-school children at moderate level. For miscellaneous service item, service quality of healthcare personnel and service standard are needed at high level. The subjects also wanted to participate in service management at moderate level participate in product/service.

Place:

Most of all subjects (41.4%) need to have a family care unit and a home visit at highest level. The average score was. $\overline{X} = 3.91$ (SD=0.96)

Price:

In terms of price which identified the result into 5 scale: the highest means high willingness to pay for the home visit, it was found that most of all subjects (48.0%) did not want the home visit service to be charged or need it at the lowest level. The average score was $\overline{X} = 1.92$ (SD=1.09).

Promotion:

It includes advertising, public relation, informing news in advance, brochures, leaflet or pamphlet about health information, home visit records kept at home. Most of all subjects want to have the promotion about home visit at highest level (36.9%). The average score was \overline{X} =3.90 (SD=0.93) as shown in the tables 4.7 to 4.8

Table 4.7 shows the level of need on home visit sorted by product/service, place, price and promotion.

Factor	Level of need											SD
	Lowest	or not	Lov	у	Moder	Moderate		h	Highest			
	required											
	Numbers	%	Numbers	%	Numbers	%	Numbers	%	Numbers	%		
1.Product/Service												
1.1 Health promotion, disease	3	0.8	30	8.0	119	31.6	135	35.8	90	23.9	3.66	0.89
control and prevention			4							}		
1.2Nursing and health rehabilitation	9	2.4	35	9.3	95	25.2	90	23.9	148	39.3	3.88	1.10
1.3 Miscellaneous service	0	0	19	5.0	99	26.3	166	44.0	93	24.7	3.84	0.78
Total 1.Product/ Service	0	0	17	4.5	117	31.0	160	42.4	83	22.0	3.80	0.76
2. Place	1	0.3	26	6.9	74	19.6	121	32.1	155	41.1	3.91	0.96
3. Price	181	48.0	93	24.7	70	18.6	19	5.0	14	3.7	1.92	1.09
4.Promotion	4	1.1	23	6.1	80	21.2	131	34.7	139	36.9	3.90	0.93
Total all aspects	0	0	16	4.2	124	32.9	169	44.8	68	18.0	3.72	0.70

Table 4.8 shows the level of needs on home visit categorized by product/service, place, price, and promotion in each item

Need	Level of need											SD
	Lowest o	or not	Lov	Low		Moderate		1	Highe	est]	
	required											
	Numbers	%	Numbers	%	Numbers	%	Numbers	%	Numbers	%		
1. Product/Service										,		
1.1 Health promotion, disease												
control and prevention												
1.1.1 Mother and infant group												}
1) Pregnant women	59	15.6	43	11.4	112	29.7	77	20.4	86	22.8	3.23	1.34
2) Mother after giving birth (6-8	40	10.6	36	9.5	94	24.9	86	22.8	121	32.1	3.56	1.31
weeks) and infant												
3) Pre-school children (1-5	53	14.1	48	12.7	109	28.9	63	16.7	104	27.6	3.31	1.37
years old)												
1.1.2 Elderly group	9	2.4	15	4.0	77	20.4	90	23.9	186	49.3	4.14	1.03
1.1.3 Youth group and general												
people												
1) School age children/	44	11.7	34	9.0	89	23.6	79	21.0	131	34.7	3.58	1.35
teenagers												
2) General/ Overall	4	1.1	14	3.7	84	22.3	93	24.7	182	48.3	4.15	0.96
Total 1.1 Health promotion, disease	3	0.8	30	8.0	119	31.6	135	35.8	90	23.9	3.66	0.89
control and prevention												

Table 4.8 (Continued)

Need	Level of need										\overline{X}	SD
	Lowest or not required		Low		Moderate		High		Highest			
	Numbers	º/o	Numbers	º/o	Numbers	%	Numbers	%	Numbers	%	_	
1.Product/Service (continued)												
1.2 Nursing and health												
rehabilitation												
1) Patients and/or	9	2.4	35	9.3	95	25.2	90	23.9	148	39.3	3.88	1.10
handicaps/disable people												
1.3 Miscellaneous about service management			1.6	4.2	90	23.9	99	26.3	172	45.6	4.13	0.92
1) Service quality of the personnel	0	0	16									
2) Standard of service	0	0	11	2.9	93	24.7	102	27.1	171	45.4	4.15	0.89
3) Participation/ Decision to receive service	13	3.4	41	10.9	116	30.8	93	24.7	114	30.2	3.67	1.12
4) Convenience in communicating	9	2.4	20	5.3	93	24.7	118	31.3	137	36.3	3.94	1.02
Total 1.3 Miscellaneous Service	0	0	19	5.0	99	26.3	166	44.0	93	24.7	3.84	0.78
Total 1.Product/ service	0	0	17	4.5	117	31.0	160	42.4	83	22.0	3.80	0.76

Table 4.8 (Continued)

Need	Level of need											SD
	Lowest	r not	Lov	v	Moder	rate	High	h	High	est		ŀ
	required											
	Numbers	%	Numbers	%	Numbers	%	Numbers	%	Numbers	%		
2. Place												
1) In contact with a family health	4	1.1	26	6.9	69	18.3	89	23.6	189	50.1	4.15	1.02
care unit							1					
2) The service unit provides a home	17	4.5	36	9.5	117	31.0	88	23.3	119	31.6	3.68	1.15
visit service												
Total 2. Place	1	0.3	26	6.9	74	19.6	121	32.1	155	41.1	3.91	0.96
3.Price aspect												
1) Pricing of service	181	48.0	93	24.7	70	18.6	19	5.0	14	3.7	1.92	1.09
4.Service promotion												
1) Advertising/ Public relation	5	1.3	31	8.2	98	26.0	114	30.2	129	34.2	3.88	1.02
2) Informing news/ Informing in	3	0.8	27	7.2	77	20.4	115	30.5	155	41.1	4.04	0.99
advance												
3) Giving brochures/ documents	12	3.2	31	8.2	86	22.8	112	29.7	136	36.1	3.87	1.09
when visiting												
4) A home visit record kept at home	15	4.0	37	9.8	88	23.3	100	26.5	137	36.3	3.81	1.15
Total 4. Service promotion	4	1.1	23	6.1	80	21.2	131	34.7	139	36.9	3.90	0.93
Total all aspects	0	0	16	4.2	124	32.9	169	44.8	68	18.0	3.73	0.70

Part 3 Compare the level of consumer's need by health workers on home visit by health workers sorted by the defined factors.

When comparing the level of consumer's need on home visit by health workers in Nuea Khlong district, Krabi province in all aspects as following.

- Product/Service consists of health promotion, disease control and prevention, nursing and health rehabilitation and miscellaneous services.
- Place
- Price
- Promotion

Sorted by sex, age, marital status, educational background, religion, occupation, household's monthly income, household's attribute, type of health insurance, health conditions of the household members and villages, it is found that the consumer's need on home visit in all aspects, the factors that have different levels of need are marital status, educational background, religion, occupation, type of health insurance and villages.

In the aspect of product/Service with all the services, the factors that have different levels of need are marital status, educational background, religion, occupation and villages.

When considering the health promotion, disease control and prevention, the factors that have different levels of need are marital status, educational background, religious, occupation and villages.

In case of nursing and health rehabilitation and miscellaneous service, the factors that have different levels of need are marital status, educational background, religious, occupation, type of health insurance and villages.

For the place aspect, the primary care service is needed. The factors that have different levels of need are age, religion, occupation, type of accommodation, type of health insurance and villages.

When looking at the price, the factors that have different levels of need are age, educational background, health conditions of the household members and villages.

In the aspect of promotion, the factors that have different levels of need religion, occupation and villages (statistical significance at P-value < 0.05) as shown in the tables 4.9

Table 4.9 shows the P-value of the level of consumer's need on home visit

	_					-					
Factors	Sex	Age	Marital	Education	Religious	Occupation	Income	House	Type of	Health	Villages
			status						health	conditions	
									insurance	of the	
The marketing mix tool										members	
1.Product/service											
1.1 Health promotion,	0.789	0.174	0.001*	0.001*	0.000*	0.027*	0.151	0.293	0.423	0.824	0.000*
disease control and											
prevention											
1.2 Nursing and health	0.561	0.672	0.005*	0.007*	0.000*	0.005*	0.109	0.209	0.025*	0.082	0.000*
rehabilitation											
1.3 Miscellaneous	0.654	0.151	0.005*	0.000*	0.000*	0.001*	0.110	0.357	0.042*	0.240	0.000*
Total product/service	0.886	0.101	0.005*	0.000*	0.003*	0.001*	0.179	0.390	0.110	0.550	0.000*
2.Place	0.380	0.015*	0.538	0.708	0.000*	0.009*	0.166	0.046*	0.049*	0.320	0.000*
3.Price	0.848	0.000*	0.205	0.019*	0.415	0.807	0.271	0.271	0.200	0.040*	0.004*
4.Promotion	0.802	0.168	0.077	0.420	0.001*	0.013*	0.194	0.394	0.068	0.258	0.000*
Total 4' Ps	0.789	0.192	0.000*	0.003*	0.000*	0.001*	0.198	0.197	0.042*	0.504	0.000*
		L		L	L			L		ــــــــــــــــــــــــــــــــــــــ	

^{*} The means for groups in the defined factors are significant (p-value<0.05), the factors that have different levels of need. The numeric in the table not shows the value (lower or higher). Compare the level of need on home visit sorted by the factors detailed on appendix C.

Part 4 Conclusions, suggestions and opinions of the subjects.

A. In the group of subjects who do not needs and not necessary a home visit, the reason why it is not necessary for them can be summarized as below.

- The house is unoccupied because the family members are at work (e.g. selling things at the market)
- Their house located nearby the hospital/ a health center. It is very easy to get to
- There is a nearby public health volunteer, which they can consult with.
- They are capable of taking care of themselves because they have the knowledge about public health.
- B. Suggestions and opinions of the samples about product/service.
 - 1. A group of mother and infant
 - They are capable of taking care of themselves and having the antenatal care with the doctor as appointment.
 - A home visit need on prenatal period.
 - Parents are able to take their children to see a doctor.
 - There is a nursery center close by the house.
 - 2. A group of elderly.
 - Some of the elderly people have no one to take care of them because their children go out to work during the day, and too considerate to bother them.
 - There is no one to take them to see a doctor.
 - 3. A group of teenagers

- Parents have a difficulty in keeping their eyes on them.
- Head of village and sub-district are requested to look after the teenagers especially on drugs.
- The teenagers should be supervised when in school.

4. Other services

- A public health personnel does not need to be highly educated, but they should have the ability to transfer their knowledge/experience to people with the clear understanding.
- A person with a speaking skill, outgoing, and has a good understanding about people' problems is needed.
- Equipment and tools should be always available before making a visit.