CHAPTER X

RESULT

General Characteristic of the Sample.

1. Socioeconomic characteristic

The survey covered 126 households (Table 15) with the total population of 768 persons, including 113 married women of reproductive age. The majority of the households (54.8 percent) had 5 - 9 persons and the average number of persons in the households was 6.10. The average age of the head of the households was 45.66 years old. The majority (85.7 percent) had no education and the other 14.3 percent had completed primary school. Only 19.1 percent of them were literate in Thai but nearly half of them (45.2 percent) were literate in Karen. Up to 70.6 percent of the head of the households were able to speak Thai. Most of the villagers (80.9 percent) were animists. The majority were agriculturists (94.4 percent) and rice was the major crop which is grown for their own consumption. The average annual rice production was sufficient for 10.25 months in last year. Red bean, coffee and taro were also grown for their living. The support of agriculture was from the Thai-Norway Project which had been set up in Mae Kha Poo Nuer 2 years ago. More than half of the household (66.5 percent) had more than one occupation and 57.9 percent of the households were hired as labourer as the sources of extra income. Some of the villagers were hired by the Hmong to work in their farm

and some were hired to work in the tin mine at Boa Kaew Subdistrict, belonging to the Thai people. They also raised animals such as chicken, pig, cattle and buffalos. The average annual household income is 13,425.98 baht. About two-third of the households (69.0 percent) had the annual income lower than 15,000 baht. About half of the villagers (49.2 percent) said that they had savings and the other half said they have not any debt or savings (28.6 percent) and some were in debt (22.2 percent). The detailed socio-demographic characteristics of the villagers are shown in Table 16. There was no electricity and no means of recreation in the village. In Mae Kha Poo Nuer Village, there was a school namely Mae Kha Poo School which offered six years completed primary school level. The other hamlets, except Huai Tong Sad has the hill tribal educational center for adult learning. In 1980, the hill tribal educational center built the mountain pipe watering system for the village. The villagers used this water for household consumption.

Table 15 Number of household and percentage of household interviewed.

Hamlets	Number of household		Percentage of household interviewed
	Total	Interviewed	
Mae Kha Poo Nuer	30	29	96.7
Mae Kha Poo Piang	37	36	97.3
Mae Kha Poo Luang	22	22	100.0
Mae Kha Poo Nai	27	26	96.3
Huai Tong Sad	13	13	100.0
Total	129	126	97.7

Table 16 Demographic and socioeconomic characteristic of the sample population.

Demographic and socioeconomic characteristic	Percent
Age of the head of the household	
20 - 24	4.8 (6)
25 - 29	14.3 (18)
30 - 34	11.9 (15)
35 - 39	9.5 (12)
40 - 44	11.1 (14)
45 - 49	2.4 (3)
50 - 54	13.5 (17)
55 - 59	7.9 (10)
60 and over	24.6 (31)
Total	100.0 (126)
Average $\bar{X} \pm SD.$	45.66 ± 15.88
Sex of the head of the household	
Male	89.7 (113)
Female	10.3 (13)
Total	100.0 (126)
Marital Status of the head of the household	
Cohabiting	84.9 (107)
Widow	15.1 (19)
Total	100.0 (126)
Religion of the household	
Animist	80.9 (102)
Buddhist	16.7 (21)
Christian	2.4 (3)
Total	100.0 (126)
Education of the head of the household	
Never attended school	85.7 (108)
Primary school	14.3 (18)
Total	100.0 (126)
Ability to speak Thai	
No	29.4 (37)
Yes	70.6 (89)
Total	100.0 (126)
Literacy in Thai	
No	80.9 (102)
Yes	19.1 (24)
Total	100.0 (126)
Literacy in Karen	
No	54.8 (69)
Yes	45.2 (57)
Total	100.0 (126)

Table 16 Demographic and socioeconomic characteristic of the sample population. (continued)

Demographic and socioeconomic characteristic		Percent
Occupation of household		
Agriculturist		27.8 (35)
Agriculturist (+ Labour)		57.9 (73)
Labour		5.6 (7)
Agriculturist (+ Other)		8.7 (11)
Total		100.0 (126)
Number of months that rice production is sufficient for annual household consumption		
1 - 3		5.6 (7)
4 - 6		6.3 (8)
7 - 9		11.9 (15)
10 - 12		76.2 (96)
Total		100.0 (126)
Average	$\bar{X} \pm SD.$	10.25 ± 2.91
Income of household (Annual income)		
less than 10,000		35.7 (45)
10,000 - 14,999		33.3 (42)
15,000 - 19,999		15.1 (19)
20,000 - 24,999		7.1 (9)
25,000 and over		8.7 (11)
Total		100.0 (126)
Average	$\bar{X} \pm SD.$	13,425.98 ± 7472.67
Total number of persons in the household		
2 - 4		34.1 (43)
5 - 9		54.8 (69)
10 and over		11.1 (14)
Average	$\bar{X} + SD.$	6.10 ± 2.65
Number of opium addicts in the household		
None		86.5 (109)
1 addict		11.9 (15)
2 addicts		0.8 (1)
3 addicts		0.8 (1)
Total		100.0 (126)

2. Mass media exposure

Mass media exposure is one way to develop the modernization of the people. Among the hill tribes in remote area, radio is the most common mass media to reach these people which they can get the information including health education. The radio

broadcast in both Thai and Karen. The result of this study shows that about half of the villagers (46.8 percent) had radio in the household (Table 17). This means that the other 53.2 percent have lower chance to receive mass communication through the radio. For the household which has radio, most of the people listen to the radio everyday both in Thai and Karen.

Table 17 Mass media exposure by radio.

Mass media exposure	Percent
Radio in the household	
No	53.2 (67)
Yes	46.8 (59)
Total	100.0 (126)

3. Health service available for the village.

In 1984, the Mae Kha Poo community health station was settled at Mae Kha Poo Nuer hamlets to serve those five hamlet mentioned above. The first community health worker was the female Chinese Haw. The curative service was acceptable by the villagers but only the office hour was available for the villager. After 2 years, she was replaced by a male Hmong who came for one year. He scarcely stayed at the station. Mostly he went to the Hmong village, Huai Nam Jang. Therefore, the villagers had never received his services at all and they had to depend on themselves. After 1 year, the male Karen came. He was the local villager and his home was at Mae Kha Poo Nuer. Therefore, the villager could receive the health services more frequently than the former two. Most of the villager accepted and were satisfied with his curative services. However, the use of spirit rite and herbal medicine were still practiced for some illness (eg. spirit rite for fever, herbal

medicine for diarrhoea).

The majority of the villagers used the traditional birth attendants and their relatives for child birth. The umbilical cord was still cut with sharpen bamboo, so that they were at risk for tetanus. However, no cases of tetanus had occurred in the village yet.

The villagers did not realize that immunization can prevent some diseases even though they did not object to child immunization.

The birth control method available to the villagers were pill, injection, male and female sterilization and norplant. The community health worker promoted the contraception by giving pill and injection. The male and female sterilization were done by the medical mobile team of Samoeng hospital. Two years age, norplant was introduced to the village by the medical mobile team of Maternal and Child Health Center from Chiangmai. Many of the villagers turned to use this method since it was a long acting contraceptive method.

Curative Service Utilization and Its Determinants.

1. Treatment ever utilized by the household

Most of the household reported using spirit rite (92.8 percent), herbs (84.9 percent) and community health station (98.4 percent) as shown in Table 18. The other treatment alternatives utilized were opium (9.5 percent), grocery shop (58.7 percent), village health volunteer or co-operative drug store (64.3 percent) and subdistrict health station (59.5 percent).

Table 18 Treatment ever used.

Treatment	Percent
Spirit rite	
No	7.2 (9)
Yes	92.8 (117)
Total	100.0 (126)
Opium	
No	90.5 (114)
Yes	9.5 (12)
Total	100.0 (126)
Herbs	
No	15.1 (19)
Yes	84.9 (107)
Total	100.0 (126)
Grocery shops	
No	41.3 (52)
Yes	58.7 (74)
Total	100.0 (126)
Village health volunteer/co-operative drug store	
No	35.7 (45)
Yes	64.3 (81)
Total	100.0 (126)
Community Health Station	
No	1.6 (2)
Yes	98.4 (124)
Total	100.0 (126)
Subdistrict Health Station	
No	40.5 (51)
Yes	59.5 (75)
Total	100.0 (126)

For the most satisfactory treatment reported (Table 19), the majority preferred community health worker (68.2 percent). The other preferred spirit rite (8.2 percent), village health volunteer (7.9 percent), subdistrict health station (4.0 percent), opium (0.8 percent) and herb (0.8 percent). The reasons for preferring community health worker than others were rapid cure (31.8 percent), low cost (21.5 percent) and easy accessibility (29.0 percent).

Table 19 The most satisfied treatment that household has ever use and the reason for prefering that treatment than others.

The most satisfied treatment	Percent	Reason *	Percent
Spirit rite	18.2 (23)	Rapid cure	5.3 (2)
		Low cost	39.5 (15)
		No travelling	10.5 (4)
		Not time consuming	26.3 (10)
		Other	18.4 (7)
		Total	100.0 (38)
Opium	0.8 (1)	Rapid cure	(1)
Herb	0.8 (1)	Rapid cure	(1)
Village Health Volunteer	7.9 (10)	Rapid cure	7.4 (2)
		Low cost	18.5 (5)
		Easy accessibility	51.8 (14)
		Not time consuming	11.1 (3)
		Mostly available	11.1 (3)
		Total	99.9 (27)
Community Health Station	68.2 (86)	Rapid cure	32.8 (61)
		Low cost	21.5 (40)
		Easy accessibility	29.0 (54)
		Not time consuming	4.3 (8)
		Mostly available	3.8 (7)
		Like the provider	8.6 (16)
		Total	100.0 (186)
Subdistrict Health Station	4.0 (5)	Rapid cure	(4)
		Low cost	(2)
		Other	(3)
Total	99.9 (126)		

* more than one answer is available.

For the most unsatisfactory treatment ever used (Table 20), the majority were unsatisfied with spirit rite (28.6 percent), herbs (23.8 percent) and subdistrict health station (27.8 percent). Only 2.4 percent were not satisfied with community health worker. The most common reason given for dissatisfaction with spirit rite and herbs were that these methods took long time to be cured (42.2 percent and 59.1 percent respectively). Difficulty in travelling

and the distance from their houses to the subdistrict health station were the reasons for dissatisfaction with subdistrict health station.

Table 20 The most unsatisfied treatment that household has ever use and the unsatisfied reason.

The most unsatisfied treatment	Percent	Reason *	Percent
Spirit rite	28.6 (36)	Long curing time	42.2 (19)
		High cost	15.6 (7)
		Waste of time	17.8 (8)
		Other	24.4 (11)
		Total	100.0 (45)
Opium	2.4 (3)	High cost	(3)
		Addict potential	(2)
		Other	(2)
Herb	23.8 (30)	Long curing time	59.1 (26)
		Difficult to find out	9.1 (4)
		Waste of time	15.9 (7)
		Only some herbs is known	15.9 (7)
		Total	100.0 (44)
Grocery shop	13.5 (17)	Long curing time	(2)
		High cost	(5)
		Time is not available	(4)
		Afraid of drug hazards	(6)
		Other	(3)
Village Health Volunteer	1.6 (2)	Time is not available	(2)
Community Health Station	2.4(3)	Difficult to reach	(2)
		Time is not available	(1)
		Far from home	(2)
Subdistrict Health Station	27.8(35)	High cost	5.4 (3)
		Difficult to reach	44.6 (25)
		Far from home	32.1 (18)
		Waste of time	17.9 (10)
		Total	100.0 (56)
Total	100.1 (126)		

* more than one answer is available.

2. Morbidity status

Perception of the morbidity status during the recall period of two weeks were assessed. The study focussed on the acute illnesses divided into 3 major groups according to the likelihood of opium use (respiratory and gastrointestinal symptoms were known to be associated with opium use) as follows :

Respiratory system symptom

Gastrointestinal system symptom

Other illnesses.

The result showed that the most common illness were the symptoms of respiratory system (38.4 percent), fever (24.1 percent), headache (18.7 percent) and gastrointestinal system (13.4 percent) as shown in Table 21.

Table 21 The illness occurring in the recall period of 2 week.

Illness/symptom	Percent
Respiratory system symptoms	
Common cold	37.5 (42)
Fever + Cough + Difficult breathing	0.9 (1)
Total	38.4 (43)
Gastrointestinal system	
Abdominal pain	9.8 (11)
Diarrhoea	3.6 (4)
Total	13.4 (15)
Other illnesses	
Headache	18.7 (21)
Fever	24.1 (27)
Fatigue	1.8 (2)
Back pain	0.9 (1)
Malaria	1.8 (2)
Abscess	0.9 (1)
Total	48.2 (63)
Total	100.0 (112)

3. Curative service utilization and its determinants.

3.1 Curative care seeking behavior

The curative care utilized during the two week recall period were shown in Table 22. Most of them used multiple treatment either the traditional treatment or the modern treatment. There were 30.3 percent of cases who did not utilized the Community health worker.

Table 22 Curative service utilization.

Curative care seeking behavior	Percent
Non use of Community health worker	
Self limiting	8.9 (10)
Spirit rite	3.6 (4)
Spirit rite + VHV	0.9 (1)
Herb	1.8 (2)
Herb + Grocery shop	1.8 (2)
Grocery shop	5.3 (6)
VHV	8.0 (9)
Total	30.3 (34)
Use of Community health worker	
CHW	65.2 (73)
CHW + Spirit rite	2.7 (3)
CHW + Herb	1.8 (2)
Total	69.7 (78)
Total	100.0 (112)

* VHV = Village health volunteer
CHW = Community health worker

Among the upper respiratory tract illness (43 cases), 79.1 percent utilized the curative service from the community health workers. For the diarrhoea (4 cases), 3 cases went to the community health worker and 1 case use the herbal medicine.

3.2 Factors influencing curative service utilization.

Curative service utilization here means the utilization of community health worker during the recall period of two week. Factors consideration in relation to the utilization of curative service were education and the ability of the head of the household to speak Thai, occupation, annual household income, mass media exposure by radio, travelling difficulty, age ,sex and household status of illness person, type or symptoms of illness and perceived severity of illness. From univariate analysis, only the symptom of headache or fever and the perceived severity of illness were significant associated with the utilization of curative services (p-value = 0.0138 and 0.0442 respectively, Table 23). From the multiple regression analysis, it was also found that the symptom of headache or fever and the perceived severity of illness were associated to the use of curative services (p-value = 0.0028 and 0.0096 respectively, Table 24). These two variables had a predicting power of 12.0 percent. The symptoms of headache or fever could be explained 6.3 percent of the variance. When adding the perceived severity of illness, 12.0 percent of the variance could be explained. The symptoms of headache or fever had more effect on the utilization than the perceived severity of illness.

Table 23 Univariate analysis of the factors affecting curative service utilization by chi-square and t-test statistics.

Variables	Statistic test	I*	II**	p-value
Education (the head of the household)	Chi-square			1.0000
Never attended school (%)		88.2	88.5	
Primary school (%)		11.8	11.5	
Ability to speak Thai (the head of household)	Chi-square			0.3120
No (%)		44.1	32.1	
Yes (%)		55.9	67.9	
Occupation	Chi-square			0.8943
Not agriculturist with labour (%)		47.1	43.6	
Agriculturist with labour (%)		52.9	56.4	
Household income	t-test			0.120
$\bar{X}$		13,629.56	16,402.50	
SEM.		1,403.54	1,064.66	
Travelling difficulty	Chi-square			0.6756
Not convenient (%)		38.2	32.1	
Convenient (%)		61.8	67.9	
Mass media exposure by radio	Chi-square			0.5408
No (%)		64.7	56.4	
Yes (%)		35.3	43.6	
Type or symptoms of illness				
Respiratory system	Chi-square			0.1332
No (%)		73.5	56.4	
Yes (%)		26.5	43.6	
Gastrointestinal system	Chi-square			0.5250
No (%)		91.2	84.6	
Yes (%)		8.8	15.4	
Headache or fever	Chi-square			**0.0138**
No (%)		38.2	65.4	
Yes (%)		61.8	34.6	
Opium addicts in the household	Chi-square			0.3991
No (%)		88.2	79.5	
Yes (%)		11.8	20.5	
Age of illness person	t-test			0.504
$\bar{X}$		26.22	22.90	
SEM.		4.15	2.66	

Table 23 Univariate analysis of the factors affecting curative service utilization by chi-square and t-test statistics. (continued)

Variables	Statistic test	I*	II**	p-value
Sex of the illness person	Chi-square			0.3372
Female (%)		52.9	41.0	
Male (%)		47.1	59.0	
Household status of the illness person (as a child of the head of household)	Chi-square			0.4799
No (%)		52.9	43.6	
Yes (%)		47.1	56.4	
Perceived severity of illness	Chi-square			**0.0442**
No (%)		67.6	44.9	
Yes (%)		32.4	55.1	

* Non utilization of curative service
** Utilization of curative service

Table 24 Multivariate analysis of factors affecting curative service utilization by multiple regression.

Variable	p-value	R	R^2	R^2 change	b	beta
RTYPE3	**0.0028**	0.2523	0.0636	0.0636	-0.2572	-0.2768
SEVERE	**0.0096**	0.3460	0.1197	0.0561	0.2191	0.2381
Constant					**0.7010**	
p-value					**0.0000**	

* TYPE3 = headache or fever
SEVERE = perceived severity of illness

4. The follow-up of acute respiratory tract infection and diarrhoea symptoms.

The result from the follow up period of 7 months showed that there were only 77 cases of upper respiratory tract system (Table 25) and 51 cases of diarrhoea symptom (Table 26). The incidence rate of upper respiratory infection and the diarrhoea were 10.0 and 6.6 percent respectively. No cases used opium for treating

the diarrhoea symptoms, even in the households which had the opium addicts or the opium addicts themselves. However, there was one opium addict who used multiple treatment included opium for treating the symptoms of the upper respiratory system.

Table 25 The curative service utilization in the upper respiratory tract illnesses. (The follow-up cases)

Treatment	Percent	
Non use of Community health worker		
Spirit rite + Herbs + VHV		(1)
Herbs		(2)
Herbs + VHV		(2)
Total	6.5	(5)
Use of Community health worker		
CHW		(34)
CHW + Spirit rite + Herbs		(6)
CHW + Spirit rite		(10)
CHW + Spirit rite + VHV		(1)
CHW + Herbs + Grocery shop		(2)
CHW + Grocery shop		(2)
CHW + Herbs		(12)
CHW + Herbs + VHV		(2)
CHW + VHV		(2)
CHW + Opium + Herbs + Grocery shop + Spirit rite		(1)
Total	93.5	(72)
Total	100.0	(77)

Table 26 The curative service utilization in the diarrhoea. (The follow-up cases)

Treatment	Percent
Non use of Community health worker	
Herbs	(1)
Grocery shop	(1)
Herbs + VHV	(3)
Total	9.8 (5)
Use of Community health worker	
CHW	(22)
CHW + Herbs + VHV	(3)
CHW + Herbs + Grocery shop	(1)
CHW + Herbs + Grocery shop + Spirit rite	(1)
CHW + Herbs + Spirit rite	(2)
CHW + Herbs	(15)
CHW + Grocery shop	(2)
Total	90.2 (46)
Total	100.0 (51)

Maternal and Child Health Care Utilization and Its Determinant.

1. Socioeconomic characteristic.

The average age of the women in reproductive age in the sample village was 28.45 years old. Most of these women (88.5 percent) never attended school. The others (11.5 percent) had 6 years of education or completed primary school level. Only 9.7 percent of these women did not have any children and 82.3 percent of them were mothers of the children aged under 5 years old (Table 27). More than half of them (61.1 percent) had between 1 and 3 children (mean = 2.91) and the ratio of male to female children is 0.9:1.

Table 27 Socio-demographic of women in reproductive age.

Socio-demographic characteristic		Percent
Age		
15 - 19		7.1 (8)
20 - 24		31.0 (35)
25 - 29		22.1 (25)
30 - 34		15.9 (18)
35 - 39		12.4 (14)
40 - 44		11.5 (13)
Total		100.0 (113)
Average age	$\bar{X}$ + SD.	28.45 $\pm$ 7.61
Education		
Never attended school		88.5 (100)
Primary school		11.5 (13)
Total		100.0 (113)
Age of last child		
No children		9.7 (11)
1 - 11 months		23.9 (27)
1 - 2 years old		29.2 (33)
3 - 5 years old		29.2 (33)
> 5 years old		8.0 (9)
Total		100.0 (113)
Number of total children		
None		9.7 (11)
1		20.4 (23)
2		21.2 (24)
3		19.5 (22)
4		8.8 (10)
5		6.2 (7)
6 and over		14.1 (16)
Total		99.9 (113)
Average	$\bar{X}$ + SD.	2.91 $\pm$ 2.25

2. History of pregnancy and wastage.

The history of pregnancies consisted of number of times they were pregnant, pregnancy wastage including spontaneous abortion and stillbirth. The study showed that the average number of pregnancies was 3.05 (Table 28). Up to 48.6 percent of the mothers had more than 2 pregnancies. Only 8.9 percent of them experienced abortion or stillbirth.

Table 28 Percentage of women in reproductive age by number of pregnancies.

Number of pregnancies		percent
0		8.0 (9)
1		21.2 (24)
2		22.2 (25)
3		16.8 (19)
4 and over		31.8 (36)
Total		100.0 (113)
Average	$\bar{X}$ + SD.	3.05 ± 2.35

3. Age at first marriage and age at first child birth.

The age at first marriage can effect fertility. The younger the age at marriage, the longer in the reproductive period. More than half of these women (56.6 percent) were married at the age lower than 20 years (Table 29) and 40.2 percent of them had the first child birth at the age lower than 20 years (Table 30). This resulted in a long average fertility period among them.

Table 29 Age at first marriage.

Age		Percent
less than 15		2.6 (3)
15 - 19		54.0 (61)
20 - 24		38.1 (43)
25 - 29		3.5 (4)
30 - 34		1.8 (2)
Total		100.0 (113)
Average	$\bar{X}$ + SD.	19.24 ± 3.12

Table 30 Age at first child birth.

Age		Percent
15 - 19		40.2 (41)
20 - 24		50.0 (51)
25 - 29		7.8 (8)
30 - 34		2.0 (2)
Total		100.0 (102)
Average	$\bar{X}$ + SD.	20.62 ± 3.33

4. Interval between marriage and first pregnancy.

Many of the newly wed couples, especially those from low economic status might not be ready to have children. They should have postponed the first pregnancy for 1 - 2 years so they could have more time to build up their economic status and be ready to accept the new member of the family. The result from this study showed that 75.5 percent of the mothers had their first child within 1 year after marriage (Table 31). Being pregnant shortly after marriage could result in high fertility and suggested that these women did not practice an appropriate family planning measure after marriage.

Table 31 Percentage of mothers by the interval between marriage and first child birth.

Interval (year)	Percent
0	8.8 (9)
1	66.7 (68)
2	12.7 (13)
3	6.9 (7)
more than 3	3.9 (5)
Total	100.0 (102)
Average $\bar{X}$ + SD.	1.37 $\pm$ 1.10

Although 69.9 percent of the married women in reproductive age said that child spacing was necessary, the average years of child spacing for them was only 2.41 years (Table 32). Compared to the accepted child spacing of 3 years, it suggested that efforts should be targeted toward improvement of child spacing.

Table 32 The attitude concerning child spacing.

The opinion about child spacing	Percent
Child spacing is necessary	
No	11.5 (13)
Yes	69.9 (79)
Not sure / don't know	18.6 (21)
Total	100.0 (113)
The appropriate years of child spacing	
< 2	3.8 (3)
2	67.1 (53)
3	20.2 (16)
> 3	8.9 (7)
Total	100.0 (79)
Average $\bar{X}$ + SD.	2.41 $\pm$ 0.76

5. Antenatal care service utilization and its determinant.

5.1 Antenatal care seeking behavior.

The maternal health during pregnancy is very important to the health of foetus and a safe of delivery. All pregnant women should go to the qualified health personnel for antenatal care as soon as pregnancy is known or within the first trimester of pregnancy. The investigation of antenatal care behavior of the last pregnancy showed that only 6.3 percent of pregnant women utilized qualified antenatal care services and most of these utilized the community health worker. There were 93.7 percent who did not use the services (Table 33).

There were number of reasons for not utilizing antenatal care service. The most important reasons was that they did not see the necessity of antenatal care (43.4 percent) or thought that the delivery would be easy (30.3 percent). The other reasons were the lack of time, the inconvenience in using the services, lack of money and being shy of doctors.

Table 33 Antenatal care seeking behavior.

Antenatal care behavior	Percent	
Use of antenatal care service		
Did not use the service	93.7	(89)
Use the service (from CHW)	6.3	(6)
Total	100.0	(95)
Reason for not using antenatal care service		
Not necessary, don't know	43.4	(43)
Thought that delivery would be easy	30.3	(30)
Lack of time, inconvenience	11.1	(11)
Lack of money	4.0	(4)
Other	11.1	(11)
Total	99.0	(99)

5.2 Factors influencing antenatal care service utilization.

The dependent variable for antenatal care experience during the last pregnancy can be divided into two categories : those who used and those who did not use the government health care facilities. Possible determinants of utilization considered include age of married women, education and the ability of married women to speak Thai, education and ability of the head of the households to speak Thai, occupation, annual household income, number of pregnancies, occurrence of abortions or stillbirths, perceived travelling difficulty and mass media exposure by radio.

From the univariate analysis, it was found that only number of pregnancies has a statistically significant association with the use of antenatal care at p =0.001 (Table 34). However, when the other variables were taken into account in multivariate analysis, no variable was associated with the utilization of antenatal services.

Table 34 Univariate analysis of the factors affecting antenatal care service utilization by chi-square and t-test statistics.

Variables	Statistic test	I*	II**	p-value
Age of married women	t-test			0.114
$\bar{X}$		28.74	26.83	
SEM.		0.78	0.83	
Education of the women	Chi-square			1.0000
Never attended school (%)		87.6	83.3	
Primary school (%)		12.4	16.7	
Ability of the women to speak Thai	Chi-square			0.3436
No (%)		61.8	33.3	
Yes (%)		38.2	66.7	
Number of pregnancies	t-test			**0.001**
$\bar{X}$		3.46	1.83	
SEM.		0.25	0.31	
Household income	t-test			0.647
$\bar{X}$		13,242.12	15,646.67	
SEM.		733.91	4,897.12	
Occurrence of abortions or stillbirths	Chi-square			0.922
No (%)		89.9	100.0	***
Yes (%)		10.1	-	
Education (head of household)	Chi-square			0.1704
Never attended school (%)		82.0	50.0	
Primary school (%)		18.0	50.0	
Ability to speak Thai (head of household)	Chi-square			0.3482
No (%)		100.0	-	***
Yes (%)		74.2	100.0	
Occupation	Chi-square			1.0000
Not agriculturist with labour (%)		31.5	33.3	
Agriculturist with labour (%)		68.5	66.7	
Travelling difficulty	Chi-square			1.0000
Not convenient (%)		28.1	33.3	
Convenient (%)		71.9	66.7	
Mass media exposure by radio	Chi-square			0.3029
No (%)		52.8	83.3	
Yes (%)		47.2	16.7	

* Non utilization of antenatal care service
** Utilization of antenatal care service *** Non analysable

6. Delivery service utilization and its determinants.

6.1 Childbirth care seeking behavior

The process of birth can be natural if there is nothing wrong with the pregnancy. But if the pregnancy is not normal such as abnormal foetus position, premature birth, problem with placenta and weakness of mothers, childbirth should be helped by qualified health personnel. This study investigated childbirth behavior of the last pregnancies by taking into account the delivery persons, place of delivery and reasons for not having delivery done by qualified health personnel.

The result of the study showed that the majority of mothers (78.9 percent) had their last delivery with relatives and traditional birth attendants who had never been trained to perform the right practice for child delivery. There were only 21.1 percent of mothers who used traditional midwives (17.9 percent), doctors at hospital (2.1 percent) and community health worker (1.1 percent). For the place of delivery, 97.9 percent were delivered at home and 2.1 percent went to the hospitals (Table 35). The two mothers who gave birth to their children at the hospital were referred by the community health worker because of abnormal delivery beyond the ability of the community health worker.

The reasons given by most of those who did not have their delivery done by qualified health personnel (trained health personnel) were expected easy delivery (61.4 percent) and lack of perception about the necessity to deliver babies with qualified health personnel (20.5 percent). Lack of time, inconvenience and lack of money were also the reasons mentioned.

Table 35 Childbirth care seeking behavior.

Childbirth	Percent
Delivery personnel	
Self delivery **	78.9 (75)
Traditional midwives	17.9 (17)
Doctors	2.1 (2)
Community health worker	1.1 (1)
Total	100.0 (95)
Place of delivery	
At home	97.9 (93)
Hospital	2.1 (2)
Total	100.0 (95)
Reason for not using health personnel	
Not see the necessity	20.5 (17)
Expected easy delivery	61.4 (51)
No time, inconvenience	7.2 (6)
No money	4.8 (4)
Other	6.0 (5)
Total	99.9 (83)

* more than one answer is available.
** By their relatives or traditional birth attendant.

6.2 Factors influencing delivery service utilization.

Delivery service utilization in this analysis was classified according to the utilization or non-utilization of qualified health personnel (trained health personnel). Factors taken into consideration for the analysis in this study includes age of married women, education and ability of the women to speak Thai, education and ability of the head of the household to speak Thai, occupation, annual household income, number of pregnancies, occurrence of abortion or stillbirth, travelling difficulty, and mass media exposure by radio.

No variable was significantly associated with the dependent variable in the univariate analysis (Table 36). When using multivariate analysis, income and mass media exposure by radio were

Table 36 Univariate analysis of the factors affecting delivery service utilization by chi-square and t-test statistics.

Variables	Statistic test	I*	II**	p-value
Age of married women	t-test			0.718
$\bar{X}$		28.79	28.00	
SEM.		0.77	2.01	
Number of pregnancies	t-test			0.861
$\bar{X}$		3.33	3.45	
SEM.		0.25	0.61	
Household income	t-test			0.139
$\bar{X}$		12,589.39	16,411.25	
SEM.		679.01	2,395.72	
Education of the women	Chi-square			0.9841
Never attended school (%)		86.7	90.0	
Primary school (%)		13.3	10.0	
Ability of the women to speak Thai	Chi-square			1.0000
No (%)		60.0	60.0	
Yes (%)		40.0	40.0	
Occurrence of abortions or stillbirths	Chi-square			1.0000
No (%)		90.7	90.0	
Yes (%)		9.3	10.0	
Education (head of household)	Chi-square			1.0000
No (%)		80.0	80.0	
Yes (%)		20.0	20.0	
Ability to speak Thai (head of household)	Chi-square			0.8407
No (%)		25.3	20.0	
Yes (%)		74.7	80.0	
Occupation	Chi-square			1.0000
Not agriculturist with labour (%)		32.0	30.0	
Agriculturist with labour (%)		68.0	70.0	
Travelling difficulty	Chi-square			0.9181
Not convenient (%)		29.3	25.0	
Convenient (%)		70.7	75.0	
Mass media exposure by radio	Chi-square			0.1968
No (%)		50.7	70.0	
Yes (%)		49.3	30.0	

* Non utilization of trained health personnel for delivery
** Utilization of trained health personnel for delivery

significantly associated with the utilization of health personnel for delivery. These two factors had an effect or have could explained 10.8 percent of variation of the utilization of health personnel for delivery. Income had more influence on the utilization than the mass media exposure by radio. Income could explained only 4.6 percent of the variance, but when it was considered with mass media exposure by radio, the explanation of variance increased to 10.8 percent (Table 37). However, the equation could not be used for prediction the relationship between the variables because of the p-value of the derived equation were not significant.

Table 37 Multivariate analysis of factors affecting delivery service utilization by multiple regression.

Variable	p-value	R	R^2	R^2 change	b	beta
INCO	**0.0044**	0.2154	0.0464	0.0464	1.73E-05	0.3063
RAD	**0.0136**	0.3283	0.1077	0.0613	-0.2161	-0.2638
Constant					0.0771	
p-value					0.3682	

* INCO = annual household income
RAD = Mass media exposure by radio

7. Postnatal care service utilization and its determinant.

7.1 Postnatal care seeking behavior.

Postnatal check up is necessary for all mothers because they can receive physical check up and also be checked for any complication that might occur. In addition, it will be a good opportunity for mothers to bring in their newborns for immunization.

The result indicated that 85.3 percent of the mothers did

not go for postnatal service (Table 38). There were only 14.7 percent who went for the service after the last delivery. This rate was more than the utilization of antenatal care service.

The reasons given by mothers who did not go for postnatal care service were that they were healthy (48.8 percent) and thought that the postnatal check up was not necessary (34.5 percent). Other reasons were lack of time, no money and so on.

Table 38 Postnatal care seeking behavior.

Postnatal care	Percent
Postnatal checkup	
Do not go	85.3 (81)
Go	14.7 (14)
Total	100.1 (95)
Reason for not going	
Not necessary	34.5 (29)
Healthy	48.8 (41)
No time	7.1 (6)
No money	1.2 (1)
Other	8.3 (7)
Total	99.9 (84)

* more than one answer is available

7.2 Factors influencing postnatal care service utilization.

Factors analysed in relation to the use of postnatal care services were age of married women, education and ability of the women to speak Thai, education and the ability of the head of the household to speak Thai, occupation, annual household income, number of pregnancies, training status of delivery personnel, travelling difficulty and mass media exposure by radio. The result of this study showed that only the training status of delivery personnel had a statistically significant influence on the

Table 39 Univariate analysis of factors affecting postnatal care service utilization by chi-square and t-test statistics.

Variables	Statistic test	I*	II**	p-value
Age of married women	t-test			0.517
$\bar{X}$		28.81	27.57	
SEM.		0.82	1.68	
Number of pregnancies	t-test			0.798
$\bar{X}$		3.38	3.21	
SEM.		0.26	0.60	
Household income	t-test			0.996
$\bar{X}$		13,395.73	13,383.93	
SEM.		796.01	2,179.49	
Education of the women	Chi-square			0.5239
Never attended school (%)		88.9	78.6	
Primary school (%)		11.1	21.4	
Ability of the women to speak Thai	Chi-square			0.5949
No (%)		61.7	50.0	
Yes (%)		38.3	50.0	
Delivery by trained health personnel	Chi-square			**0.0117**
No (%)		84.0	50.0	
Yes (%)		16.0	50.0	
Education (head of household)	Chi-square			0.6125
Never attended school (%)		81.5	71.4	
Primary school (%)		18.5	28.6	
Ability to speak Thai (head of household)	Chi-square			0.5478
No (%)		25.9	14.3	
Yes (%)		74.1	85.7	
Occupation	Chi-square			0.9608
Not agriculturist with labour (%)		30.9	35.7	
Agriculturist with labour (%)		69.1	64.3	
Travelling difficulty	Chi-square			0.7586
Not convenient (%)		29.6	21.4	
Convenient (%)		70.4	78.6	
Mass media exposure by radio	Chi-square			0.0990
No (%)		50.6	78.6	
Yes (%)		49.4	21.4	

* = Non utilization of postnatal care service
** = Utilization of postnatal care service

use of postnatal care service either in univariate analysis (p-value = 0.0117, Table 39) or multivariate analysis (p-value = 0.0037, Table 40). If the delivery for the last child was done by trained health personnel, the mothers tended to go for postnatal care. The training status of delivery personnel could explain 8.7 percent of the variance.

Table 40 Multivariate analysis of factors affecting postnatal care service utilization.

Variable	p-value	R	R^2	R^2 change	b	beta
DEL	**0.0037**	0.2952	0.0871	0.0871	0.2567	0.2952
Constant					0.0933	
p-value					**0.0203**	

* DEL = Training status of delivery personnel.

8. Child immunization service utilization and its determinants.

8.1 Child immunization seeking behavior.

Immunization will help to prevent serious disease in children such as Tuberculosis, Diphtheria, Pertussis and Tetanus. This study shows that the majority of mothers (65.2 percent) took their last babies for vaccination (Table 41).

There were only 34.7 percent of the mothers who did not take their babies for vaccination. For those mothers who took their children for vaccination, 70.9 percent of them kept every appointment given by the health personnel.

The reasons given by those who did not take there children for immunization were that did not see the necessity or did not

know about need for child immunization (47.2 percent), lack of time and inconvenience (36.1 percent).

Table 41 Child immunization seeking behavior.

Immunization	Percent	
Immunization for last child		
No	34.7	(33)
Yes	65.3	(62)
Total	100.0	(95)
Fulfil of appointment		
Went for all appointment	71.0	(44)
Not go for all appointment	29.0	(18)
Total	100.0	(62)
Reason for not bringing in babies for vaccination		
Not see the necessity	47.2	(17)
Lack of time, inconvenience	36.1	(13)
No money	5.6	(2)
Other	11.1	(4)
Total	100.0	(36)

* more than one answer is available

8.2 Factor influencing child immunization service utilization.

Factors analysed in relation to the use of child immunization service were age of married women, education and ability of the women to speak Thai as well as the head of the household, occupation, annual household income, training status of delivery personnel, perceived travelling difficulty and mass media exposure by radio. The result of this study showed that in univariate analysis, only education of the head of the household had a statistically significant influence on the use of immunization services at $p = 0.006$ (Table 42). When other factors were taken into account in multivariate analysis, education of the head of the household, occupation and perceived travelling difficulty very

Table 42 Univariate analysis of factors affecting child immunization service utilization by chi-square and t-test statistics.

Variables	Statistic test	I*	II**	p-value
Age of married women	t-test			0.793
$\bar{X}$		28.91	28.47	
SEM.		1.45	0.83	
Household income	t-test			0.761
$\bar{X}$		13,677.57	13,243.05	
SEM.		998.50	1,017.24	
Education of the women	Chi-square			0.0835
Never attended school (%)		97.0	82.3	
Primary school (%)		3.0	17.7	
Ability of the women speak Thai	Chi-square			0.7582
No (%)		63.6	58.1	
Yes (%)		36.4	41.9	
Delivery by trained health personnel	Chi-square			0.4443
No (%)		84.8	75.8	
Yes (%)		15.2	24.2	
Education (head of household)	Chi-square			**0.0060**
Never attended school (%)		97.0	71.0	
Primary school (%)		3.0	29.0	
Ability to speak Thai (head of household)	Chi-square			0.2066
No (%)		33.3	19.4	
Yes (%)		66.7	80.6	
Occupation	Chi-square			0.1757
Not agriculturist with labour (%)		21.2	37.1	
Agriculturist with labour (%)		78.8	62.9	
Travelling difficulty	Chi-square			**0.0490**
Not convenient (%)		42.4	21.0	
Convenient (%)		57.6	79.0	
Mass media exposure by radio	Chi-square			0.1229
No (%)		42.4	61.3	
Yes (%)		57.6	38.7	

* =Non utilization of child immunization
** =Utilization of child immunization

significantly affected child immunization at $p < 0.0001$ (Table 43). All three factors mentioned above could explain 18.1 percent of the variance associated with child immunization seeking behavior. Education had the most influence on the utilization, followed by travelling convenience and occupation respectively. Education of the head of the household could explained up to 9.5 percent of the variance. When the travelling difficulty and occupation were included consecutively, the variance could be increasingly explained (14.3 percent and 18.1 percent of the variance respectively).

Table 43 Multivariate analysis of factors affecting child immunization service utilization by multiple regression.

Variable	p-value	R	R^2	R^2 change	b	beta
EDU	**0.0019**	0.3095	0.0958	0.0958	0.3617	0.3038
RVILL	**0.0126**	0.3794	0.1439	0.0481	0.2569	0.2434
OCC	**0.0466**	0.4249	0.1806	0.0367	-0.1976	-0.1929
Constant					0.5316	
p-value					**0.0000**	

* EDU = Eduction of the head of the household
RVILL = Travelling difficulty
OCC = Occupation

9. Tetanus vaccination service utilization and its determinants.

9.1 Vaccination against tetanus in the last pregnancies.

During child birth, mothers are at risk of tetanus since the instrument use for delivery might not be sufficiently sterile. Therefore, the pregnant women should have vaccination against tetanus. This study showed that only 6.3 percent of the mothers had vaccination against tetanus (Table 44).

The reasons given by those who did not go for vaccination were that did not see the necessity or did not know about need for vaccination (69.1 percent), no time and inconvenience (25.5 percent).

Although the tetanus vaccination should be included in the antenatal care service, not all of the cases who went for antenatal care received the tetanus vaccine (only 4 cases in 6 cases of using antenatal care service). Therefore, among those 6 cases who received tetanus vaccination, 4 cases received it from antenatal care service and the other 2 cases went for tetanus vaccination because of the wound injuries occurring during pregnancy, and not as a result of seeking antenatal care services.

Table 44 Vaccination against tetanus.

Vaccination	Percent
Go for vaccination	
No	93.7 (89)
Yes	6.3 (6)
Total	100.0 (95)
Reason for not going for vaccination	
Not see the necessity, don't know	69.1 (65)
No time, inconvenience	25.5 (24)
No money	1.1 (1)
Other	4.3 (4)
Total	100.0 (94)

* more than one answer is available

9.2 Factor influencing tetanus vaccination service utilization during last pregnancy.

Factors analysed in relation to vaccination against tetanus were age of married women, education and ability of women to speak Thai, education and ability of the head of the household to

Table 45 Univariate analysis of the factors affecting tetanus vaccination service utilization by chi-square and t-test statistics.

Variables	Statistic test	I*	II**	p-value
Age of married women	t-test			0.566
$\bar{X}$		28.77	26.33	
SEM.		0.75	3.92	
Household income	t-test			0.875
$\bar{X}$		13,365.27	13,820.00	
SEM.		779.37	2,658.19	
Education of the women	Chi-square			**0.0270**
Never attended school (%)		89.9	50.0	
Primary school (%)		10.1	50.0	
Ability of the women to speak Thai	Chi-square			0.0076
No (%)		64.0	-	***
Yes (%)		36.0	100.0	
Education (head of household)	Chi-square			0.1704
Never attended school (%)		82.0	50.0	
Primary school (%)		18.0	50.0	
Ability to speak Thai (head of household)	Chi-square			0.3482
No (%)		25.8	-	***
Yes (%)		74.2	100.0	
Occupation	Chi-square			0.7202
Not agriculturist with labour (%)		32.6	16.7	
Agriculturist with labour (%)		67.4	83.3	
Travelling difficulty	Chi-square			0.8478
Not convenient (%)		29.2	16.7	
Convenient (%)		70.8	83.3	
Mass media exposure by radio	Chi-square			1.0000
No (%)		55.1	50.0	
Yes (%)		44.9	50.0	

* Non utilization of tetanus vaccination service
** Utilization of tetanus vaccination service
*** Non analysable

speak Thai, occupation, annual household income, travelling difficulty and mass media exposure by radio. The result of this study shows that only education of the women had a statistically

significant influence on vaccination against tetanus at p = 0.027 in univariate analysis (Table 45). This factor also showed up in multivariate analysis and could explained 8.5 percent of the variance, but the equation could not be used for prediction the relationship between the variables because the p-value of the derived equation were not significant (Table 46).

Table 46 Multivariate analysis of factors affecting tetanus vaccination service utilization by multiple regression.

Variable	p-value	R	R^2	R^2 change	b	beta
EDUC	**0.0041**	0.2921	0.0853	0.0853	0.2139	0.2921
Constant					0.0361	
p-value					0.1647	

* EDUC = Education of the married women.

Family planning and its determinants

1. Ideal number of children

The ideal number of children may affect the utilization of contraceptive service. People may not practice contraception until they have reached the desirable number of children.

The result showed the average ideal number of children as expected by the women was 3.99 children (Table 47) and 73.5 percent of the mothers wanted more than 2 children.

Table 47 Ideal number of children.

Sex of children	Percent
Son	
0	2.7 (3)
1	37.2 (42)
2	31.9 (36)
3	13.3 (15)
4	10.6 (12)
5 and over	4.5 (5)
Daughter	
0	2.7 (3)
1	38.1 (43)
2	40.7 (46)
3	9.7 (11)
4	5.3 (6)
5 and over	3.5 (4)
Total	
2	26.5 (30)
3	29.2 (33)
4	15.9 (18)
5	6.2 (7)
6	8.8 (10)
7 and over	13.2 (15)
Average number of son	X + SD = 2.12 + 1.44
Average number of daughter	X + SD = 1.88 + 1.05
Average number of total children	X + SD = 3.99 + 2.11

2. Sex preference for children

If sex preference for children for either sex is strong, it might result in a higher fertility because eventhough people have the number of children wanted, they may want additional children of their preference sex.

From the investigation of sex preference for children of mothers under this study, 60.2 percent of mothers said either sex was all right. Only 39.8 percent said they had certain sex preference for children. More mothers in this group wanted a son (26.5 percent) than a daughter (Table 48).

Table 48 Sex preference for children.

Sex preference of children	Percent
Sex of children	
Male	26.5 (30)
Female	13.3 (15)
Either sex	60.2 (68)
Total	100.0 (113)
Reason for preferring a son	
Sons can take care of themselves and parents need not worry about them	32.4 (12)
Sons are easier to bring up than daughters	13.5 (5)
Sons can do hard work	37.8 (14)
Sons can be depended upon by parents at old age	16.2 (6)
Total	99.9 (37)
Reason for preferring a daughter	
Daughters are easier to bring up than sons	16.7 (3)
Daughters can help with housework	38.9 (7)
Daughters can be depended upon by parents at old age	27.8 (5)
Daughters have closer relationship with parents than sons	11.1 (2)
Daughters are not going to be a soldier	5.5 (1)
Total	100.0 (18)

The most important reason for preferring a son was that the sons could do hard work (37.8 percent). The second most frequent response was that the sons could take care of themselves and parents needed not be worried about them (32.4 percent). The other reasons given were that the sons could be easier brought up than the daughters (13.5 percent) and the sons could be depended upon by parents at old age (16.2 percent).

The most important reason for preferring a daughter was that a daughter could help with household work (38.9 percent). The other reasons were that daughters can be depended upon by parents at old age (27.8percent), daughters could be easier to brought up than sons (16.7 percent) and so on.

3. Contraceptive utilization and its determinant.

3.1 Birth control seeking behavior

The result of this study showed that 47.8 percent of the mothers or their husband were currently using a method of birth control (Table 49). The majority of them (83.3 percent) use temporary birth control methods. This suggested that they might still want more children in the future. The most common temporary birth control method used was norplant (31.5 percent), pill (3.7 percent) and injections (48.1 percent). For permanent birth control methods, male sterilization was used more than female sterilization. Among those who were already had 2 children, 61.8 percent utilized contraceptive method.

Table 49 Birth control seeking behavior.

Birth control behavior	Percent
Contraceptive use	
No	52.2 (59)
Yes	47.8 (54)
Total	100.0 (113)
Reason for not using birth control	
Want more children	55.9 (33)
Think that unable to have more children	18.6 (11)
No time/inconvenience	6.8 (4)
Other	18.6 (11)
Total	100.0 (59)
Current method of birth control used	
Pills	3.7 (2)
Injection	48.1 (26)
Female sterilization	5.6 (3)
Male sterilization	11.1 (6)
Norplant	31.5 (17)
Total	100.0 (54)

The reason given by those who did not practice birth control was that they wanted more children (55.9 percent). Some said that

they thought that they could not have more child. Lack of time and inconvenience were also the reasons mentioned.

3.2 Factors affecting contraceptive utilization.

Factor taken into consideration as possible predictors of contraception were age of married women, duration of marriage, number of total children, ideal number of children, education and the ability of women to speak Thai, education and the ability of the head of the household to speak Thai, occupation, annual household income, travelling difficulty, and mass media exposure by radio. The result of univariate analysis showed that age, duration of marriage, number of total children and travelling difficulty were significantly associated with the utilization of contraception (p-value = 0.014, 0.001, 0.001 and 0.0026 respectively, Table 50). However, by using multivariate analysis, number of pregnancies and ideal number of children were found to be related to the use of contraception. These two factors could explain 21.5 percent of the variance (Table 51). Number of previous pregnancies had more influence on the utilization than ideal number of children. The number of previous pregnancies could explain up to 10.2 percent of the variance, but when it was considered with ideal number of children, 21.5 percent of the variance could be explained.

Table 50 Univariate analysis of factors affecting contraceptive utilization by chi-square and t-test statistics.

Variables	Statistic test	I*	II**	p-value
Age of married women	t-test			**0.014**
$\bar{X}$		26.80	30.26	
SEM.		1.04	0.92	
Duration of marriage	t-test			**0.001**
$\bar{X}$		7.07	11.56	
SEM.		0.91	0.91	
Number of pregnancies	t-test			**0.001**
$\bar{X}$		2.33	3.83	
SEM.		0.29	0.31	
Number of total children	t-test			**0.001**
$\bar{X}$		2.27	3.61	
SEM.		0.29	0.28	
Ideal number of children	t-test			0.893
$\bar{X}$		4.02	3.96	
SEM.		0.28	0.28	
Household income	t-test			0.226
$\bar{X}$		12,241.52	13,858.68	
SEM.		726.77	1,108.80	
Education of the women	Chi-square			0.3122
Never attended school (%)		84.7	92.6	
Primary school (%)		15.3	7.4	
Ability of the women to speak Thai	Chi-square			0.6842
No (%)		59.3	64.8	
Yes (%)		40.7	35.2	
Education (head of household)	Chi-square			1.0000
Never attended school (%)		81.4	81.5	
Primary school (%)		18.6	18.5	
Ability to speak Thai (head of household)	Chi-square			1.0000
No (%)		27.1	25.9	
Yes (%)		72.9	74.1	
Occupation	Chi-square			0.9268
Not Agriculturist with labour (%)		32.2	29.6	
Agriculturist with labour (%)		67.8	70.4	

Table 50 Univariate analysis of factors affecting contraceptive utilization by chi-square and t-test statistics. (continued)

Variables	Statistic test	I*	II**	p-value
Travelling difficulty	Chi-square			**0.0026**
Not convenient (%)		42.4	14.8	
Convenient (%)		57.6	85.2	
Mass media exposure by radio	Chi-square			0.4904
No (%)		49.2	57.4	
Yes (%)		50.8	42.6	

* = Non utilization of contraceptive service
** = Utilization of contraceptive service

Table 51 Multivariate analysis of factors affecting contraceptive utilization by multiple regression.

Variable	p-value	R	R^2	R^2 change	b	beta
PREGEXP	**0.0000**	0.3188	0.1016	0.1016	0.1399	0.6558
ICHI	**0.0001**	0.4638	0.2152	0.1136	-0.1131	-0.4766
Constant					0.5020	
p-value					**0.0000**	

* PREGEXP = Number of pregnancies.
ICHI = Ideal number of children.