

## CHAPTER 4

### RESULTS

This study is aimed to investigate factors related to maternal behavior on receiving child immunization in Mueang Fuang District Vientiane Province Lao PDR with 208 mothers who have children under one year. The results of this research are presented by the following categories as socio demographic factors, knowledge about immunization, perception of immunization, cues to action and maternal behavior on receiving child immunization service. The next part is shown the correlation between maternal perception, maternal knowledge, and maternal behavior between of sample groups by using Chi square test and fisher Exact test with the level of significance set at  $\alpha = 0.05$ .

The data collection was conducted on 1<sup>st</sup> April to 31<sup>st</sup> June 2013 with the target group 212 people by using questionnaire and received 208 questionnaires back that equal 98% of total questionnaire.

Based on the conceptual framework, the result of the research will be presented in table with explanation by using frequency and percentage distribution to describe respondents' characteristics, cues to action, knowledge and perception that include 5 sections bellows:

1. Socio – demographic characteristics
2. Maternal behavior on receiving child immunization service and health accessibility
3. Knowledge about immunization
4. Perception of immunization
5. Cues to action
6. Analysis study: the relationship between the Socio – demographic characteristics, Knowledge, Perception about immunization, and cue to action with Maternal behavior on receiving child immunization services

## 1. Socio-demographic characteristics

The socio demographic characteristics include age, marital status, ethnicity, number of children, education level, occupation and average income per month these will be presented by descriptive statistic and show by frequency percentage, mean and standard division as the table 4.1 below.

Table 4.1 Number and Percentage of mothers who have children under one year divide by social demographic characteristics

(n=208)		
Socio demographic characteristics	Number	Percentage
<b>Age</b>		
< 20 years old	12	5.8
21-25 years old	73	33.2
26-30 years old	77	36.0
> 30 years old	46	25.0
$\bar{x} = 27.43, S.D = 4.41, Min. = 18, Max. = 40$		
<b>Marital status</b>		
Single	185	88.4
Married	8	3.8
Widow	10	5.2
Divorced	3	1.6
Separated	2	1.0
<b>Ethnicity</b>		
Lao Loum	115	55.3
Lao Thung	55	26.4
Lao Soung	38	18.3
<b>Number of Children</b>		
1-2 persons	74	35.6
3-4 persons	99	47.6

Table 4.1 (continue)

(n=208)

Socio demographic characteristics	Number	Percentage
5-6 persons	30	14.4
More than 6 children	5	2.4
$\bar{x} = 3.13$ , S.D = 1.48, Min. = 1, Max. = 8		
<b>Total Number of Children by sex</b>		
Boy	318	48.8
Girl	334	51.2
<b>Number of Boy</b>		
1-2 persons	38	19.2
3-4 persons	1	0.5
5-6 persons		
<b>Number of Girl</b>		
1-2 persons	168	80.8
3-4 persons	40	51.2
5-6 persons	0	0.0
<b>Education level</b>		
No education	41	19.7
Primary school	45	21.7
Secondary school	30	14.4
High school	52	25.0
Collage/University	40	19.2
<b>Occupation</b>		
Farmer	92	47.7
Trader	40	20.7
Laborer	6	3.1
Government Employee	38	19.7
House wife	17	8.8

Table 4.1 (continue)

(n=208)

Socio demographic characteristics	Number	Percentage
<b>Average income per month</b>		
100,000 – 399,000 Kip	59	28.4
400,000 – 699,000 Kip	72	34.6
More than 700,000 Kip	77	37.0

From Table 4.1 shows that the majority of respondents (36%) were aged between 26-30 years old, the minimum and maximum ages were 18 and 40. Married (88.4%), Main ethnic group is Lao Loum (55.3%), number of children 3–4 (47.6%), sex of children is girl (51.2%), boy (81.3 %), girl (80.8 %), education level completed high school (25%), occupation farmer (47.7%) and average income per month (37%) more than 700,000 Kip.

## **2. Maternal behavior on receiving child immunization service and health accessibility**

The researcher had studied the maternal behavior on receiving child immunization in Mueang Fuang District, Vientiane Province, Lao PDR with 208 mothers who had children under one year. The research had focused on the bringing children under 1 year to receive immunization service and the health accessibility about service place, distance, method of travel and traveling that the result was showed on the table 4.2.

Table 4.2 Number and percentage of mother who bring the child for immunization and health service accessibility

(n=208)

<b>Mother who bring the child for immunization</b>	<b>Number</b>	<b>Percentage</b>
<b>Bringing children to receive immunization service</b>		
Yes	170	81.7
No	38	18.3
<b>Health accessibility</b>		
<b>Service place for receiving immunization service</b>	27	13.0
Health center	69	34.2
District hospital	12	3.8
Private clinic	100	49.0
Mobile outreach team		
<b>Distance of bringing children for immunization service</b>		
< 1 km	86	41.3
1-3 km	70	33.7
3-5 km	32	15.4
> 5 km	20	9.6
<b>Method of travel for receiving immunization service</b>		
Walk	64	30.8
Transportation	8	3.8
Tut-Tut	23	12.1
Private (Bicycle, Motorcycle, Car etc.)	106	54.9
<b>Time spending for bringing children receiving immunization service</b>		
< 15 minutes	49	23.6
Between 15-30 minutes	104	50.5
Between 31 - 1 hour	40	19.2
> 1 hour	15	6.7

From Table 4.2 found that mainly there were bring children to receive immunization service (81.7%). For health accessibility, most of service place where maternal behavior on receiving child immunization services was mobile outreach team (49%). Distance of travel for receiving immunization services was less than 1 km (41.1%). Method of travel for receiving immunization services was using the private such as bicycle, motorcycle, car etc. (54.9%). Time spending for receiving immunization services was between 15-30 minutes (50%).

### 3. Knowledge about immunization

This section was study about knowledge of mother on receiving child immunization in Mueang Fuang District Vientiane Province Lao PDR. The research was collect data with 208 mothers who had children under one year and had focused on the basic knowledge about 7 types of vaccine were used an EPI programme in Lao PDR as BCG, OPV (Polio), DTP-HepB and Measles the result was presented by descriptive statistic and showed by number of percentage on the table 4.3 below. The level of knowledge divided into 3 levels: high, moderate and low level showed as the table 4.4

Table 4.3 Number, percentage an level of mother's knowledge on receiving child immunization service divided by many items.

(n=208)

Mother's knowledge on receiving child immunization service	Correct		Incoorect	
	Number	Percentage	Number	Percentage
1. Immunization mean, the giving vaccine to stimulate body build immune.	133	63.9	75	34.7
2. The important purpose of immunization was to make children were not sick with preventable diseases.	111	53.4	97	46.6
3. Children less than 1 year were target group for immunization	88	42.3	120	57.7

Table 4.3 (continue)

(n=208)

Mother's knowledge on receiving child immunization service	Correct		Incoorect	
	Number	Percentage	Number	Percentage
4. Children who were breastfed don't need immunization	58	27.9	150	72.1
5. Immunization can prevent Diphtheria, Pertussis, Tetanus, Measles, Polio, Tuberculosis, Hepatitis type B.	95	45.7	113	54.3
6. Immunization can have many vaccines in the same time.	41	19.7	167	80.3
7. Vaccination for Diphtheria, Pertussis, Tetanus and Polio have to have immediatly when baby are 2 months and it will have no effect if baby growth up.	63	30.3	145	69.7
8. Vaccinations for Diphtheria, Pertussis, Tetanus and Polio have to have at least 3 times for good effect.	74	35.6	134	64.4
9. Diphtheria transmitted by cough and sneeze.	51	24.5	157	75.5
10. Pertussis transmitted by breath and made children cough and frequently until can't breathe.	60	28.8	148	71.2
11. Tetanus will make children had jaw solid, convulsion and it might be make children die.	79	38.0	129	62.0
12. Poliomyelitis transmitted by touching hand or contamination food and water with germs.	51	24.5	157	75.5

Table 4.3 (continue)

(n=208)

Mother's knowledge on receiving child immunization service	Correct		Incoorect	
	Number	Percentage	Number	Percentage
13. Tuberculosis transmitted by mucus, saliva and phlegm of patient.	108	51.9	100	48.1
14. Vaccination to prevent tuberculosis when was born.	68	32.7	140	67.3
15. Vaccination to prevent tuberculosis only one time after delivery can prevent life time.	60	28.8	148	71.2
16. Vaccination to prevent tuberculosis can give by oral.	51	24.5	157	75.5
17. Vaccination to prevent mmeasles has to have when children are one year old and it will have no effect if children growth up more than one year.	74	35.6	134	64.4
18. Measles can transmit by cough and sneeze.	69	33.2	139	66.8
19. Vaccination to prevent measles only one time can prevent life time.	60	28.8	148	71.2
20. Complication of measles is diarrhoea and pneumonia.	60	28.8	148	71.2
21. The dangerous of hepatitis type B was it had high opportunity to be cancer liver.	83	39.9	125	60.1
22. Hepatitis type B can prevent by vaccination only one time.	56	26.9	152	73.1
23. Polio vaccine was oral vaccine.	73	35.1	135	64.9
24. Children less than one year should have polio vaccine 3 times every 2 months.	43	20.7	165	79.3

Table 4.3 (continue)

(n=208)

Mother's knowledge on receiving child immunization service	Correct		Incoorrect	
	Number	Percentage	Number	Percentage
25. Advantage of immunization was it made children were not cripple or were not die by preventable disease.	99	47.6	109	52.4
26. Symptoms found after vaccination was fever and pain at the area injection.	100	47.1	108	51.9
27. Fever after vaccination can solve by rub children with wet towel and take some relief fever medicine.	90	43.3	118	56.7
28. Swelling was happened by vaccination can treat by clean up.	63	30.3	145	69.7
29. Symptoms after vaccination were not dangerous and will be better within 2-3 days.	80	38.5	128	61.5
30. Number of time that you should take your children for immunisation was 5 times.	95	45.7	113	54.3

From Table 4.3 is the test of knowledge of mothers on taking children to received immunization service, the knowledge that tested is knowledge about vaccination BCG, HepB, Polio, Diphtheria, Tetanus, Pertussis and Measles and the test found that the correct answer in top 5 had like this the item No1 Immunization mean, the giving vaccine to stimulate body build immune (63.9%), the item No2The important purpose of immunization was to make children were not sick with preventable diseases (53.4%), item No 13 Tuberculosis transmitted by mucus, saliva and phlegm of patient (51.9%), item No 26 Symptoms found after vaccination was fever and pain at the area injection (48.1%) and item No 25 Advantage of immunization was it made children were not cripple or were not die by preventable disease (47.6%), respectively.

For the top 5 answer that respondents answered incorrect as follows: item No 6 Immunization can have many vaccines in the same time (80.3%), item No24 Children less than one year should have polio vaccine 3 times every 2 months (79.3%), item No12 Poliomyelitis transmitted by touching hand or contamination food and water with germs (75.5%), item No16 Vaccination to prevent tuberculosis can give by oral (75.5%) and item No 9 Diphtheria transmitted by coughs and sneeze (75.5%), respectively.

Table 4.4 Level of mother's knowledge on taking children for immunization

Level of Mothers' Knowledge	Number	Percentage
Low (< 18 score)	197	94.7
Moderate (18-24score)	11	5.3
High (> 24 score)	0	0.0
<b>Total</b>	<b>208</b>	<b>100.0</b>

$\bar{x} = 10.75$ , S.D. = 4.560, Min. = 1, Max. = 22

From Table 4.4 found that most mothers' knowledge was at a low level (93.3%), there were maximum score is 22 and minimum score is 1 from full score is 30. The mean score of knowledge was about 10.75 and 4.560 standard deviation.

#### 4. Perception of immunization

The study about the factors related to maternal behavior on receiving child immunization in Mueang Fuang District Vientiane Province Lao PDR with 208 mothers who had children under 1 year old, researcher had studied mothers Perception on taking children for immunization as detail on table 4.5. The level of total perception and 4 aspects of perception about susceptibility, severity, benefits and barriers of immunization divided into 3 levels: high, moderate and low level showed as the table 4.6.

Table 4.5 Mean, standard division and level of mother's perception on taking children for immunization.

Level of Perception	(n=208)		
	$\bar{x}$	S.D.	Level
1. Immunization is child right and all children have to receive.	2.69	0.557	High
2. Main of all disease happened with children had Vaccination.	2.47	0.605	High
3. The number of children had diphtheria reduce because of there was vaccination.	2.25	0.717	Moderat
4. Pertussis or 100 Days Cough Diseases can recover itself when child was due cough 100 days	2.11	0.645	Moderate
5. Tetanus is serious disease but there was vaccine but there was vaccine to prevent.	2.29	0.704	Moderate
6. Children who had polio vaccine based on schedule won't be crippling by polio disease.	2.53	0.651	High
7. Tetanus can treat but less opportunity to survive.	2.08	0.704	Moderate
8. Tuberculosis in children was serious than in adult.	1.83	0.796	Moderate
9. Vaccination many times, it made children afraid and didn't accept.	1.84	0.715	Moderate
10. Vaccine in health centre, hospital and clinic had equally quality	2.16	0.775	Moderate
11. Taking children for immunization each time have to waste the time and high cost.	2.14	0.804	Moderate
12. Taking children for immunization is role and responsibility of parent that have to do.	2.17	0.784	Moderate
13. Taking children for immunization based on schedule it made children healthy.	2.29	0.706	Moderate
14. Based on appointment, you had intended to take your child for vaccination every time.	2.27	0.700	Moderate

Table 4.5 (continue)

	(n=208)		
<b>Level of Perception</b>	$\bar{X}$	<b>S.D.</b>	<b>Level</b>
15. You think, children who are healthy don't need vaccination.	1.91	0.733	Moderate
16. Prevent by vaccination better than left children sick and treat.	2.17	0.767	Moderate
17. You checked appointment every time in yellow card when you take your children for immunization.	2.19	0.773	Moderate
18. Taking children for immunization is not difficult thing that everyone can do.	2.24	0.688	Moderate
19. Taking children for immunization will make preventable disease are used up soon	2.17	0.706	Moderate
20. Poliomyelitis can causes permanent paralysis resulting to death of some cases.	2.43	0.692	High
21. All of seventh target diseases of EPI programme are severity if the children get infected, and there are no drugs for treatment	2.18	0.730	Moderate
22. Measles can cause severe pneumonia, and acute diarrhea.	2.05	0.714	Moderate
23. If your children immunized only two doses can prevented DPT, hepatitis B.	1.98	0.834	Moderate
24. If your children get healthy, you still take them for immunize.	2.29	0.749	Moderate
25. Your children completed immunization (by national schedule) can prevent seventh target diseases of EPI programme.	2.23	0.752	Moderate
26. Measles disease can prevent by drinking clean water.	2.16	0.719	Moderate
27. Hepatitis B disease can prevent by injection vaccine.	2.22	0.765	Moderate

Table 4.5 (continue)

	(n=208)		
Level of Perception	$\bar{X}$	S.D.	Level
28. Immunize the child completely is better than incomplete immunization (three doses).	2.22	0.784	Moderate
29. If you paid some money for your child on getting vaccine injection, you still take them for immunize.	2.23	0.779	Moderate
30. If you have appointment with health worker to get your children for immunize, but that day your children got sick, you still get them your children going to immunize.	2.17	0.666	Moderate
31. Do you think the vaccination can have side effect.	2.20	0.700	Moderate
32. Do you think DPT- HepB Vaccine had side effect.	1.74	0.681	Moderate
33. Do you think Measles Vaccine had side effect.	1.83	0.673	Moderate
34. Fever, Abscess area injection and Rash are side effect of vaccination.	2.25	0.734	Moderate
35. Based on poor road condition, poor transportation and weather you still take your children to have immunization in health center or hospital.	1.74	0.785	Moderate
36. If there was not mobile outreach team service you still take your children to have immunization in health center or hospital.	2.08	0.701	Moderate
37. If someone who you respected told you that vaccination is not good or it's had no effect you will believe and follow.	2.05	0.775	Moderate

Mean: Low = 1.0 – 1.6, Moderate = 1.7 – 2.3, High = 2.4 – 3.0

From the table 4.5, the top 5 level of mean maximum as item No1 Immunization is child right and all children have to receive. ( $\bar{x} = 2.69$ , S.D. = 0.557), item No 6 Children who had polio vaccine based on schedule won't be crippling by polio disease ( $\bar{x} = 2.53$ , S.D. = 0.651), item No 20 Poliomyelitis can causes permanent paralysis resulting to death of some cases ( $\bar{x} = 2.43$ , S.D. = 0.692), item No 2 Main of all disease happened with children had vaccination ( $\bar{x} = 2.47$ , S.D. = 0.605) and item No 24 If you paid some money for your child on getting vaccine injection, you still take them for immunize ( $\bar{x} = 2.28$ , S.D. = 0.749).

Table 4.6 Level of mothers' perception on taking children for immunization divided by 4 aspects and total perception.

(n=208)

Mothers' Perception	Level of perception		
	Low no.(%)	Moderate no.(%)	High no.(%)
1. Susceptibility of immunization	12(5.8%)	159(76.4%)	37(17.8%)
2. Severity of immunization	36(17.3%)	112(53.8%)	60(28.8%)
3. Benefits of immunization	27(13.0%)	119(57.2%)	62(29.8%)
4. Barriers of immunization	50(24.0%)	143(68.8%)	15(17.2%)
<b>Total Perception</b>	<b>7(3.4%)</b>	<b>186(89.4%)</b>	<b>15(7.2%)</b>

From the table 4.6 found that the total level of perception of mothers were at a moderate level (89.4%). When considering in each aspect of perception, also all of aspects about susceptibility, severity, benefits and barriers of immunization were as a moderate level.

## 5. Cues to action

The section 5 The study about the factors related to maternal behavior on receiving child immunization in Mueang Fuang District Vientiane Province Lao PDR with 208 mothers who had children under 1 year old, researcher had studied mothers cues to action on taking children for immunization as detail on table 4.7

Table 4.7 Number and percentage of mothers' cues to action on taking children for immunization (n=208)

Cues to action	Number	Percentage
<b>1. You had any information about immunization</b>		
Yes	207	99.5
No	1	0.5
<b>2. Who give any information about immunization</b>		
Health worker	46	22.1
TV, Radio, Poster, Brochure, Newspaper	47	22.6
Neighbour or Friend	41	19.7
Family member	29	13.9
Village leaders	26	12.5
Village Health Volunteer (VHV)	19	9.1
<b>3. Main source of information about immunization</b>		
Health worker	55	26.4
TV, Radio, Poster, Brochure, Newspaper	29	13.9
Neighbour or Friend	41	19.7
Family member	32	15.4
Village leaders	22	10.6
Village Health Volunteer (VHV)	29	13.9

Table 4.7 (continue)

(n=208)

Cues to action	Number	Percentage
<b>4. Most likely to get information about immunization</b>		
Health worker	83	39.9
TV, Radio, Poster, Brochure, Newspaper	14	6.7
Neighbour or Friend	32	15.4
Family member	21	10.1
Village leaders	25	12.0
Village Health Volunteer	32	15.4
Other	1	0.5

From the table 4.7 found that mothers had received information about immunization (99.5%) and received information from Health worker (21.1%), from TV, Radio, Poster, Brochure, Newspaper (22.6%), main source of information that received was Health worker (26.9%) and most likely to get information is Health worker (39.9%)

#### **6. Analysis study: the relationship between the Socio-demographic characteristics, Knowledge, Perception about immunization, and cue to action with Maternal behavior on receiving child immunization services**

The study about the factors related to maternal behavior on receiving child immunization in Mueang Fuang district of Vientiane province, Lao PDR with 208 mothers who had children under 1 year old, researcher had analyzed by Chi-square test and Fisher's exact test to test the relationship between maternal characteristics: age, marital status, ethnicity, number of children, number of boy, number of girl, education level, occupation, average and income per month with maternal behavior on receiving child immunization detailed in Table 4.8. The relationship between health accessibility: service place, distance, method of travel, time with maternal behavior on receiving child immunization

showed in Table 4.9. The relationship between knowledge, perception and cue to action (received any information, sources, main source, most likely) with maternal behavior on receiving child immunization in Table 4.10.

Table 4.8 The relationship between mothers' characteristics and level of maternal behavior on receiving child immunization in Mueang Fuang district.

Mothers' characteristics	Level of received immunization			$\chi^2$	df	p-value
	Yes	No	Total			
	No. (%)	No. (%)	No.(%)			
<b>Age</b>				4.769	2	0.092
< 20 year	7(58.3)	5(41.7)	12(100.0)			
21-30 year	119(82.6)	25(17.4)	144(100.0)			
>30 year	44(84.6)	8(15.4)	52(100.0)			
Total	170(81.7)	38(18.3)	208(100.0)			
<b>Marital status</b>				1.058 <sup>F</sup>	1	0.388
Single/widow/ divorce/ separate	17(73.9)	6 (26.1)	23(100.0)			
Married	153(82.7)	32(17.3)	185(100.0)			
Total	170(81.7)	38(18.3)	208(100.0)			
<b>Ethnicity</b>				0.765	2	0.682
Lao Loum	93(80.9)	22(19.1)	115(100.0)			
Lao Thung	47(85.5)	8(14.5)	55(100.0)			
Lao Soung	30(78.9)	8(21.1)	38(100.0)			
Total	170(81.7)	38(18.3)	208(100.0)			
<b>Number of children</b>				0.881	2	0.644
1-2 persons	58(78.4)	16(21.6)	74(100.0)			
3-4 persons	83(83.8)	16(16.2)	99(100.0)			
> 5 persons	29(82.9)	6(17.1)	35(100.0)			
Total	170(81.7)	38(18.3)	208(100.0)			

Table 4.8 (continue)

Mothers' characteristics	Level of received immunization			$\chi^2$	df	p-value
	Yes	No	Total			
	No. (%)	No. (%)	No.(%)			
<b>Number of boy</b>				0.225	2	0.894
1-2 persons	138(81.7)	31(18.3)	169(100.0)			
3-4 persons	35(87.5)	5(12.5)	40(100.0)			
> 5 persons	1(100.0)	0(0.0)	1(100.0)			
Total	170(81.7)	38(18.3)	208(100.0)			
<b>Number of girl</b>				1.104 <sup>F</sup>	1	0.367
1-3 persons	135(80.4)	31(18.3)	169(100.0)			
3-4 persons	35(87.5)	5(12.5)	40(100.0)			
Total	170(81.7)	38(18.3)	208(100.0)			
<b>Education level</b>				1.587	3	0.662
No education	34(82.9)	7(17.1)	41(100.0)			
Primary/ secondary Education	58(77.3)	17(22.7)	75(100.0)			
High school	44(84.6)	8(15.4)	52(100.0)			
College/university	34(84.6)	6(15.0)	40(100.0)			
Total	170(81.7)	38(18.3)	208(100.0)			
<b>Occupation</b>				3.260	2	0.353
Farmer	80(81.6)	18(18.4)	98(100.0)			
Trader/labor/ house wife	40(75.0)	11(25.0)	51(100.0)			
Government employee	50(84.7)	9(15.3)	59(100.0)			
Total	170(81.7)	38(18.3)	208(100.0)			

Table 4.8 (continue)

Mothers' characteristics	Level of received immunization			$\chi^2$	df	p-value
	Yes	No	Total			
	No. (%)	No. (%)	No. (%)			
<b>Income/month (Kip)</b>				2.107	2	0.349
100,000-399,000	50(84.7)	9(15.3)	59(100.0)			
400,000-699,000	55(76.4)	17(23.6)	72(100.0)			
> 700,000	65(84.4)	12(15.6)	77(100.0)			
Total	170(81.7)	38(18.3)	208(100.0)			

From Table 4.8 the Chi-Square test of the relationship between mothers' characteristics such as maternal age, marital status, ethnicity, number of children (boy, girl), education level, occupation, and income per month with level of maternal behavior on receiving child immunization in Mueang Fuang district of Vientiane province, Lao PDR found that all of mothers' characteristics were not significant related to the level of maternal behavior on receiving child immunization in Mueang Fuang district (p-value > 0.05).

Table 4.9 The relationship between health accessibility with level of maternal behavior on receiving child immunization in Mueang Fuang district.

Health Accessibility	Level of received immunization			$\chi^2$	df	p-value
	Yes	No	Total			
	No. (%)	No. (%)	No. (%)			
<b>Service place</b>				3.105	3	0.376
Health center	24(88.9)	3(11.1)	27(100.0)			
District hospital	9(85.5)	10(14.5)	69(100.0)			
Private clinic	10 (83.3)	2(16.7)	12(100.0)			
Mobile clinic	77(77.0)	23(23.0)	100(100.0)			
Total	170(81.7)	38(18.3)	208(100.0)			

Table 4.9 (continue)

Health Accessibility	Level of received immunization			$\chi^2$	df	p-value
	Yes	No	Total			
	No. (%)	No. (%)	No. (%)			
<b>Distance</b>				18.235	3	0.000*
< 1 km	59(68.6)	27(18.3)	86(100.0)			
1-2 km	65(92.9)	5(7.1)	70(100.0)			
3-5 km	27(84.4)	5(15.6)	32(100.0)			
> 5 km	19(95.0)	1(5.0)	20(100.0)			
Total	170(81.7)	38(18.3)	208(100.0)			
<b>Method of travel</b>				33.76	3	.000*
Walk	53(82.8)	11(17.2)	64(100.0)			
Transportation	6(75.0)	2(25.0)	8(100.0)			
Tut-Tut	9(39.1)	14(60.9)	23(100.0)			
Private(bicycle, motorcycle)	102(90.3)	11(9.7)	113(100.0)			
Total	170(81.7)	38(18.3)	208(100.0)			
<b>Time of travel</b>				10.572	3	0.014*
< 15 min.	40(82.9)	9(17.1)	49(100.0)			
15-30 min.	90(85.7)	15(14.3)	105(100.0)			
31 min.-1 hour	33(82.5)	7(17.5)	40(100.0)			
> 1 hour	7(50.0)	7(50.0)	14(100.0)			
Total	170(81.7)	38(18.3)	208(100.0)			

Note: \* Significant = p-value <.05

From Table 4.9 the Chi-Square test of the relationship between health accessibility such as service place, distance, method and time of travel with level of maternal behavior on receiving child immunization in Mueang Fuang district of Vientiane province, Lao PDR found that the distance, method and time of travel were statistically significant relation with the level of maternal behavior on receiving child immunization in Mueang Fuang district (p-value =0.000, 0.000, and 0.014, respectively).

Table 4.10 The relationship between the factors of knowledge, perception and cue to action with level of maternal behavior on receiving child immunization in Mueang Fuang district.

Factors	Level of received immunization			$\chi^2$	df	p-value
	Yes	No	Total			
	No.(%)	No.(%)	No.(%)			
<b>Knowledge</b>				3.356 <sup>F</sup>	1	0.078
Low level	156 (80.4)	38(19.6)	194(100.0)			
Moderate level	14(100.0)	0(0.0)	14(100.0)			
Total	170(81.7)	38(18.3)	208(100.0)			
<b>Perception</b>						
Low level	5(71.4)	2(28.6)	7(100.0)			
Moderate level	152(81.7)	34(18.3)	186(100.0)			
High level	13(86.7)	2(13.3)	15(100.0)			
Total	170(81.7)	38(18.3)	208(100.0)			
<b>Cue to action</b>						
-Received any information						
Yes	107(82.1)	18 (18.4)	98(100.0)	4.495	1	0.183
No	0(75.0)	1(100.0)	51(100.0)			
Total	170(81.7)	38(18.3)	208(100.0)			

Table 4.10 (continue)

Factors	Level of received immunization			$\chi^2$	df	p-value
	Yes	No	Total			
	No.(%)	No.(%)	No.(%)			
-Who give information				3.632	5	0.604
Health worker	41(89.1)	5(10.9)	46(100.0)			
TV, radio, poster, brochure, newspaper	38(80.9)	9(19.1)	47(100.0)			
Neighbor/friend	31(75.6)	10(24.4)	41(100.0)			
Family members	22(75.9)	7(24.1)	29(100.0)			
Village leaders	22(84.6)	4(15.4)	26(100.0)			
Village Health Volunteers (VHVs)	16(84.2)	3(15.8)	9(100.0)			
Total	170(81.7)	38(18.3)	208(100.0)			
- Main sources of information				3.632	5	0.600
Health worker	1(89.1)	5(10.9)	46(100.0)			
TV, radio, poster, brochure, newspaper	38(80.9)	9(19.1)	47(100.0)			
Neighbor/friend	31(75.6)	10(24.4)	41(100.0)			
Family member	22(75.9)	7(24.1)	29(100.0)			
Village leaders	22(84.6)	4(15.4)	26(100.0)			
Village Health Volunteers (VHVs)	16(84.2)	3(15.8)	9(100.0)			
Total	170(81.7)	38(18.3)	208(100.0)			

Table 4.10 (continue)

Factors	Level of received immunization			$\chi^2$	df	p-value
	Yes	No	Total			
	No.(%)	No.(%)	No.(%)			
-Most likely to get information				3.632	5	0.600
Health worker	1(89.1)	5(10.9)	46(100.0)			
TV, radio, poster, brochure, newspaper	38(80.9)	9(19.1)	47(100.0)			
Neighbor/friend	31(75.6)	10(24.4)	41(100.0)			
Family member	22(75.9)	7(24.1)	29(100.0)			
Village leaders	22(84.6)	4(15.4)	26(100.0)			
Village Health Volunteers (VHVs)	16(84.2)	3(15.8)	9(100.0)			
Total	170(81.7)	38(18.3)	208(100.0)			

From Table 4.10 The relationship between the factors of knowledge, perception and cue to action with level of maternal behavior on receiving child immunization in Mueang Fuang district found that main source of information and most likely to get information were statistically significant relation with elation with the level of maternal behavior on receiving child immunization services in Mueang Fuang district (p-value = 0.030 and 0.001, respectively).