

## **CHAPTER IV**

### **RESULTS**

The study was analytical cross-sectional study concerning knowledge, attitudes, and practices of preventive behaviors regarding foot ulcer in diabetes type II OPD patients at BMA Health Center No.48.

This chapter presents the findings of the data analysis. The findings of study are divided into 8 sections.

1. Distribution of demographic characteristics of the population.
2. Distribution of knowledge about preventive behaviors regarding foot ulcer
3. Distribution of attitudes about preventive behaviors regarding foot ulcer
4. Distribution of practices about preventive behaviors regarding foot ulcer
5. Association between general characteristics and with knowledge, with attitudes, and with practices of preventive behaviors regarding foot ulcer
6. Association between knowledge and attitudes of preventive behaviors regarding foot ulcer
7. Association between knowledge and practices of preventive behaviors regarding foot ulcer
8. Association between attitudes and practices of preventive behaviors regarding foot ulcer

#### 4.1 Distribution of demographic characteristics of the population

The description of demographic characteristics of the population includes gender, age, nationality, marital status, educational level (highest degree obtained), occupation, numbers of family member, monthly household income, monthly household expenditure, family history of DM, history of diabetic foot ulcers, body mass index, blood sugar level, and years of having DM type II.

A total of 300 respondents with diabetes who live in Bangkok were interviewed with structured questionnaire.

Table 2: Distribution of address and gender

<b>Characteristics</b>	<b>Number</b>	<b>Percentage</b>
<b>Address</b>		
Bangkok	300	100.0
<b>Gender</b>		
Male	80	26.7
Female	220	73.3
Total	300	100.0
<b>Nationality</b>		
Thai	300	100.0

As presented in the table 2, most of subjects (73.3%) were female and 26.7% were male, and all of them were Thai by nationality.

Table 3: Distribution of age and nationality

Characteristics	Number	Percentage
<b>Age (years)</b>		
30-45	21	7.0
46-55	65	21.7
56-65	107	35.7
66-75	90	30.0
>75	17	5.7
Total	300	100.0
Mean=60.96 SD=10.154		

Respondents' age ranged from 30 to >75 years old with mean age of 60.96. Most of the respondents (87.4%) were aged between 46-75 years as shown in the table3.

Table 4: Distribution of marital status and family member

Characteristics	Number	Percentage
<b>Marital status</b>		
Single	19	6.3
Married	217	72.3
Widowed	49	16.3
Divorced	15	5.0
Total	300	100.0
<b>Family member (person)</b>		
1-3	56	18.7
4-6	182	60.7
>6	62	20.7
Total	300	100.0

As shown in the tale 4, most of respondents (72.3%) were married, 6.3% were single, and 16.3% were widows and 5% were divorced.

60.7% of respondents were in the range from 4 to 6 in family members and 18.7% were in less than 4 and 20.7% were in more than 6.

Table 5: Distribution of educational status and occupation

<b>Characteristics</b>	<b>Number</b>	<b>Percentage</b>
<b>Educational status</b>		
Less than Primary school	13	4.3
Primary school	210	70.0
Secondary school	44	14.7
Vocation	19	6.3
Over than Vocation	14	4.7
Total	300	100.0
<b>Occupation</b>		
General laborer	38	12.7
Agricultural worker	19	6.3
Own small business	26	8.7
Business owner	11	3.7
Housekeeper	183	61.0
Retired person	9	3.0
Not working	8	2.7
Other	6	2.0
Total	300	100.0

As shown in the above table, most of subjects (95.7%) had some formal education, with 70% having primary school education, 14.7% having attended secondary school education, 6.3% having vocational education, and 4.7% having education over vocational education. Those who had education less than primary school education were only 4.3%.

Regarding the occupation, more than half (61%) of the subjects were housekeeper, 12.7% were general laborer, 6.3% were agricultural worker, 8.7% owned small business 3.7% were business owner, 3.0% were retired person, 2.7% were not working, 2.0% were others.

Table 6: Distribution of monthly household income and household expenditure

Characteristics	Number	Percentage
<b>Monthly Household Income (Baht)</b>		
<10,001	92	30.7
10,001-30,000	166	55.3
>30,000	42	14.0
Total	300	100.0
Minimum=600 Maximum=60000 Mean=20133 SD=12773.47		
<b>Monthly Household Expenditure (Baht)</b>		
<10,001	76	25.3
10,001-30,000	169	56.3
>30,000	55	18.3
Total	300	100.0
Minimum=600 Maximum=53000 Mean=17626 SD=11392.09		

As presented in the table 6, more than half (55.3%) of subjects had a household income from 10,001 to 30,000 Baht, 30.7% of them had less than 10,001 Baht and 14% had more than 30,000 Baht.

While more than half (56.3%) of the subjects had a household expenditure from 10,001 to 30,000 Baht, 25.3% of the subjects had less than 10,001 Baht, and 18.3% had more than 30,000 Baht.

Table 7: Distribution of family history of diabetes and history of foot ulcers

Characteristics	Number	Percentage
<b>Family history of DM</b>		
Yes	166	55.3
No	134	44.7
Total	300	100.0
<b>History of self-foot ulcers</b>		
Yes	135	45.0
No	165	55.0
Total	300	100.0

More than half (55.3%) were the subjects' family had history of diabetes mellitus, while respondents with history of self- foot ulcer were 45%, as presented in the table 7.

Table 8: Distribution of blood sugar and period suffered from diabetes

<b>Characteristics</b>	<b>Number</b>	<b>Percentage</b>
<b>Blood sugar(mg/dl)</b>		
<121	98	32.7
121-165	124	41.3
>165	78	26.0
Total	300	100.0
Minimum=72 Maximum=342 Mean=148.97 SD=47.77		
<b>Period (years)</b>		
1-3	62	20.7
4-7	95	31.7
8-12	111	37.0
>12	32	10.7
Total	300	100.0
Minimum=1 Maximum=26 Mean=7.55 SD=4.442		

As presented in table 8, 41.3% of the subjects had blood sugar level between 121- 165 mg/dl, 32.7% had less than 121mg/dl, and 26% had more than 165 mg/dl. The range of blood sugar was 72-342 mg/dl, and the mean was 148.97mg/dl.

Regarding the periods (years) of having DM Type II, most of them (79.4%) suffered from diabetes mellitus over 4 years. 20.7% of the subjects suffered from diabetes between 1 to 3 years, 31.7% between 4 to 7 years, 37%; between 8 to 12 years, and 10.7% more than 12 years. The range of period suffered from diabetes was 1-26 years and the mean was 7.55 years.

Table 9: Distribution of BMI

Gender	BMI				Total
	<18.5	18.5-24.9	25-29.9	>=30	
Male	4(5.0)	34(42.5)	32(40.0)	10(12.5)	80(100)
Female	5(2.3)	98(44.5)	86(39.1)	31(14.1)	220(100)
Total	9(3.0)	132(44.0)	118(39.3)	42(13.7)	300(100)
Minimum=12 Maximum=47 Mean=25.66 SD=4.509					

As presented in table 9, the subjects (underweight) having BMI less than 18.5 were 3.0%, the subjects(normal weight) having range of 18.5-24.9 were 44.0%, range (overweight) of 25-29.9 were 39.3%, and 30 or over (obese) were 13.7%. In male, the subjects having BMI less than 18.5 were 5.0%, 18.5-24.9 were 42.5% and 25-29.9 were 40.0% and 30 or over of BMI were 12.5%. In the same group of BMI proportion of female were 2.3%, 44.5%, 39.1% and 14.1%, respectively.

## 4.2 Knowledge about preventive behaviors regarding foot ulcer

Table 10: Distribution of knowledge of preventive behaviors regarding foot ulcer

Level	Number	Percentage
Low	84	28.0
Moderate	169	56.3
High	47	15.7
Total	300	100.0
Minimum=9 Maximum=19 Mean=16.09 SD=1.519		

As presented in table 10, the score range of subjects for the total of 19 questions was 9 to 19, and the mean was 16.09. More than half (56.3%) of respondents had

moderate level of knowledge, 15.7% had high level of knowledge, and 28% had low level of knowledge of preventive behaviors regarding foot ulcer.

### 4.3 Attitudes about preventive behaviors regarding foot ulcer

Table 11: Distribution of attitudes of preventive behaviors regarding foot ulcer

Level	Number	Percentage
Low	80	26.7
Moderate	147	49.0
High	73	24.3
Total	300	100.0
Minimum=21 Maximum=33 Mean=28.71 SD=2.295		

As presented in the table 11, the score range of the subjects for the total of 11 questions was 21 to 33, and the mean was 28.71. Nearly half (49.0%) of the respondents had moderate level of attitude, 24.3% had high level of attitude, and 26.7% had low level of attitude of preventive behaviors regarding foot ulcer.

### 4.4 Practices about preventive behaviors regarding foot ulcer

Table 12: Distribution of practice of preventive behaviors regarding foot ulcer

Level	Number	Percentage
Low	120	40.0
Moderate	100	33.3
High	80	26.7
Total	300	100.0
Minimum=17 Maximum=33 Mean=26.43 SD=3.735		



As shown in Table 12, the score range of the subjects for the total of 11 questions was 17 to 33, and the mean was 26.43. High level of practices of preventive behaviors regarding foot ulcer was 26.7%, moderate level was 33.3%, and low level was 40.0%.

#### **4.5 Association between general characteristics with knowledge, with attitudes, and with practices of preventive behaviors regarding foot ulcer**

Table 13: Association between gender and attitudes of preventive behaviors regarding foot ulcer

	Attitudes status				Chi-Square	P value
	Low	Moderate	High	Total		
Gender	No (%)	No (%)	No (%)	No (%)		
Male	30(37.5)	35(43.7)	15(18.8)	80(100)	6.812	0.033
Female	50(22.7)	112(50.9)	58(26.4)	220(100)		
Total	80(26.7)	147(49.0)	73(24.3)	300(100)		

Table 13 shows that there was statistically significant association between gender and attitudes of preventive behaviors regarding foot ulcer ( $p < 0.05$ ). In female group, the high level of attitudes was 26.4% and low level of attitudes was 22.7%, while in male group, the high level of attitudes was 18.8%, the low level of attitudes was 37.5%.

Table 14: Association between gender and practices of preventive behaviors regarding foot ulcer

<b>Gender</b>	<b>Practices status</b>				<b>Chi-Square</b>	<b>P value</b>
	<b>Low</b>	<b>Moderate</b>	<b>High</b>	<b>Total</b>		
	<b>No (%)</b>	<b>No (%)</b>	<b>No (%)</b>	<b>No (%)</b>		
Male	45(56.3)	20(25.0)	15(18.7)	80(100)		
Female	75(34.1)	80(36.4)	65(29.5)	220(100)	12.038	0.002
Total	120(40.0)	100(33.3)	80(26.7)	300(100)		

As presented in the table 14, there was a significant association between gender and practices of preventive behaviors regarding foot ulcer ( $p < 0.01$ ). In female respondents, the high level of practices was 29.5% and low level of practices was 34.1%, while in male group, the high level of practices; 18.7%, the low level of practices was 56.3%.

Table 15: Association between age and practices of preventive behaviors regarding foot ulcer

<b>Age</b>	<b>Practices status</b>				<b>Chi-Square</b>	<b>P value</b>
	<b>Low</b>	<b>Moderate</b>	<b>High</b>	<b>Total</b>		
<b>(years)</b>	<b>No (%)</b>	<b>No (%)</b>	<b>No (%)</b>	<b>No (%)</b>		
30-44	10(47.6)	7(33.3)	4(19.1)	21(100)		
45-54	35(53.8)	21(32.3)	9(13.9)	65(100)		
55-64	41(38.3)	34(31.8)	32(29.9)	107(100)	14.730	0.065
65-74	30(33.3)	29(32.2)	31(34.5)	90(100)		
>74	4(23.5)	9(53.0)	4(23.5)	17(100)		
Total	120(40.0)	100(33.3)	80(26.7)	300(100)		

As presented in the table 15, there was no significant association between age and practices of preventive behaviors regarding foot ulcer ( $p$ -value 0.065).

Table 16: Association between marital status and practices of preventive behaviors regarding foot ulcer

Marital status	Practices status				Chi-Square	P value
	Low	Moderate	High	Total		
	No (%)	No (%)	No (%)	No (%)		
Single	11(57.9)	5(26.3)	3(15.8)	19(100)	12.870	0.045
Married	88(40.5)	65(30.0)	64(29.5)	217(100)		
Widowed	13(26.5)	25(51.0)	11(22.5)	49(100)		
Divorced	8(53.3)	5(33.3)	2(13.3)	15(100)		
Total	120(40.0)	100(33.3)	80(26.7)	300(100)		

Table 16 shows that there was statistically significant association between marital status and practices of preventive behaviors regarding foot ulcer ( $p < 0.05$ ). In the married and widowed subjects, high level of practices was 29.5%, 22.5%, and low level of practices was 40.5%, 26.5% respectively, while in single and divorced subjects, high level of practices was only 15.8%, 13.3%, and low level of practices 57.9%, 53.3% respectively.

Table 17: Association between educational status and practices of preventive behaviors regarding foot ulcer

Educational status	Practices status				Chi-value	P Square
	Low	Moderate	High	Total		
	No (%)	No (%)	No (%)	No (%)		
<Primary	6(46.2)	4(30.7)	3(23.1)	13(100)	6.422	0.600
Primary	89(42.4)	70(33.3)	51(24.3)	210(100)		
Secondary	13(29.5)	18(41.0)	13(29.5)	44(100)		
Vocation	6(31.6)	5(26.3)	8(42.1)	19(100)		
>Vocation	6(42.9)	3(21.4)	5(35.7)	14(100)		
Total	120(40.0)	100(33.3)	80(26.7)	300(100)		

Table 17 shows that there was no a significant association between educational status and practices of preventive behaviors regarding foot ulcer (p-value 0.600).

Table 18: Association between occupation and attitudes of preventive behaviors regarding foot ulcer

Occupation	Attitudes status				Chi-Square	P value
	Low	Moderate	High	Total		
	No (%)	No (%)	No (%)	No (%)		
General labor	14(36.8)	18(47.4)	6(15.8)	38(100)	26.361	0.023
Agricultural worker	10(52.6)	5(26.3)	4(21.1)	19(100)		
Own small business	3(11.5)	17(65.4)	6(23.1)	26(100)		
Business owner	3(27.3)	3(27.3)	5(45.4)	11(100)		
Housekeeper	40(21.9)	94(51.4)	49(26.7)	183(100)		
Retired person	2(22.2)	5(55.6)	2(22.2)	9(100)		
Not working	5(62.5)	3(37.5)	0	8(100)		
Other	3(50.0)	2(33.3)	1(16.7)	6(100)		
Total	120(40.0)	100(33.3)	80(26.7)	300(100)		

As presented in the table 18, there was a significant association between occupation and attitudes of preventive behaviors regarding foot ulcer ( $p < 0.05$ ). Out of 300 subjects housekeeper were 183, general labor 38, own small business 26, and agricultural worker 19. In the group of housekeeper and general labor, high level of attitudes was 26.7% and 15.8 %, and low level of attitudes was 21.9 and 36.8 % respectively. While in the group of own small business and agricultural worker, high level of attitudes was 23.1% and 21.1%, and low level of attitudes was 11.5% and 52.6% respectively.

Table 19: Association between occupation and practices of preventive behaviors regarding foot ulcer

Occupation	Practices status				Chi-Square	P value
	Low	Moderate	High	Total		
	No (%)	No (%)	No (%)	No (%)		
General labor	21(55.3)	11(28.9)	6(15.8)	38(100)	20.376	0.119
Agricultural worker	10(52.6)	7(36.9)	2(10.5)	19(100)		
Own small business	13(50.0)	10(38.5)	3(11.5)	26(100)		
Business owner	5(45.4)	2(18.2)	4(36.4)	11(100)		
Housekeeper	60(32.8)	62(33.9)	61(33.3)	183(100)		
Retired person	3(33.3)	3(33.3)	3(33.3)	9(100)		
Not working	5(62.5)	3(37.5)	0	8(100)		
Other	3(50.0)	2(33.3)	1(16.7)	6(100)		
Total	120(40.0)	100(33.3)	80(26.7)	300(100)		

As presented in the table 19, there was no significant association between occupation and practices of preventive behaviors regarding foot ulcer (p-value 0.119).

Table 20: Association between numbers of family member and practices of preventive behaviors regarding foot ulcer

Family member (person)	Practices status				Chi-Square	P value
	Low	Moderate	High	Total		
	No (%)	No (%)	No (%)	No (%)		
1-3	27(48.2)	14(25.0)	15(26.8)	56(100)	9.007	0.059
4-6	77(42.3)	57(31.3)	48(26.4)	182(100)		
>6	16(25.8)	29(46.8)	17(27.4)	62(100)		
Total	120(40.0)	100(33.3)	80(26.7)	300(100)		

As presented in the table 20, there was no significant association between family member and practices of preventive behaviors regarding foot ulcer (p-value 0.059).

Table 21: Association between monthly household income and practices of preventive behaviors regarding foot ulcer

Monthly income (Baht)	Practices status				Chi-Square	P value
	Low No (%)	Moderate No (%)	High No (%)	Total No (%)		
<10,001	43(56.6)	25(32.9)	8(10.5)	76(100)	35.706	0.000
10,001-30,000	69(40.8)	57(33.7)	43(25.5)	169(100)		
>30,000	8(14.6)	18(32.7)	29(52.7)	55(100)		
Total	120(40.0)	100(33.3)	80(26.7)	300(100)		

The association between monthly household income and practices of preventive behaviors regarding foot ulcer showed statistically strong significance ( $p < 0.001$ ) as shown in the table 21, especially within the group of monthly household income of more than 30,000 baht, there was a positive direction of association. In the group of less than 10,001 Baht, those whose practice level was high were 10.5%, in the group of 10,001-30,000 Baht were 25.5%, and in the group of more than 30,000 were 52.7%. While in the group of monthly household income less than 10,001 Baht, those whose practice level was low were 56.6%, in the group of 10,001-30,000 Baht were 40.8%, and in the group more than 30,000 Baht were only 14.6%.

Table 22: Association between monthly household expenditure and practices of preventive behaviors regarding foot ulcer

Monthly expenditure (Baht)	Practices status				Chi-Square	P value
	Low No (%)	Moderate No (%)	High No (%)	Total No (%)		
<10,001	52(56.5)	29(31.5)	11(12.0)	92(100)		
10,001-30,000	62(37.3)	57(34.4)	47(28.3)	166(100)	31.702	0.000
>30,000	6(14.3)	14(33.3)	22(52.4)	42(100)		
Total	120(40.0)	100(33.3)	80(26.7)	300(100)		

As presented in the table 22, this study found a strong significant association between monthly household expenditure and practices of preventive behaviors regarding foot ulcer ( $p < 0.001$ ), and it was similar to the association between monthly household income and practices of preventive behaviors regarding foot ulcer in terms of bracket range with positive direction of association in the group of  $> 30,000$  baht monthly household expenditure.

Table 23: Association between family history of DM and attitudes of preventive behaviors regarding foot ulcer

Family history	Attitudes status				Chi-Square	P value
	Low No (%)	Moderate No (%)	High No (%)	Total No (%)		
Yes	34(20.5)	88(53.0)	44(26.5)	166(100)		
No	46(34.3)	59(44.0)	29(21.7)	134(100)	7.273	0.026
Total	80(26.7)	147(49.0)	73(24.3)	300(100)		

Table 23 shows that there was a significant association between family history of DM and attitudes of preventive behaviors regarding foot ulcer ( $p < 0.05$ ). Those

who had high level of attitudes related to family history of DM at 26.8%, those in low attitudes level related to family history of DM at 19.6 %. On the other hand, those who had high level of attitudes related to none family history of DM at 21.8% and those in low level of attitudes related to none family history of DM at 34.0 %.

Table 24: Association between family history of DM and practices of preventive behaviors regarding foot ulcer

<b>Family history</b>	<b>Practices status</b>				<b>Chi-Square</b>	<b>P value</b>
	<b>Low</b>	<b>Moderate</b>	<b>High</b>	<b>Total</b>		
	<b>No (%)</b>	<b>No (%)</b>	<b>No (%)</b>	<b>No (%)</b>		
Yes	50(30.1)	54(32.5)	62(37.4)	166(100)	25.045	0.000
No	70(52.2)	46(34.3)	18(13.5)	134(100)		
Total	120(40.0)	100(33.3)	80(26.7)	300(100)		

As shown in the table 24, there was a significant association between family history of DM and practices of preventive behaviors regarding foot ulcer ( $p < 0.001$ ). In the respondents with family history of DM, the high level of practice was 38.6 % and low level was 30.0%. On the other hand, in those without family history of DM, high level of practices was 14.3 % and low level of practices was 50.3%.



Table 25: Association between history of foot ulcer and practices of preventive behaviors regarding foot ulcer

Foot ulcer history	Practices status				Chi- Square	P value
	Low	Moderate	High	Total		
	No (%)	No (%)	No (%)	No (%)		
Yes	49(36.3)	42(31.1)	44(32.6)	135(100)	4.438	0.109
No	71(43.0)	58(35.2)	36(21.8)	165(100)		
Total	120(40.0)	100(33.3)	80(26.7)	300(100)		

As presented in the table 25, in subjects with self-history of foot ulcer, high level of practices was 32.6% and low level of practices was 36.3%, while in those without history of foot ulcer, high level of practices was 21.8% and low level of practices was 43.0%, but there was no significant association between self-history of foot ulcer and practices of preventive behaviors regarding foot ulcer (p-value 0.109). Nevertheless, this table showed that the samples with foot ulcer history seemed to have constant practice status, while those without seemed to differ in practice status. Though there was no significant relationship between these 2 variables, it can be seen that self-care worked in the group of foot ulcer history patients.

Table 26: Association between BMI and practices of preventive behaviors regarding foot ulcer

BMI	Practices status				Chi-Square	P value
	Low	Moderate	High	Total		
	No (%)	No (%)	No (%)	No (%)		
<18.5	3(33.3)	4(44.4)	2(22.2)	9(100)	9.840	0.132
18.5-24.9	57(43.2)	45(34.1)	30(22.7)	132(100)		
25-29.9	38(32.2)	39(33.1)	41(34.7)	118(100)		
>=30	22(53.7)	12(29.3)	7(17.0)	41(100)		
Total	120(40.0)	100(33.3)	80(26.7)	300(100)		

As presented in the table 26, there was no a significant association between BMI and practices of preventive behaviors regarding foot ulcer (p-value 0.132).

Table 27: Association between blood sugar and practices of preventive behaviors regarding foot ulcer

Blood sugar (mg/dl)	Practices status				Chi-Square	P value
	Low	Moderate	High	Total		
	No (%)	No (%)	No (%)	No (%)		
<121	36(36.7)	27(27.6)	35(35.7)	98(100)	6.358	0.174
121-165	52(41.9)	45(36.3)	27(21.8)	124(100)		
>165	32(41.0)	28(35.9)	18(23.1)	78(100)		
Total	120(40.0)	100(33.3)	80(26.7)	300(100)		

As shown in the table 27, there was no significant association between level of blood sugar and practices of preventive behaviors regarding foot ulcer (p-value 0.174).

Table 28: Association between periods suffered from diabetes mellitus and practices of preventive behaviors regarding foot ulcer foot ulcer

Period (years)	Practices status				Chi- Square	P value
	Low	Moderate	High	Total		
	No (%)	No (%)	No (%)	No (%)		
1-3	31(50.0)	22(35.5)	9(14.5)	62(100)	11.235	0.081
4-7	42(44.2)	30(31.6)	23(24.2)	95(100)		
8-12	38(34.2)	38(34.2)	35(31.5)	111(100)		
>12	9(28.1)	10(31.3)	13(40.6)	32(100)		
Total	120(40.0)	100(33.3)	80(26.7)	300(100)		

As presented in the table 28, there was no a significant association between period suffered from diabetes mellitus and practices of preventive behaviors regarding foot ulcer (p-value 0.081).

#### 4.6 Association between knowledge and attitudes of preventive behaviors regarding foot ulcer

Table 29: Association between knowledge and attitudes of preventive behaviors regarding foot ulcer

Knowledge status	Attitudes status				Chi- Square	P value
	Low	Moderate	High	Total		
	No (%)	No (%)	No (%)	No (%)		
Low	32(38.1)	36(42.9)	16(19.0)	84(100)	11.753	0.019
Moderate	40(23.7)	81(47.9)	48(28.4)	169(100)		
High	8(17.0)	30(63.8)	9(19.2)	47(100)		
Total	80(26.7)	147(49.0)	73(24.3)	300(100)		

As presented in table 29, there was a significance association between knowledge and attitude of preventive behaviors regarding foot ulcer ( $p < 0.05$ ). 19.2%

of the subjects had high level of knowledge and high level of attitudes, while 17.0% of the subjects had low level of attitudes but high knowledge was 17.0%. On the other hand, the subjects with low level of knowledge and low level of attitudes were 38.1%, but with high level of attitudes and low knowledge level at 19.0% respectively.

#### 4.7 Association between knowledge and practices of preventive behaviors regarding foot ulcer

Table 30: Association between knowledge and practices of preventive behaviors regarding foot ulcer

Knowledge status	Practices status				Chi-Square	P value
	Low No (%)	Moderate No (%)	High No (%)	Total No (%)		
Low	32(38.1)	32(38.1)	20(23.8)	84(100)	3.443	0.487
Moderate	71(42.0)	49(29.0)	49(29.0)	169(100)		
High	17(36.2)	19(40.4)	11(23.4)	47(100)		
Total	120(40.0)	100(33.3)	80(26.7)	300(100)		

As shown in the table 20, there was no significance between knowledge and practices of preventive behaviors regarding foot ulcer (p-value 0.487). Respondents with high knowledge had high level of practices for 23.4% and low level of practices for 36.2%, while those with low knowledge had high practice at 23.8%, and those with low knowledge had low practice at 38.1% respectively.

#### 4.8 Association between attitudes and practices of preventive behaviors regarding foot ulcer

Table 31: Association between attitudes and practices of preventive behaviors regarding foot ulcer

Attitudes status	Practices status				Chi-Square	P value
	Low	Moderate	High	Total		
	No (%)	No (%)	No (%)	No (%)		
Low	40(50.0)	27(33.7)	13(16.3)	80(100)	10.252	0.036
Moderate	57(38.8)	43(29.2)	47(32.0)	147(100)		
High	23(31.5)	30(41.1)	20(27.4)	73(100)		
Total	120(40.0)	100(33.3)	80(26.7)	300(100)		

As presented in the table 31, there was a significance association between attitudes and practices of preventive behaviors regarding foot ulcer ( $p < 0.05$ ). In subjects with high level of attitudes had high level of practices at 27.4% and had low level of practice at 31.5%. On the other hand, in subjects with low level of attitudes had high level of practices at 16.3% and had low level of practices at 50.0%.