DATA ANALYSIS & INTERPRETATION

CHAPTER – IV
DATA ANALYSIS AND INTERPRETATION

OBJECTIVES:

- To assess the level of knowledge, attitude and practice of foot care among diabetic patients.
- To assess foot care practices among adult diabetic patients.
- To create awareness among the public regarding foot care.
- To assess prevalence of diabetic foot and related foot complications

The analysis is a process of organizing and synthesizing the data in such a way that the research questions can be answered and the hypotheses are tested**.** This chapter deals with the analysis and interpretation of the data collected from 100 type2 diabetes mellitus patients to assess the level of knowledge, attitude and practice of diabetic foot care among diabetic patients in selected area of Puducherry.

The data was organized, tabulated and analyzed according to the objectives. Data analysis begins with description that applies to the study in which the data are numerical with some concepts. Descriptive statistics allows the researcher to organize the data and to examine the quantum of information and inferential statistics is used to determine the relationship.

ORGANISATION OF THE DATA:

Data collected were organized under the following sections

Section A: Description of the demographic variables of the diabetes mellitus patient in selected community area

Section B: TOOL TO ASSESS THE PATIENT KNOWLEDGE ABOUT FOOT CARE.

Section C: TOOL TO ASSESS THE ATTITUDE OF PATIENTS TOWARDS FOOTCARE

Section D: TOOL TO ASSESS PATIENT'S PRACTICES ON FOOT CARE

SECTION A: Description of the demographic variables of the diabetes mellitus patients in the selected community area.

TABLE 4.1: Frequency and Percentage wise distribution of demographic variables among the diabetes mellitus patients in the selected community area.

[N=100]

SL.NO	DEMOGRAPHIC VARIABLES	FREQUENCY [n]	PERCENTAGE [%]	Cumulative Percentage
1.	**AGE IN YEARS**			
	<30 years	6	6%	6%
	30-50 years	27	27%	33%
	51-70 years	50	50%	83%
	>70 years	17	17%	100%
2.	**GENDER**			
	Male	57	57%	57%
	Female	43	43%	100%
3.	**EDUCATION**			
	Illiterate	38	38%	38%
	Educated	62	62%	100%
4.	**OCCUPATION**			
	Government sector	15	15%	15%
	Private sector	26	26%	41%
	Business	16	16%	57%
	Others	43	43%	100%
5.	**FAMILY INCOME**			
	Less than 10,000	12	12%	12%
	10,000-30,000	45	45%	57%
	30,000-50,000	35	35%	92%
	More than 50,000	8	8%	100%
6.	**MARITAL STATUS**			
	Single	17	17%	17%
	Married	79	79%	96%
	Divorced	4	4%	100%

7.	**PERSONAL HABITS**			
	Smoking	19	19%	19%
	Alcohol	21	21%	40%
	Tobacco Chewing	10	10%	50%
	Others	50	50%	100%
8.	**DIETARY HABITS**			
	Vegetarian	24	24%	24%
	Non-vegetarian	76	76%	100%
9.	**FAMILY HISTORY OF DIABETES**			
	Parents	46	46%	46%
	Siblings	22	22%	68%
	No history of diabetes	32	32%	100%
10.	**DURATION OF ILLNESS**			
	Less than a year	19	19%	19%
	2-5 years	38	38%	57%
	More than 5 years	43	43%	100%
11.	**TAKING TREATMENT FOR DIABETES MELLITUS**			
	Yes	71	71%	71%
	No	29	29%	100%
12.	**TYPE OF TREATMENT**			
	Insulin therapy	28	28%	28%
	Oral Diabetic Medication	50	50%	78%
	None	22	22%	100%
13.	**PLACE OF TREATMENT**			
	Government hospital	60	60%	60%
	Private hospital	14	14%	74%
	Others	26	26%	100%

INFERENCE and MAJOR FINDINGS OF TABLE 4.1

Reveals frequency and Percentage wise distribution of demographic variables among diabetes mellitus patients in the selected community area. Out of the 100 patients who were interviewed,

- **Majority (50%) of the diabetic patients between the age group of 51-70 years.**
- **Majority (57%) of the diabetic patients are Male.**
- **Majority of the diabetic patients (62%) are educated.**
- **Majority (43%) of the diabetic patients are employed in others (Except Business, Government and Private Sectors).**
- **45% of diabetic patients are between the family income of Rs. 10,000-30,000.**
- **79% of diabetic patients are Married.**
- **Among the diabetic patients, 50% are having Smoking, Alcohol and Tobacco chewing habits and other 50% are not having any personal habits.**
- **76% of diabetic patients are having Non-vegetarian dietary habit.**
- **46% of diabetic patient's parents are having diabetic history.**
- **43% of diabetic patients are having the illness more than 5 years.**
- **71% of diabetic patients are taking treatment for the illness.**
- **50% of diabetic patients are taking oral diabetic medication treatment.**
- **60% of diabetic patients are taking treatment from Governments hospitals.**

FIGURE 4.1: Frequency of Age group

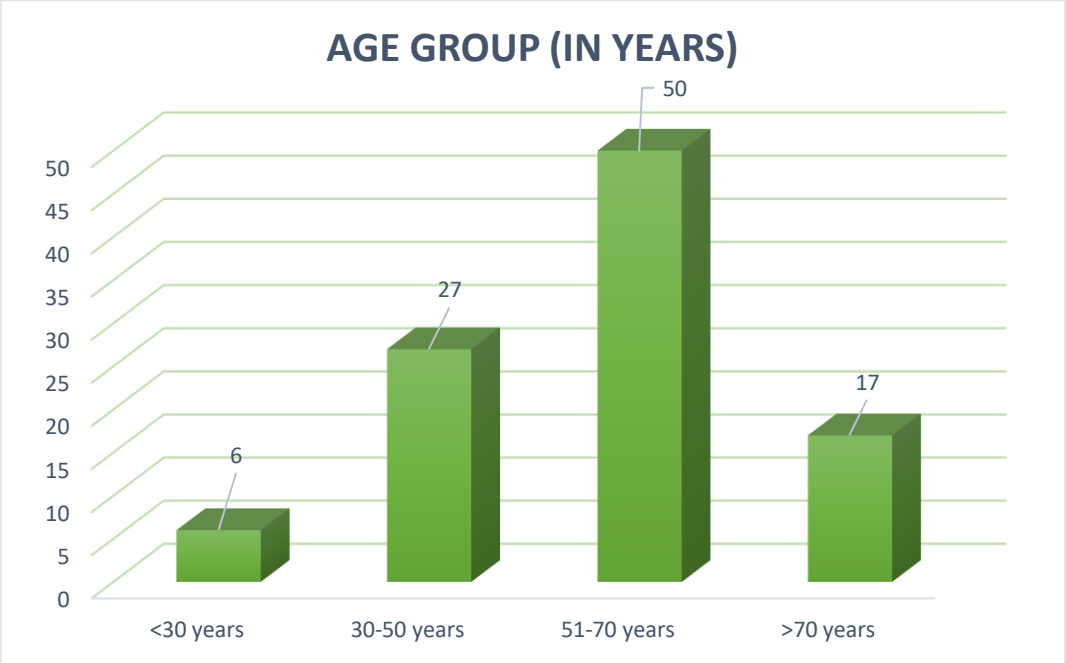


FIGURE 4.2: Percentage of gender distribution

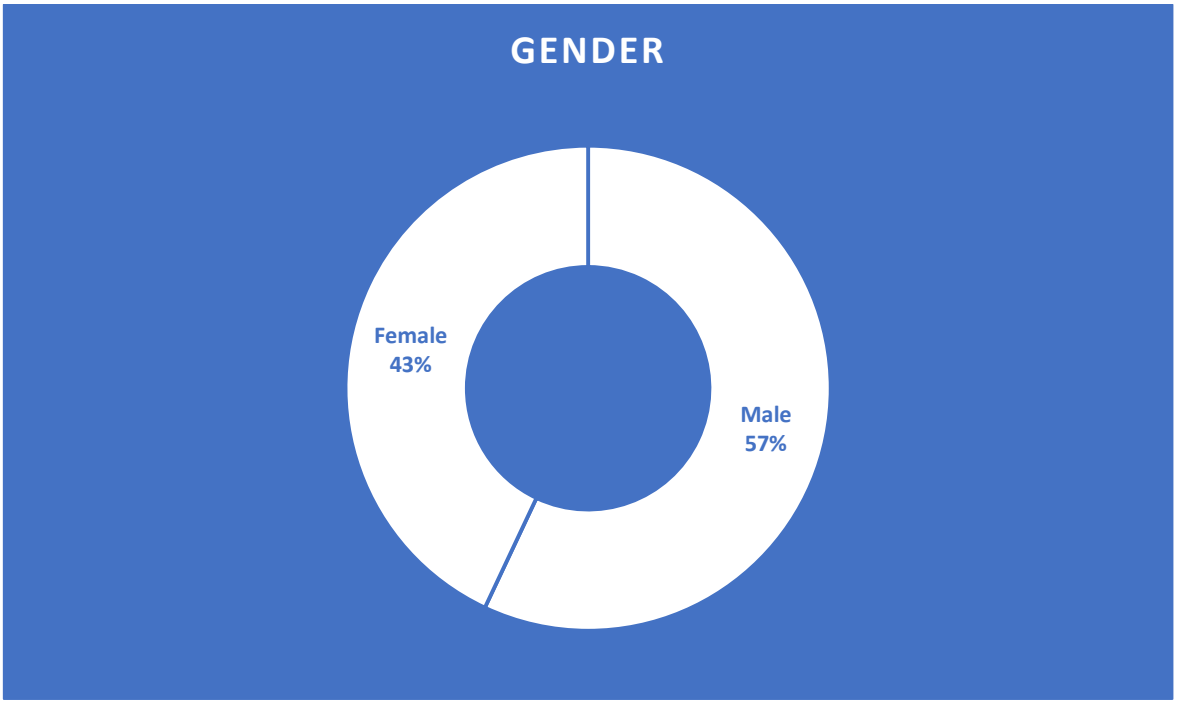


FIGURE 4.3: Frequencies of education status

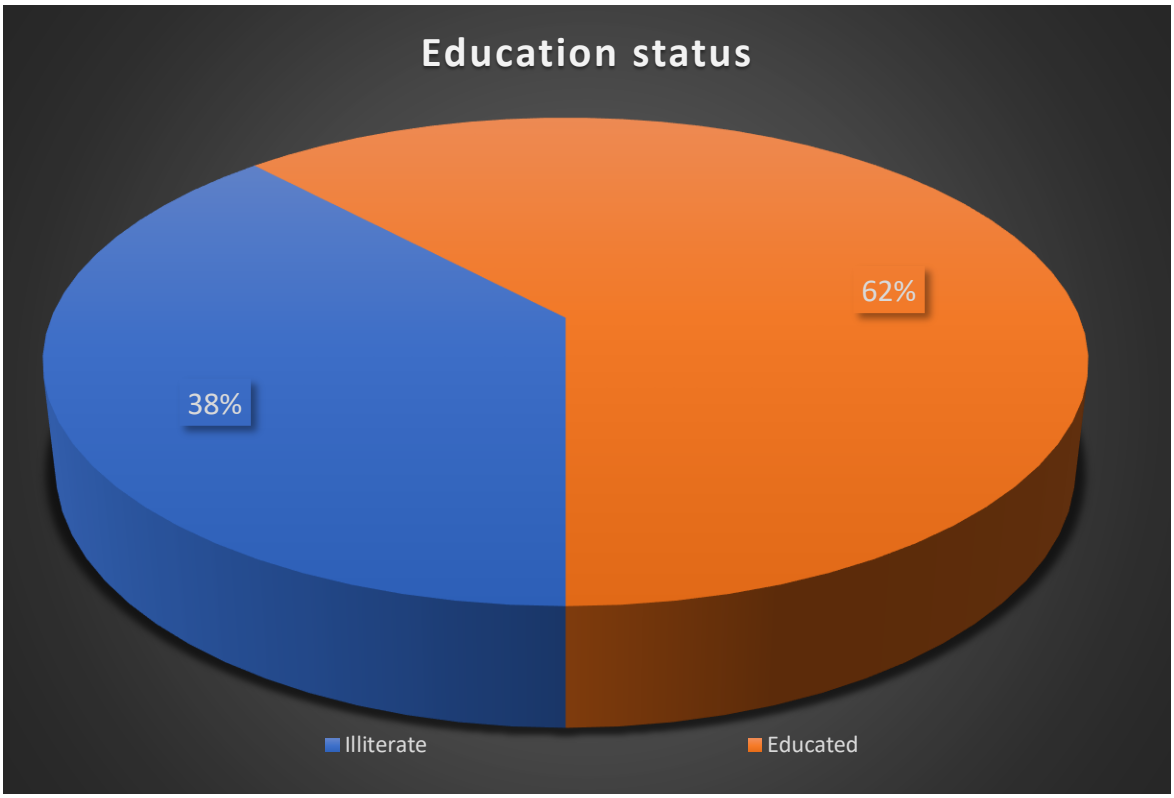


FIGURE 4.4: Frequencies of Occupation

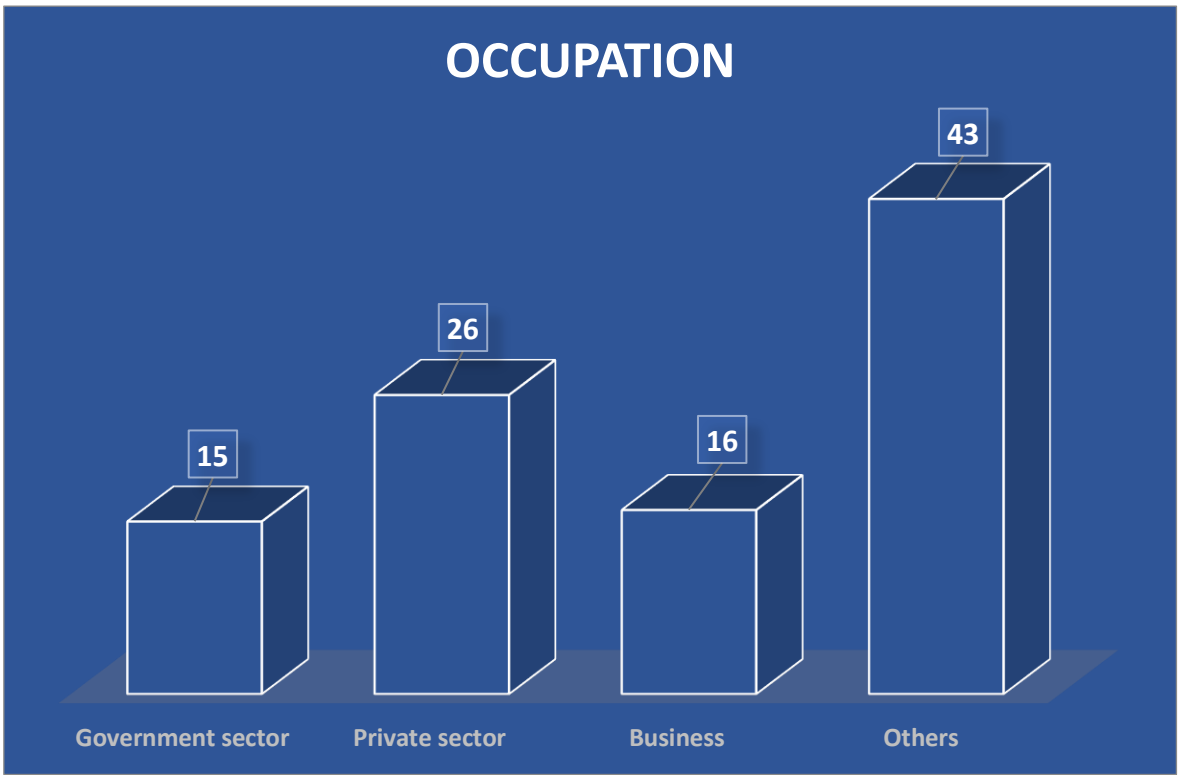


FIGURE 4.5: Frequencies of Family Income

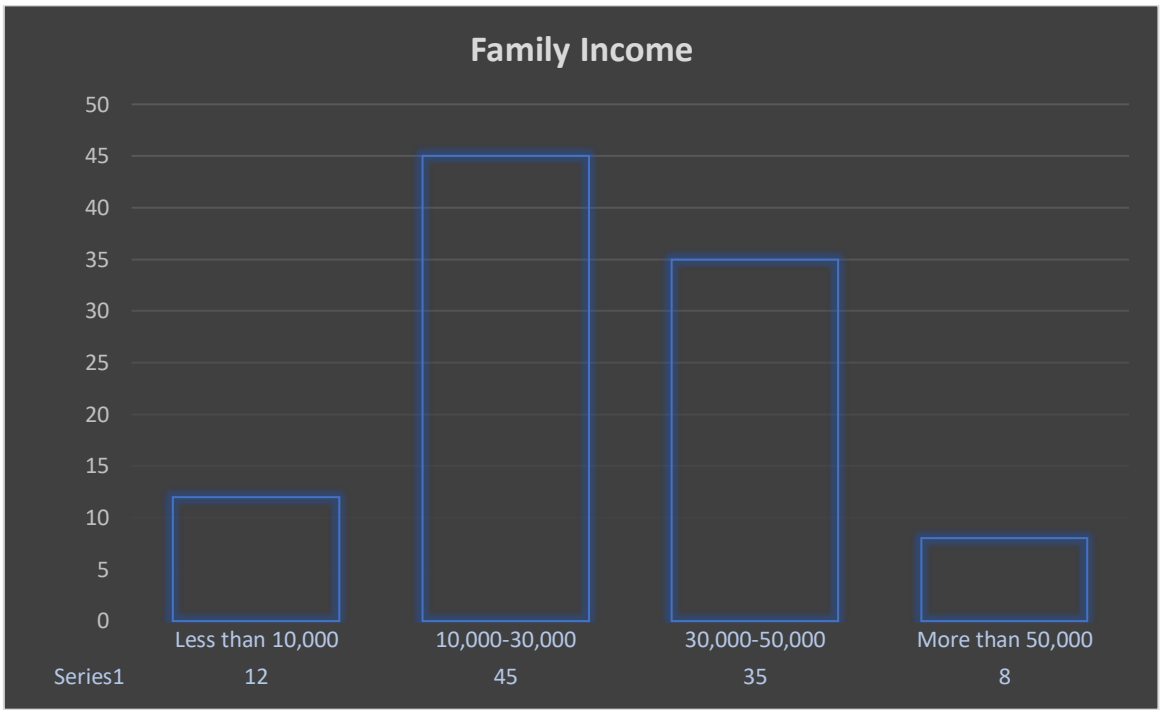


FIGURE 4.6: Frequencies of Marital Status

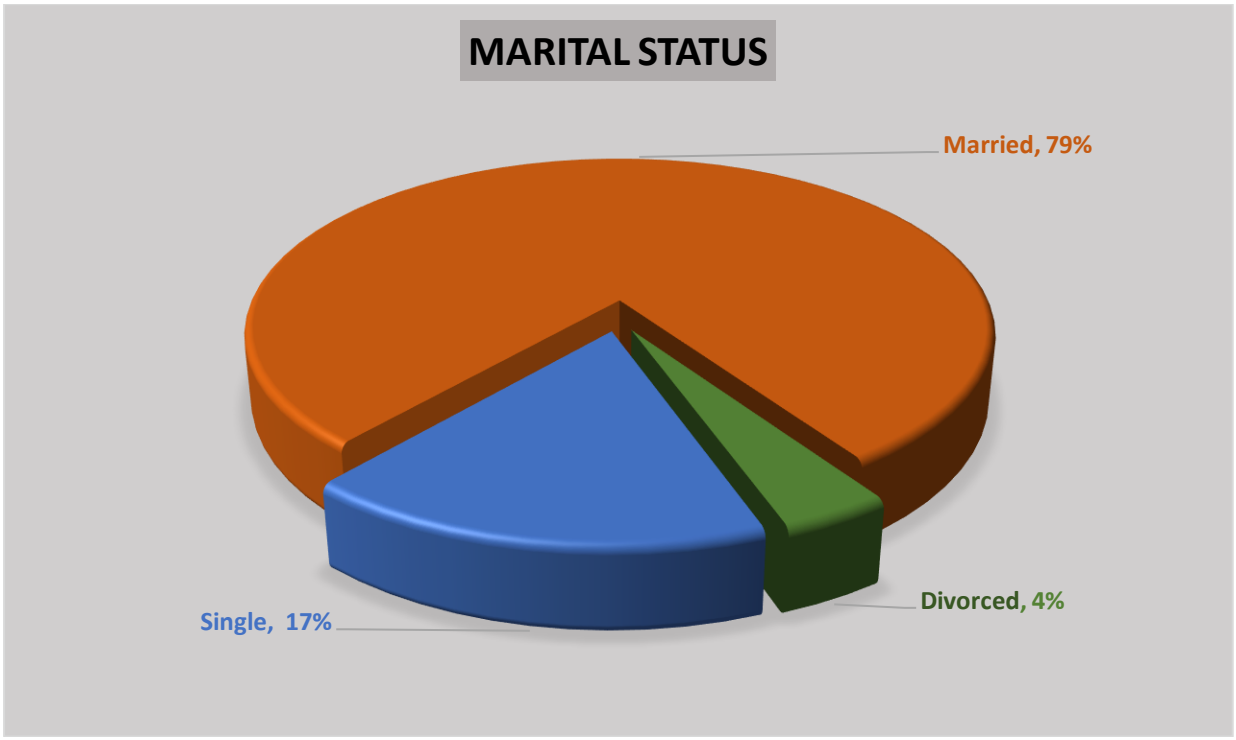


FIGURE 4.7: Frequencies Personal habits

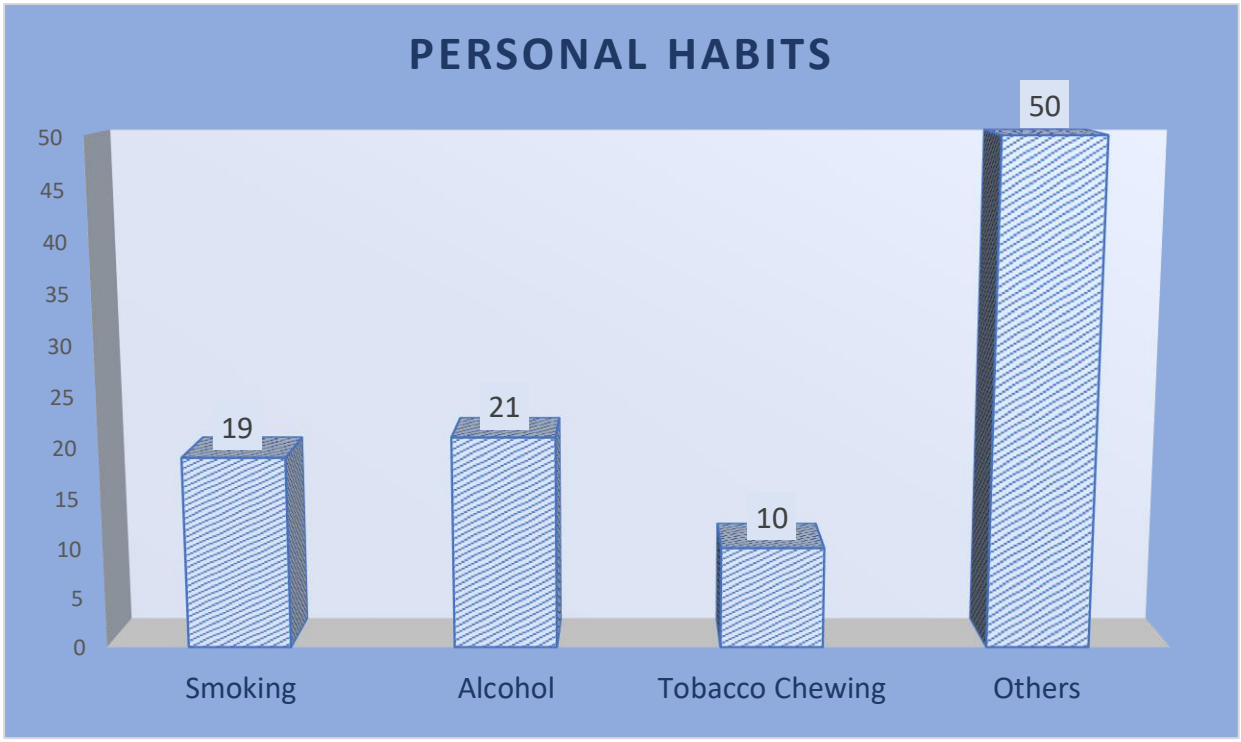


FIGURE 4.8: Frequencies of Dietary habits

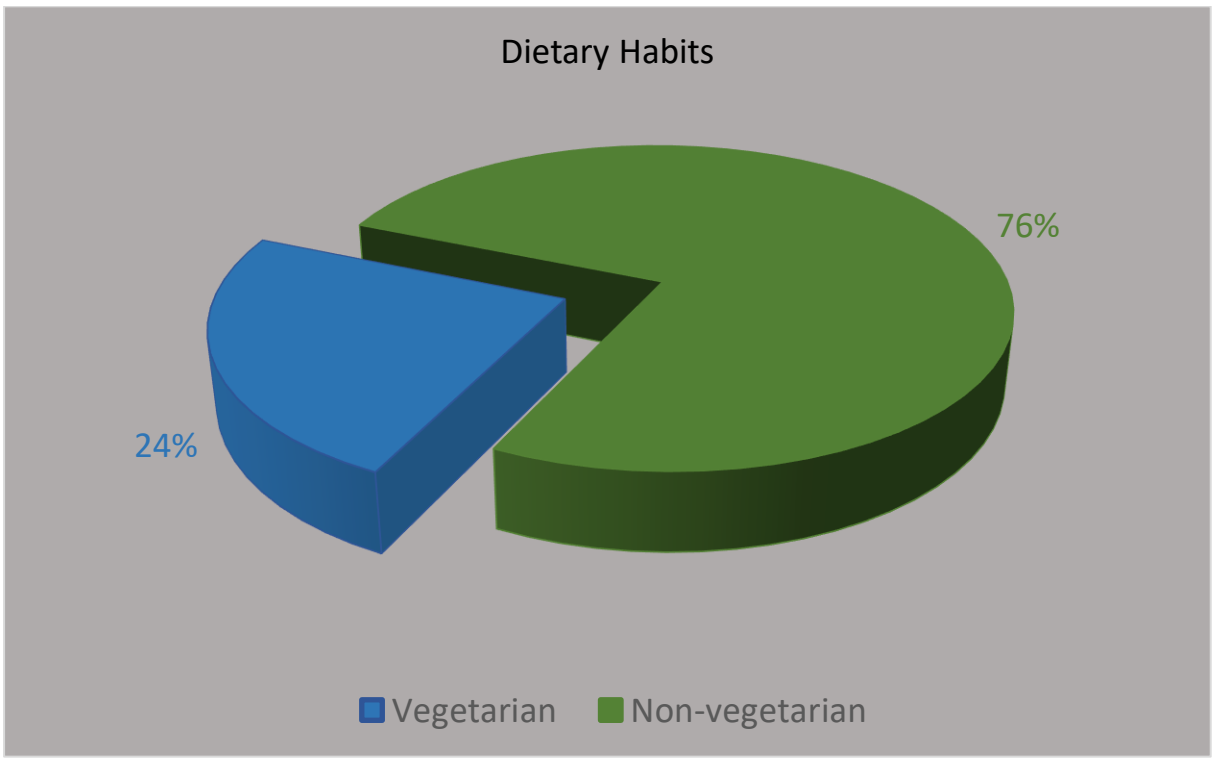


FIGURE 4.9: Frequencies of Family history of Diabetes

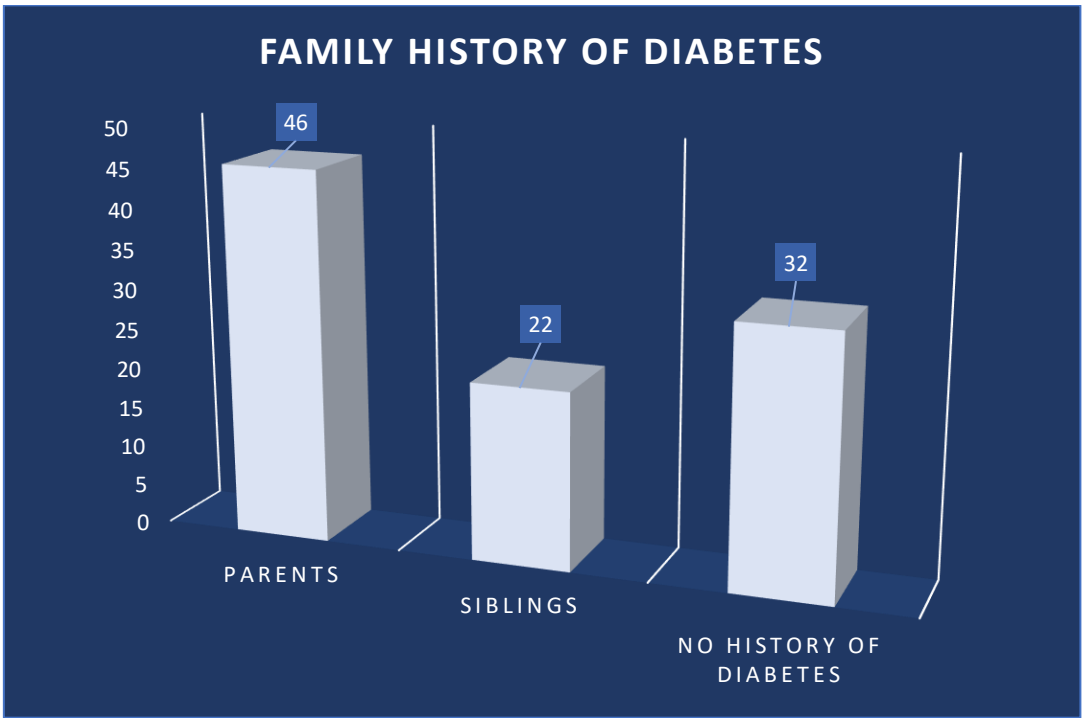


FIGURE 4.10: Frequencies of Duration of illness

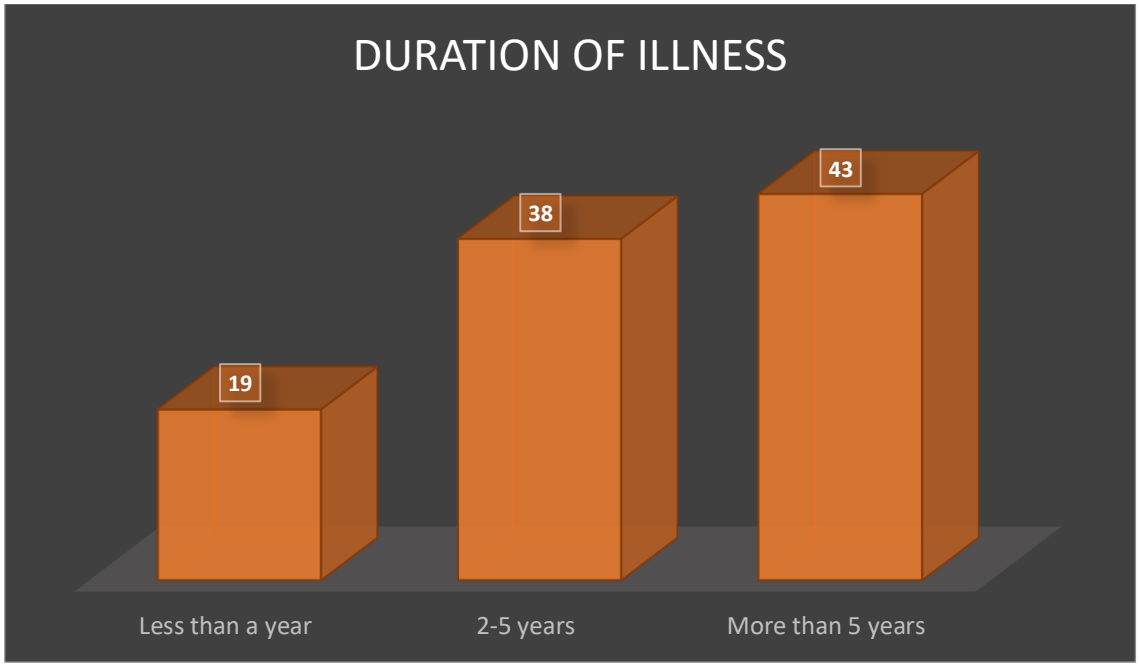


FIGURE 4.11: Percentage of patients taking treatment for diabetes mellitus

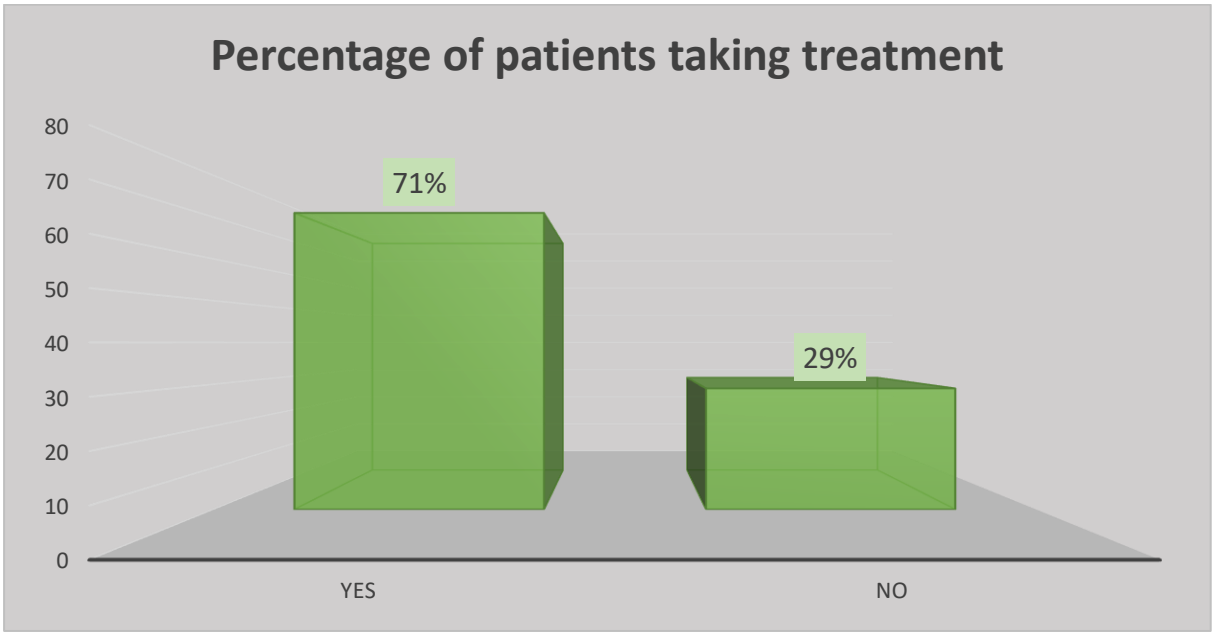


FIGURE 4.12: Frequencies of Type of treatment

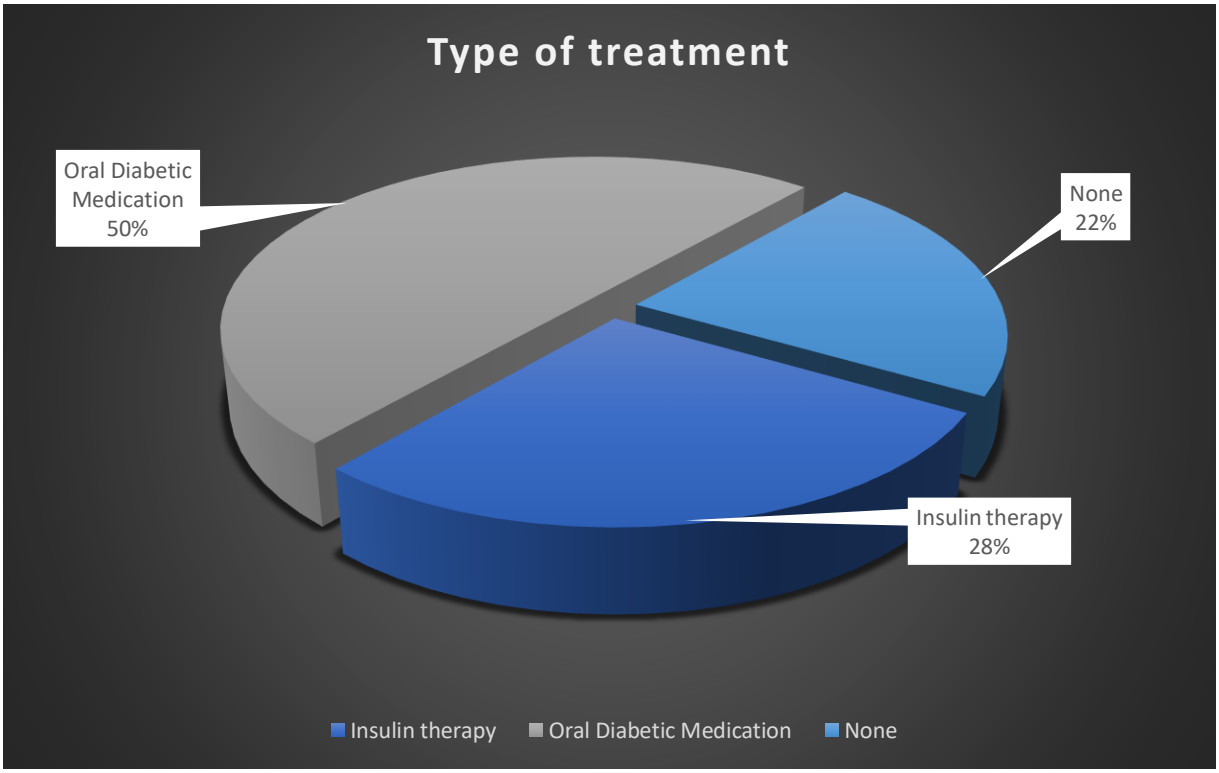
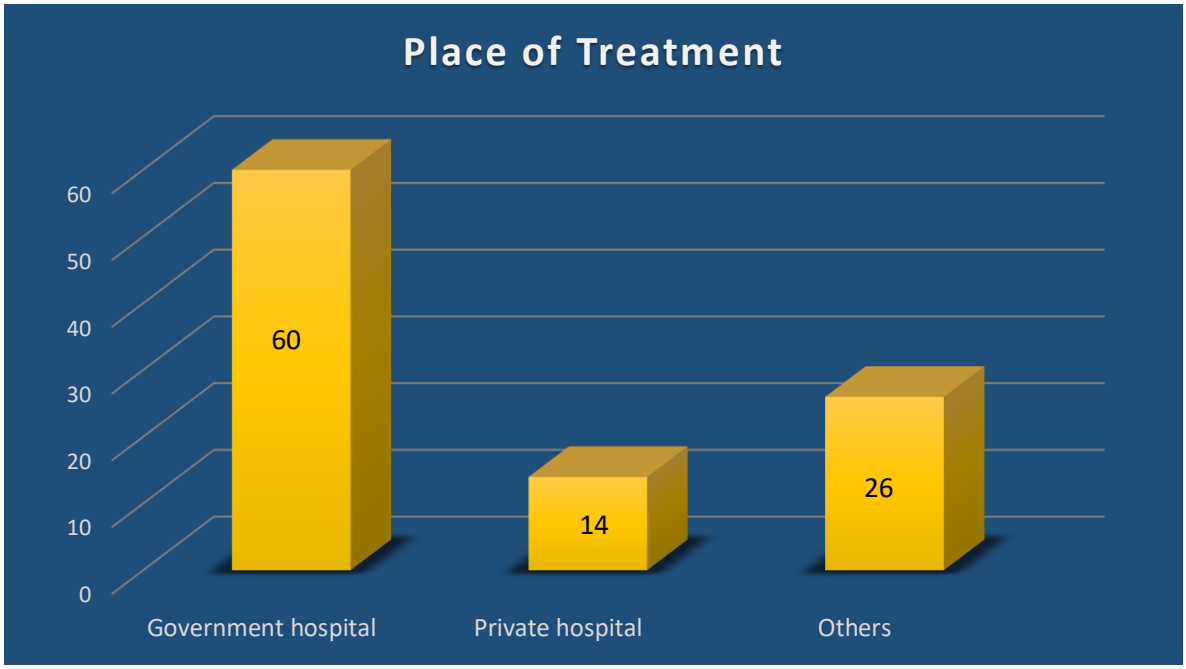


FIGURE 4.13: Frequencies of Place of treatment



SECTION B: TOOL TO ASSESS THE PATIENT KNOWLEDGE ABOUT FOOT CARE.

TABLE 4.2: Frequency and Percentage wise distribution of level of knowledge about foot care among the diabetes mellitus patients in selected community area.

Level of knowledge	Frequency (n)	Percentage (%)
Inadequate level of knowledge	29	29%
Moderate level of knowledge	69	69%
Adequate level of knowledge	2	2%
Total	**100**	**100%**

INFERENCE OF TABLE 4.2

Shows frequency and percentage wise distribution of level of knowledge regarding self - management diabetes among type 2 diabetes patients in selected community area.

* **Majority of the patients (69%) have moderate level of knowledge.**
* **29% of Patients have inadequate level of knowledge.**
* **Only 2% of the patients have adequate level of knowledge.**

FIGURE 4.14: Showing the level of knowledge about foot care among the diabetes mellitus patients in selected community area.

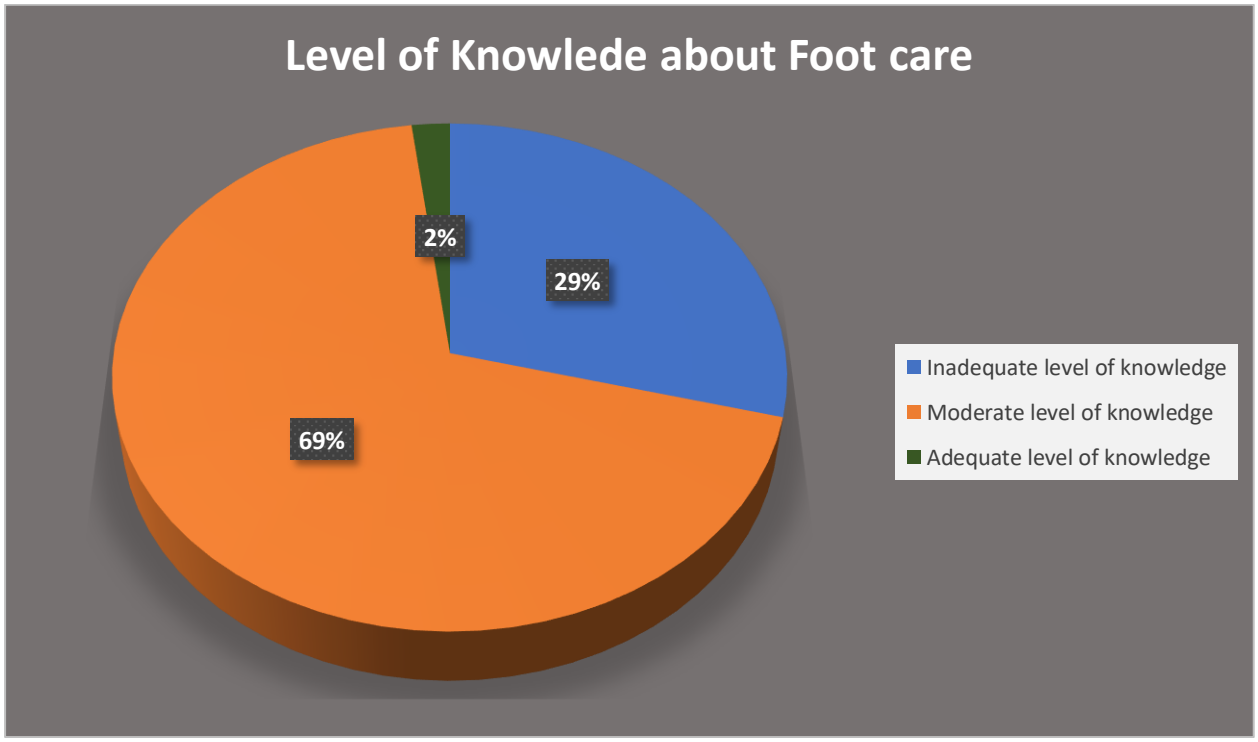


TABLE 4.3 Association between level of knowledge about foot care among Diabetic patients with selected demographic variables.

Sl. No:	DEMOGRAPHIC VARIABLES	LEVEL OF KNOWLEDGE						Chi-Square (χ^2), Df and p-value
		Inadequate		Moderate		Adequate		
		n	%	n	%	n	%	
1.	**AGE IN YEARS**							
	<30 years	4	66.7	2	33.3	0	0	$\chi^2 = 7.686$
	30-50 years	5	18.5	22	81.5	0	0	df = 6
	51-70 years	15	30	34	68	1	2	p = 0.262
	>70 years	5	29.4	11	64.7	1	5.9	NS
2.	**GENDER**							$\chi^2 = 3.614$
	Male	19	33.3	38	66.7	0	0	df = 2
	Female	10	23.3	31	72.1	2	4.7	p = 0.164
								NS
3.	**EDUCATION**							$\chi^2 = 0.312$
	Illiterate	10	26.3	27	71.1	1	2.6	df = 2
	Educated	19	30.6	42	67.7	1	1.6	p = 0.856
								NS
4.	**OCCUPATION**							
	Government sector	4	26.7	11	73.3	0	0	$\chi^2 = 3.255$
	Private sector	7	26.9	19	73.1	0	0	df = 6
	Business	6	37.5	9	56.3	1	6.3	p = 0.776
	Others	12	27.9	30	69.8	1	2.3	NS

5.	**FAMILY INCOME**						
	Less than 10,000	3	25	8	66.7	1	8.3	**$\chi^2 = 8.076$**
	10,000-30,000	11	24.4	33	73.3	1	2.2	**df = 6**
	30,000-50,000	10	28.6	25	71.4	0	0	**p = 0.233**
	More than 50,000	5	62.5	3	37.5	0	0	**NS**
6.	**MARITAL STATUS**							**$\chi^2 = 0.981$**
	Single	4	23.5	13	76.5	0	0	**df = 4**
	Married	24	30.4	53	67.1	2	2.5	**p = 0.913**
	Divorced	1	25	3	75	0	0	**NS**
7.	**PERSONAL HABITS**							
	Smoking	4	21.1	15	78.9	0	0	**$\chi^2 = 6.471$**
	Alcohol	9	42.9	12	57.1	0	0	**df = 6**
	Tobacco Chewing	1	10	9	90	0	0	**p = 0.373**
	Others	15	30	33	66	2	4	**NS**
8.	**DIETARY HABITS**							**$\chi^2 = 6.527$**
	Vegetarian	7	29.2	15	62.5	2	8.3	**df = 2**
	Non-vegetarian	22	28.9	54	71.1	0	0	**p = 0.038**
								S*
9.	**FAMILY HISTORY OF DIABETES**							
	Parents	17	37	28	60.9	1	2.2	**$\chi^2 = 3.338$**
	Siblings	5	22.7	17	77.3	0	0	**df = 4**
	No history of diabetes	7	21.9	24	75	1	3.1	**p = 0.503**
								NS

10.	**DURATION OF ILLNESS**						**χ^2 = 5.458**
	Less than a year	3	15.8	16	84.2	0	0	**df = 4**
	2-5 years	14	36.8	24	63.2	0	0	**p = 0.243**
	More than 5 years	12	27.9	29	67.4	2	4.7	**NS**
11.	**TAKING TREATMENT FOR DIABETES MELLITUS**						**χ^2 = 2.419**
	Yes	23	32.4	46	64.8	2	2.8	**df = 2**
	No	6	20.7	23	79.3	0	0	**p = 0.298**
								NS
12.	**TYPE OF TREATMENT**						
	Insulin therapy	10	35.7	16	57.1	2	7.1	**χ^2 = 6.748**
	Oral Diabetic Medication	14	28	36	72	0	0	**df = 4**
	None	5	22.7	17	77.3	0	0	**p = 0.150**
								NS
13.	**PLACE OF TREATMENT**						
	Government hospital	16	26.7	42	70	2	3.3	**χ^2 = 9.043**
	Private hospital	8	57.1	6	42.9	0	0	**df = 4**
	Others	5	19.2	21	80.8	0	0	**p = 0.040**
								S*

Where, Df- Degrees of Freedom.

<u>Decision Rule</u>: If p-value ≤ 0.05 – Significant (S*); Otherwise Not Significant (NS)

<u>INFERENCE OF TABLE 4.3</u>

The table 4.3 depicts that the demographic variables, **DIETARY HABIT & PLACE OF TREATMENT** had shown statistically significant association between the level of knowledge about foot care among Diabetic patients. The other demographic variables had not shown statistically significant association between the level of knowledge about foot care among Diabetic patients.

SECTION C: TOOL TO ASSESS THE ATTITUDE OF PATIENTS TOWARDS FOOT CARE

TABLE 4.4: Frequency and Percentage wise distribution of attitude of the patients towards foot care among the diabetes mellitus patients in selected community area.

Attitude towards Foot care	Frequency (n)	Percentage (%)
Negative Attitude	76	76%
Positive Attitude	24	24%
Total	**100**	**100%**

INFERENCE OF TABLE 4.4

Shows frequency and percentage wise distribution of attitude of the patients towards foot care among the diabetes mellitus patients in selected community area.

* **Majority of the patients (76%) have negative attitude towards foot care.**

* **Only 24% of the Patients have positive attitude towards foot care.**

FIGURE 4.15: Showing the attitude of the patients towards foot care among the diabetes mellitus patients in selected community area.

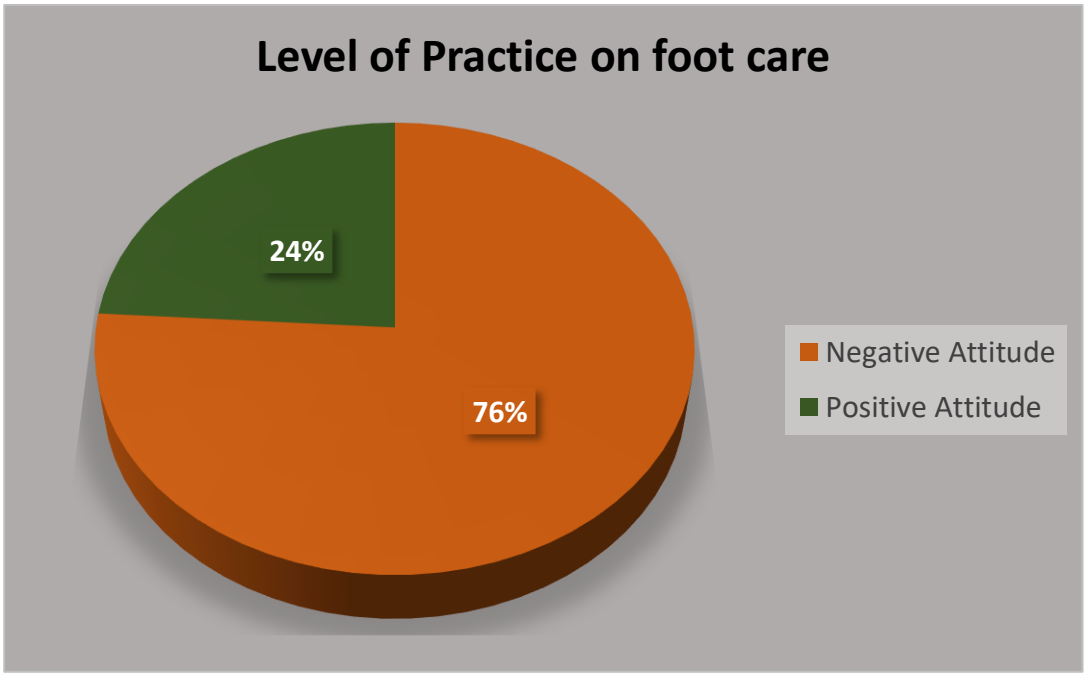


TABLE 4.5 Association between attitude towards foot care of diabetes patients with selected demographic variables.

Sl. No:	DEMOGRAPHIC VARIABLES	ATTITUDE TOWARDS FOOT CARE				Chi-Square (χ^2), df and p-value
		Negative		Positive		
		n	%	n	%	
1.	**AGE IN YEARS**					
	<30 years	4	66.7	2	33.3	$\chi^2 = 1.961$ df = 3 p = 0.581 NS
	30-50 years	21	77.8	6	22.2	
	51-70 years	40	80	10	20	
	>70 years	11	64.7	6	35.3	
2.	**GENDER**					$\chi^2 = 0.390$ df = 1 p = 0.532 NS
	Male	42	73.7	15	26.3	
	Female	34	79.1	9	20.9	
3.	**EDUCATION**					$\chi^2 = 0.003$ df = 1 p = 0.954 NS
	Illiterate	29	76.3	9	23.7	
	Educated	47	75.8	15	24.2	
4.	**OCCUPATION**					
	Government sector	11	43.3	4	26.7	$\chi^2 = 0.450$ df = 3 p = 0.930 NS
	Private sector	21	80.8	5	19.2	
	Business	12	75	4	25	
	Others	32	74.4	11	25.6	
5.	**FAMILY INCOME**					
	Less than 10,000	9	75	3	25	$\chi^2 = 5.086$ df = 3 p = 0.166 NS
	10,000-30,000	31	68.9	14	31.1	
	30,000-50,000	31	88.6	4	11.4	
	More than 50,000	5	62.5	3	37.5	

6.	**MARITAL STATUS**					
	Single	12	70.6	5	29.4	**$\chi^2 = 1.536$ df = 2 p = 0.464 NS**
	Married	60	75.9	19	29.4	
	Divorced	4	100	0	0	
7.	**PERSONAL HABITS**					
	Smoking	13	68.4	6	31.6	**$\chi^2 = 3.114$ df = 3 p = 0.374 NS**
	Alcohol	14	66.7	7	33.3	
	Tobacco Chewing	9	90	1	10	
	Others	40	80	10	20	
8.	**DIETARY HABITS**					**$\chi^2 = 1.508$ df = 1 p = 0.219 NS**
	Vegetarian	16	66.7	8	33.3	
	Non-vegetarian	60	78.9	16	21.1	
9.	**FAMILY HISTORY OF DIABETES**					
	Parents	33	71.7	13	28.3	**$\chi^2 = 0.961$ df = 2 p = 0.618 NS**
	Siblings	17	77.3	5	22.7	
	No history of diabetes	26	81.3	6	18.8	
10.	**DURATION OF ILLNESS**					
	Less than a year	16	84.2	3	15.8	**$\chi^2 = 1.064$ df = 2 p = 0.587 NS**
	2-5 years	29	76.3	9	23.7	
	More than 5 years	31	72.1	12	27.9	
11.	**TAKING TREATMENT FOR DIABETES MELLITUS**					**$\chi^2 = 0.288$ df = 1 p = 0.592 NS**
	Yes	55	77.5	16	22.5	
	No	21	72.4	8	27.6	
12.	**TYPE OF TREATMENT**					
	Insulin therapy	20	71.4	8	28.6	**$\chi^2 = 2.045$ df = 2 p = 0.360 NS**
	Oral Diabetic Medication	41	82	9	18	
	None	15	68.2	7	31.8	

13.	**PLACE OF TREATMENT**					
	Government hospital	47	78.3	13	21.7	**$\chi^2 = 2.510$ df = 2 p = 0.285 NS**
	Private hospital	12	85.7	2	14.3	
	Others	17	65.4	9	34.6	

Where, Df- Degrees of Freedom.

Decision Rule: If p-value ≤ 0.05 – Significant (S*); Otherwise Not Significant (NS)

INFERENCE OF TABLE 4.5

The table 4.5 depicts that none of the demographic variables shown statistically significant association between attitude towards foot care of diabetes patients.

SECTION D: TOOL TO ASSESS PATIENT'S PRACTICES ON FOOT CARE

TABLE 4.6: Frequency and Percentage wise distribution of level of practice on foot care among the diabetes mellitus patients in selected community area.

Level of Practice	Frequency (n)	Percentage (%)
Inadequate level of Practice	77	77%
Adequate level of Practice	23	23%
Total	**100**	**100%**

INFERENCE OF TABLE 4.6

Shows frequency and percentage wise distribution of level of practice on foot care among the diabetes mellitus patients in selected community area.

* **Majority of the patients (77%) have Inadequate level of practice.**

* **Only 23% of the patients have adequate level of practice.**

FIGURE 4.16: Showing the level of practice on foot care among the diabetes mellitus patients in selected community area.

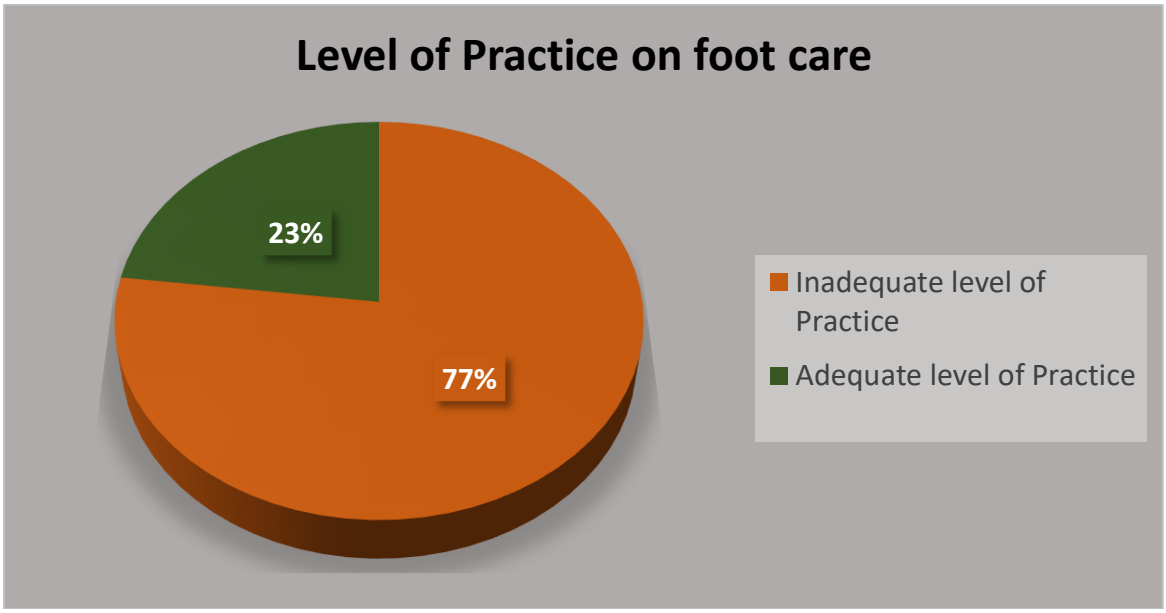


TABLE 4.7: Association between level of practice on foot care among Diabetic patients with selected demographic variables.

Sl. No:	DEMOGRAPHIC VARIABLES	LEVEL OF PRACTICE ON FOOT CARE				Chi-Square (χ^2), df and p-value
		Inadequate		Adequate		
		n	%	n	%	
1.	**AGE IN YEARS**					
	<30 years	5	83.3	1	16.7	χ^2 =3.640
	30-50 years	19	70.4	8	29.6	df = 3
	51-70 years	42	84	8	16	p = 0.303
	>70 years	11	64.7	6	35.3	NS
2.	**GENDER**					χ^2 = 0.003
	Male	44	77.2	13	22.8	df = 1
	Female	33	76.7	10	23.3	p = 0.958
						NS

3.	**EDUCATION**					**$\chi^2 = 0.726$**
	Illiterate	31	81.6	7	18.4	**df = 1**
	Educated	46	74.2	16	25.8	**p = 0.394**
						NS
4.	**OCCUPATION**					**$\chi^2 = 1.842$**
	Government sector	13	86.7	2	13.3	**df = 3**
	Private sector	18	69.2	8	30.8	**p = 0.606**
	Business	13	81.3	3	18.8	**NS**
	Others	33	76.7	10	23.3	
5.	**FAMILY INCOME**					
	Less than 10,000	9	75	3	25	**$\chi^2 = 0.579$**
	10,000-30,000	34	75.6	11	24.4	**df = 3**
	30,000-50,000	27	77.1	8	22.9	**p = 0.901**
	More than 50,000	7	87.5	1	12.5	**NS**
6.	**MARITAL STATUS**					**$\chi^2 = 0.502$**
	Single	12	70.6	5	29.4	**df = 2**
	Married	62	75.8	17	21.5	**p = 0.778**
	Divorced	2	75	1	25	**NS**
7.	**PERSONAL HABITS**					
	Smoking	15	78.9	4	21.1	**$\chi^2 = 0.488$**
	Alcohol	15	71.4	6	28.6	**df = 3**
	Tobacco Chewing	8	80	2	20	**p = 0.922**
	Others	39	78	11	22	**NS**
8.	**DIETARY HABITS**					**$\chi^2 = 0.678$**
	Vegetarian	17	70.8	7	29.2	**df = 1**
	Non-vegetarian	60	78.9	16	21.1	**p = 0.410**
						NS
9.	**FAMILY HISTORY OF DIABETES**					
	Parents	34	73.9	12	26.1	**$\chi^2 = 0.575$**
	Siblings	17	77.3	5	22.7	**df = 2**
	No history of diabetes	26	81.3	6	18.8	**p = 0.750**
						NS

10.	**DURATION OF ILLNESS**					
	Less than a year	12	63.2	7	36.8	**$\chi^2 = 3.162$**
	2-5 years	29	76.3	9	23.7	**df = 2**
	More than 5 years	36	83.7	7	16.3	**p = 0.206**
						NS
11.	**TAKING TREATMENT FOR DIABETES MELLITUS**					**$\chi^2 = 0.030$**
	Yes	55	77.5	16	22.5	**df = 1**
	No	22	75.9	7	24.1	**p = 0.0.863**
						NS
12.	**TYPE OF TREATMENT**					
	Insulin therapy	21	75	7	25	**$\chi^2 = 0.544$**
	Oral Diabetic Medication	40	80	10	20	**df = 2**
						p = 0.762
	None	16	72.7	6	27.3	**NS**
13.	**PLACE OF TREATMENT**					
	Government hospital	46	76.7	14	23.3	**$\chi^2 = 0.023$**
						df = 2
	Private hospital	11	78.6	3	21.4	**p = 0.988**
	Others	20	76.9	6	23.1	**NS**

Where, Df- Degrees of Freedom.

<u>Decision Rule</u>: If p-value ≤ 0.05 – Significant (S*); Otherwise Not Significant (NS)

INFERENCE OF TABLE 4.7

The table 4.7 depicts that none of the demographic variables shown statistically significant association between level of practice towards foot care of diabetes patients.