



# A Study to Assess the Level of Knowledge and Attitude Regarding Foot Care Practices among Diabetic patients at Selected Hospitals, Bengaluru with the View to Develop an Informational Booklet

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## ABSTRACT

Diabetes is a chronic, metabolic disease characterized by elevated levels of blood glucose (or blood sugar), which leads over time to serious damage to the heart, blood vessels, eyes, kidneys and nerves. The most common is type 2 diabetes, usually in adults, which occurs when the body becomes resistant to insulin or doesn't make enough insulin. Foot problems are common in people with diabetes. They can happen over time when high blood sugar damages the nerves and blood vessels in the feet. The nerve damage, called diabetic neuropathy, can cause numbness, tingling, pain, or a loss of feeling in your feet.

Around 10.5 percent of the global adult population suffered from diabetes in 2021 - by the year 2045 this number is expected to rise to over 12 percent. Diabetes mellitus, refers to a group of metabolic disorder that result in chronic high blood sugar levels. Diabetes can lead to serious health complications, such as cardiovascular disease, chronic kidney disease and stroke and is now among the top 10 leading causes of death worldwide.

The estimated number of diabetes patient in the 20-79 age group is 74.2 million in 2021 and is likely to increase to 124.8 million in 2045.

Patients with diabetes have remarkably higher risk of developing diabetic foot that can only be prevented by building awareness regarding selfcare. The chance of developing chronic non-healing foot ulcer in diabetics is approximately 15% in their lifetime. To emphasize the significance of diabetic foot problems, International Diabetes Federation also came up with the theme of World Diabetes Day in 2005 "Put Feet First, Prevent Amputations."

**Method:** A study was conducted by using the descriptive design and was carried out in CDSIMER, Harohalli. Total 60 Samples selected using non-probability purposive sampling technique was used to collect the data. A structured knowledge questionnaire was used to assess the level of knowledge and attitude mention regarding foot care. Collected data was analysed by using descriptive and inferential statistics.

**Result:** With respect to age majority are higher in 56-65years which is 30%. With respect to gender majority are higher in male which is 53%. With respect to educational qualification majority are higher in PUC which is 31.6%. With respect to occupation majority are higher in employed which is 46.6%. With respect to income per month majority are less than 10,000 which is 38%. With respect to level of knowledge majority are having moderately adequate knowledge which is 50%. The findings of the study revealed that diabetic patient had moderate level of knowledge and favorable level of attitude regarding foot care practices. There was significant association between the level of knowledge and demographic variables: educational qualification and occupation.

## INTRODUCTION

Diabetes is a chronic, metabolic disease characterized by elevated levels of blood glucose (or blood sugar), which leads over time to serious damage to the heart, blood vessels, eyes, kidneys and nerves. The most common is type 2 diabetes, usually in adults, which occurs when the body becomes resistant to insulin or doesn't make enough insulin. Foot problems are common in people with diabetes. They can happen over time when high blood sugar damages the nerves and blood vessels in the feet. The nerve damage, called diabetic neuropathy, can cause numbness, tingling, pain, or a loss of feeling in your feet.

Diabetes mellitus (DM) is a major public health problem that is increasing in its prevalence. The number of people affected by DM was expected to rise from 171 million in the year 2000 to 366 million by 2030. In 2011, there were 366 million people affected with diabetes mellitus globally. In 2014, The International Diabetes Federation estimated that there were 20.5% of Saudis between 20 and 79 years are diabetics. Together with the rising prevalence of diabetes, a substantial increase in its complications is expected. One of the most serious complications of diabetes causing high degrees of morbidities and mortalities and care cost is diabetic foot. It describes various degrees of angiopathy and neuropathy affecting the foot with tendency towards destruction of the foot tissue, ulceration and infection. Many risk factors may lead to diabetic foot including long duration of diabetes, poor metabolic control, foot deformities, older age, peripheral vasculo-pathy and poor knowledge of diabetics. Diabetic foot was found to affect 8-17% of diabetics.

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For the prevention of diabetic foot, the patient himself plays an important role therefore foot care is important to prevent foot complications. In this study, Researchers are going to assess the level of knowledge and attitude regarding foot care practices among patient with diabetes mellitus with a view to develop an information booklet.

## OBJECTIVES

- To assess the level of knowledge regarding foot care practices among Diabetic patients.
- To assess the level of attitude regarding foot care practices among Diabetic patients.
- To associate between the demographic variable and knowledge regarding foot care practices among Diabetic patients.
- To associate between the demographic variable and attitude regarding foot care practices among Diabetic patients.

## HYPOTHESIS

- H<sub>1</sub>: There is a significant association between level of knowledge and demographic variables regarding foot care practices among diabetic patients.
- H<sub>2</sub>: There is a significant association between level of attitude and demographic variables regarding foot care practices among diabetic patients.

## METHOD

### RESEARCH APPROACH

Non-experimental descriptive approach.

### RESEARCH DESIGN

Descriptive design

### RESEARCH SETTING

CDSIMER (Chandramma Dayananda Sagar Institute of medical education and research), Harohalli.

## POPULATION

Diabetic patients above 35

## SAMPLE

## SAMPLE SIZE

60 Diabetic patients

## SAMPLE TECHNIQUE

Purposive sampling technique

## INCLUSION CRITERIA

Diabetic patients who were:

both men and women aged above 35 years.

at risk of diabetic foot

able to read, write, and understand English.

## EXCLUSION CRITERIA

Diabetic patients who were:

not cooperative.

exposed to the information recently.

seriously ill.

## SELECTION AND DEVELOPMENT OF RESEARCH TOOL

Structured knowledge questionnaire regarding foot care practices and three-point likert scale regarding foot care practices to assess the attitude.

## DESCRIPTION OF TOOLS

It consists of three sections

### Section A:

It consists of socio-demographic variables of subjects such as age, gender, educational qualification, occupation and income per month.

### Section B:

It consists of structured knowledge questionnaire regarding foot care practices to assess the knowledge.

**Section C:**

It consists of Three- point Likert scale regarding foot care practices to assess the attitude.

**RESULTS AND FINDINGS**

The present study has revealed that majority of the diabetic patient 18(30%) belongs to the age group of 56-65 years, 15(25%) belongs to the age group of 46-55 years, 15(25%) belongs to age group of above 65 years, 12(20%) belongs to age group of 35-45 years were found during the study. The distribution of respondents by their gender were majority 32(53%) were male, 28(47%) were female, and 0(0%) were transgender. The distribution of respondents by their educational qualification were majority 19(31.6%) were PUC, 15(25%) were illiterate, 10(16.6%) were graduates and 16(26.6%) were others. The distribution of respondents by their occupation were majority 28(46.6%) employed, 8(13%) were unemployed, 14(23%) were homemaker and 10(16.6%) were retired. The distribution of respondents by their income per month were majority 23(38%) were less than 10,000 rupees, 21(35%) were 10,001-20,000 rupees, 10(16.6%) were 20,001-30,000 rupees and 6(10%) were above 30,000 rupees.

**Table 1- Analysis and interpretation of demographic data**

Sl.no.	Demographic variables	Frequency (f)	Percentage (%)
<b>1.</b>	<b>AGE:</b>		
	a) 35 – 45 years	12	20 %
	b) 46 – 55 years	15	25 %
	c) 56 – 65 years	18	30 %
	d) Above 65 years	15	25 %
<b>2.</b>	<b>GENDER:</b>		
	a) Male	32	53 %
	b) Female	28	47 %
	c) Transgender	0	0%
<b>3.</b>	<b>Educational qualification:</b>		
	a) Illiterate	15	25 %

	b) PUC	19	31.6%
	c) Graduates	10	16.6%
	d) Others	16	26.6%
<b>4.</b>	<b>Occupation:</b>		
	a) Employed	28	46.6%
	b) Unemployed	8	13%
	c) Homemaker	14	23%
	d) Retired	10	16.6%
<b>5.</b>	<b>Income per month:</b>		
	a) Less than 10,000 rupees	23	38%
	b) 10,001 – 20,000 rupees	21	35%
	c) 20,001 – 30,000 rupees	10	16.6%
	d) Above 30,000 rupees	6	10%

**Table 2 :** Frequency and percentage distribution of level of knowledge on foot care practices among diabetic patients.

Sl. No	Interpretation	Level Of Knowledge	
		Frequency (f)	Percentage (%)
1.	Inadequate knowledge <50%	26	43.33%
2.	Moderately adequate knowledge 50 – 75%	30	50%

3.	Adequate knowledge >75%	4	6.66 %
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**Table 3 :** Mean, Standard deviation and Mean percentage regarding foot care practices among diabetic patients.

Sl.no	Domain	Mean	Standard Deviation	Mean(%)
1	Level of knowledge	4.83	5.147	8.05%
2	Level of attitude	24.4	24.64	40.66%

**Table 4:** Association between level of knowledge and the selected demographic variable:

Sl.No	Demographic variables	Level of knowledge			$X^2$
		Inadequate (<50%)	Moderate (50 – 75%)	Adequate (>75%)	
1.	AGE:				10.885 df = 6 NS
	a) 35 – 45 years	4	8	0	
	b) 46 – 55 years	4	9	2	
	c) 56 – 65 years	8	10	0	
	d) Above 65 years	10	3	2	
2.	GENDER:				2.23 df= 4 NS
	a) Male	11	18	3	
	b) Female	15	11	2	
	c) Transgender	0	0	0	
3.	Education qualification:				20.23 df= 6 S
	a) Illiterate	9	6	0	
	b) PUC	9	7	3	

	c) Graduates	5	5	0	
	d) Others	4	11	1	
4.	Occupation:				14.92
	a) Employed	14	12	2	df= 6 S
	b) Unemployed	0	8	0	
	c) Homemaker	9	3	2	
	d) Retired	3	7	0	
5.	Income per month:				12.27
	a) Less than 10,000 rupees	14	9	0	df=6 NS
	b) 10,001 – 20,000 rupees	8	11	2	
	c) 20,001 – 30,000 rupees	2	6	2	
	d) Above 30,000 rupees	2	4	0	

**S\*= Significant at  $P < 0.05$ , NS= Not Significant at  $P > 0.05$ , df= degree of freedom.**

There is significant association of knowledge with the variables such as occupation and educational qualification of the diabetic patients. It was found that there is no significant association with demographic variables such as age, gender and income, Hence H1 is accepted.



Table 6: Association between level of attitude and the selected demographic variable.

Sl.No	Demographic variables	Level of attitude			
		Inadequate (<50%)	Moderate (50 – 75%)	Adequate (>75%)	X2
1.	<b>AGE:</b>				2.2245
	a) 35 – 45 years	9	3	0	df= 6 NS
	b) 46 – 55 years	11	4	0	
	c) 56 – 65 years	11	7	0	
	d) Above 65 years	10	5	0	
2.	<b>GENDER:</b>				1.0513
	a) Male	21	17	0	df=4 NS
	b) Female	11	10	0	
	c) Transgender	0	1	0	
3.	<b>EDUCATIONAL QUALIFICATION:</b>				8.2
	a) Illiterate	9	6	0	df= 6 NS
	b) PUC	9	10	0	
	c) Graduates	10	0	0	
	d) Others	11	5	0	
4.	<b>Occupation:</b>				9.88
	a) Employed	18	10	0	df= 6 NS
	b) Unemployed	2	6	0	
	c) Homemaker	11	3	0	
	d) Retired	9	1	0	
5.	<b>Income per month:</b>				9.212
	a) Less than 10,000 rupees	12	11	0	df=6 NS
	b) 10,001 – 20,000 rupees	15	6	0	
	c) 20,001 – 30,000 rupees	8	1	1	

	d) Above 30,000 rupees	4	2	0	
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**S\*= Significant at P<0.05, NS= Not Significant at P>0.05, df= degree of**

**freedom.** It was found that there is no significant association of attitude with demographic variables such as age, gender, educational qualification, occupation and income of the diabetic patients, Hence H2 is rejected.

## RECOMMENDATIONS

A similar study can be conducted in a large scale.

A similar study can be conducted for longer period of time.

A similar study can be conducted to assess the effectiveness of self-instruction module on foot care practices.

A study can be conducted on lifestyle modification regarding foot care practices among diabetic patients.

## CONCLUSION

The present study was designed to assess the level of knowledge and attitude regarding foot care practices among diabetic patients at selected hospitals, Bengaluru. The data was collected from 60 diabetic patients. Purposive Sampling technique was used to select the sample. Structured knowledge questionnaire was used to assess the level of knowledge and 3-point Likert scale was used to assess the level of attitude. The findings of the study revealed that diabetic patient had moderate level of knowledge and favorable level of attitude regarding foot care practices. There was significant association between the level of knowledge and demographic variables: educational qualification and occupation.

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