



## **A STUDY TO ASSESS THE KNOWLEDGE AND PRACTICE ON FOOT CARE AMONG THE DIABETIC PATIENTS**

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**Abstract:** Diabetes is a chronic disease that occurs either when the pancreas does not produce enough insulin or when the body cannot effectively use the insulin it produces. Hyperglycaemia, also called raised blood glucose or raised blood sugar, is a common effect of uncontrolled diabetes and over time leads to serious damage to many of the body's systems, especially the nerves and blood vessels. Diabetic foot disease (DFD) is one of the most debilitating complications of diabetes mellitus. It encompasses infection, ulceration, and osseous destruction of the foot of a person with diabetes. Diabetic foot requires utmost care and the need for efficient and effective management of foot care is paramount. Taking into consideration the importance of adequate foot care in alleviating existing complications and preventing further ones from occurring, this quantitative study was conducted to assess the knowledge and practice of foot care among the diabetic patients in a selected Hospital of Thrissur district. The main objectives of the study were to assess the knowledge and practice of foot care among the patients, to associate the levels of knowledge of foot care among them with their selected demographic variables, to correlate the knowledge and practice among diabetic patients regarding foot care, and to prepare and distribute an information booklet on foot care. Through purposive sampling technique, 60 participants who fulfilled the inclusion and exclusion criteria were selected as samples. The data was collected using a questionnaire. The setting of the study was conducted in Aswini hospital limited, Thrissur. The data collected was analysed by quantitative and inferential statistics. The study was revealed that 7(11.66%) had inadequate knowledge and 53 (88.33%) had adequate knowledge. Regarding the level of practice of foot care among diabetic patients 50(83.33%) maintained good practice and 10 (16.66%) samples reported poor practice. Analysis showed that there was no significant association between demographic variables and knowledge. However an association between knowledge and practice has been observed. The present study reveals the correlation between level of knowledge and practice of foot care among diabetic patients. The relationship between level of knowledge and practice on foot care are tested by Karl Pearson's Correlation.

The calculated Karl Pearson's Correlation coefficient value is +1, which is statistically significant at 0.05 level. Hence there was a perfect positive correlation found between knowledge and practice.

Thus the research hypothesis was accepted and null hypothesis was rejected.

Key words : *Diabetic foot, Diabetic patients*



## INTRODUCTION

Diabetes mellitus is a group of metabolic disorders characterized and identified by the presence of hyperglycemia in the absence of treatment. Diabetes mellitus is associated with serious complications. One of the major complications of diabetes mellitus is diabetic foot. Three major factors play a role in the development of diabetic foot -neuropathy, ischemia and sepsis. In order to prevent these complications, proper care of the feet is crucial to patients with diabetes mellitus. there is still inadequate awareness about the real magnitude of the problem, among the general public. There is also a lack of awareness about the existing interventions for preventing diabetes and the management of complications.

## NEED AND SIGNIFICANCE OF THE STUDY

The burden of diabetes as a debilitating health crisis is high and increasing globally; particularly in developing countries like India. The estimates in 2019 showed that 77 million individuals had diabetes in India, and these numbers are expected to rise in under two decades, to 134 million and beyond by 2045. Approximately 57% of these individuals remain undiagnosed and under the radar of the medical community. The prevalence of diabetes in India has risen from 7.1% in 2009 to 8.9% in 2019. Currently 25.2 million adults are sufferers of diabetes mellitus, and the number is estimated to increase to 35.7 million by 2045. The Indian disease burden initiative study conducted at a state level in 2021 on diabetes reported that the prevalence and number of people with diabetes in India

increased from 5.5% and 26.0 million in 1990 to 7.7% and 65.0 million in the year 2016. The prevalence and number of patients with diabetes in India has increased. So assessing the knowledge and practice of footcare among diabetes patients help to know the importance of educating patients on foot care.

## Statement of the study

A study to assess the knowledge and practice of foot care among the diabetic patients at a selected hospital, Thrissur.

## Objectives of the study

- 1.To assess the knowledge and practice of foot care among diabetic patients at a selected hospital,Thrissur.
- 2.To correlate the knowledge and practice among diabetic patients regarding foot care.
- 3.To associate the level of knowledge of foot care among diabetic patients with their selecteddemographic variables.
- 4.To prepare and distribute an information booklet on foot care, management of diabetic foot and the significance of diligent upkeep of the infected foot, for sufferers of diabetes mellitus.

## Hypothesis

Significance at 0.05 level

H1: There will be a significant association between levels of knowledge regarding foot care of diabetes mellitus with their selected demographic variables.

H2: There is significant correlation between levels of knowledge and practice of patients regarding diabetic foot care.

## Methodology



**Research Approach :** This study adopted quantitative approach to assess the knowledge and practice of foot care among diabetic patients.

#### **Methods of data collection**

Data collection procedure are the means of gathering information to address the research problem. The investigators met the diabetologist in order to establish support and collaboration to conduct the study. The investigators obtained permission from the Management of Aswini Hospital, Thrissur. The study was conducted in OPD and ward of Aswini Hospital, Thrissur. The data was collected from 15 October 2022 to 20 October 2022. A total number of 60 samples were selected by purposive sampling technique, after obtaining consent, and appropriate instructions were given to the samples.

Questionnaire, clarification of doubt, getting response for appropriate answer. The questionnaire was completed in the presence of the investigators to avoid incompleteness in the collection of data.

**Research design:** The investigators adopted a descriptive survey design to conduct the study.

**Demographic variables:** In this study the demographic variables are age, gender, educational status, nature of work, diet, duration of treatment, history of diabetes mellitus in family, treatment taking for diabetes mellitus and prior awareness regarding diabetic foot

**Population:** The population of this study comprised of patients with diabetes mellitus who received treatment at a selected hospital, Thrissur.

**Target population:** It includes all diabetic

patients receiving treatment at Aswini hospital who meet the inclusive criteria.

**Accessible population:** Population of diabetic patients available at Aswini hospital during the time of study.

**Sampling technique:** The sampling technique adopted for this study was purposive sampling technique.

**Sample size:** The sample size of the study comprised of 60 patients with diabetes mellitus at OPD and ward of Aswini hospital, Thrissur

#### **Sample criteria**

##### **Inclusion criteria:**

Patients with diabetes mellitus who are:

- diagnosed with diabetes mellitus and have been treatment for more than 1 year
- Willing to participate in the study
- Able to read and write Malayalam

##### **Exclusion criteria:**

Patient with diabetes mellitus who are:

- Not willing to participate
- Unconscious
- Patients with type I diabetes

#### **Description and scoring**

**Section A :** Distribution of samples according to socio-demographic variables.

**Section B** : Distribution of samples based on knowledge and practice of foot care among diabetic patients.

**Section C** : Analysis and interpretation of association between the knowledge and selected demographic variables among diabetic patients regarding foot care.

**Section D:** Analysis and interpretation of correlation between the knowledge and practice of foot care among diabetic patients.

**RESULT FINDINGS**

**SECTION A** :Distribution of samples according to socio-demographic variables Table 1: Frequency and percentage distribution of demographic profile of subjects

S	Demographic Variable	Frequency (f)	Percentage (%)
<b>1</b>	<b>Age</b>		
	a) 30-45 years	2	3.33%
	b) 46-60 years	23	38.33%
	c) >60 years	35	58.33%
<b>2</b>	<b>Gender</b>		
	a) Male	39	65%
	b) Female	21	35%
	c) Others	0	0
<b>3</b>	<b>Education status</b>		
	a) Primary education	18	30%
	b) Secondary education	23	38.33%

	c) Higher secondary	6	10%
	d) Graduation and above	13	21.66%
<b>4</b>	<b>Nature of work</b>		
	a) With minimal physical activity (<30 minutes)	37	61.66%
	b) Work with moderate activities	22	36.66%
	(>30 minutes?)		
	c) Strenuous work(>2 hours)	1	1.66%
<b>5</b>	<b>Diet</b>		
	a) Vegetarian	18	30%
	b) Non vegetarian	42	70%
	c) Ovo vegetarian	0	0

<b>6</b>	<b>Duration of treatment</b>		
	a) 1-5 years	21	35%
	b) 6-10 years	16	26.66%
	c) >10 years	23	38.33%
<b>7</b>	<b>History of diabetes mellitus in family</b>		
	a) Yes	38	63.33%
	b) No	22	36.66%
<b>8</b>	<b>The kind of treatment received for diabetes mellitus</b>		
	a) Modern medicine	56	93.33%
	b) Alternative medicine	1	1.66%
	c) Diet control	1	1.66%



d)	Exercise	2	3.33%
e)	Nil	0	0
<b>9 Prior awareness regarding diabetic foot</b>			
a)	Yes	32	53.33%
b)	No	28	46.66%

**SECTION B: Distribution of samples based on level of knowledge and practice on diabetic foot care**

**Table 2: Level of knowledge on foot care among diabetic patients**

Sl. No.	Level of knowledge	Frequency (f)	Percentage (%)
1	Inadequate	7	11.66
2	Adequate	53	88.33

**Table 3: Level of practice of foot care among diabetic patients**

Sl. No.	Level of practice	Frequency (f)	Percentage (%)
1	Good practice	10	16.66
2	Poor practice	50	83.33

**SECTION C: Analysis and interpretation of association between the level of knowledge of foot care among diabetic patients with their selected demographic variables**

There was no significant association between the knowledge score and selected demographic variables. Null hypothesis was accepted and research hypothesis H1 was rejected.

**SECTION D: Analysis and interpretation of correlation between the knowledge and**

**practice among diabetic patients regarding foot care**

It was calculated by Karl Pearson's Correlation coefficient and value is +1, which is statistically significant at 0.05 level. There was a perfect positive correlation between knowledge and practice.

**DISCUSSION**

**The first objective was to assess the knowledge and practice of foot care among the diabetic patients at a selected hospital in Thrissur**

With regard to the level of knowledge on foot care among diabetic patients, out of 60 samples, 53(88.33%) had adequate knowledge and 7(11.66%) had inadequate knowledge. As far as the level of practice of foot care is concerned 50 (83.33%) samples had poor practice and 10(16.66%) samples had good practice.

**The second objective was to associate the level of knowledge on foot care among diabetic patients with their selected demographic variables.**

There is no significant association found between the level of knowledge and selected demographic variables (age-Chi square value=3.84, gender-Chai square value=-3.84, nature of work-Chai square value=3.84)

**The third objective was to correlate the knowledge and practice among diabetic patients regarding foot care.**



There was a perfect positive ( $r$  value=+1) correlation found between knowledge and practice. The Karl Pearson correlation coefficient score for knowledge and practice was 1, which shows that by improving awareness (knowledge) on foot care, better foot care practice can be ensured in diabetic patients.

### CONCLUSION

Diabetes mellitus is a group of metabolic disorders characterized and identified by the presence of hyperglycemia. The present study reveals that there was no association between the level of knowledge and selected demographic variables and there was a perfect positive correlation found between knowledge and practice. Thus the findings insist that the occurrence of complication of diabetic foot can be reduced through training and educational programmes.

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