IJCRT.ORG ISSN : 2320-2882

INTERNATIONAL JOURNAL OF CREATIVE RESEARCH THOUGHTS (IJCRT)

An International Open Access, Peer-reviewed, Refereed Journal

"Study To Assess The Knowledge And Practice On Diabetic Foot Care Among Diabetic Patients Admitted In Selected Hospital"

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OBJECTIVES OF THE STUDY

PRIMARY OBJECTIVE: -

1. To assess the knowledge and practice on diabetic foot care among diabetic patients

OTHER OBJECTIVES: -

1. To correlate the knowledge and practice on diabetic foot care among diabetic patients.
2. To find out the association between knowledge and practice on diabetic foot care among diabetic patients with these selected demographic variables

INTRODUCTION: Diabetes Mellitus (DM) is metabolic disorder characterized by chronic hyperglycaemia and trouble in metabolism of carbohydrates, protein, and fat as a result of defect in insulin secretion, insulin action or both.[1] The global burden of diabetes mellitus (DM) continues to intensify, predominantly driven by widespread lifestyle changes, the escalating prevalence of obesity, and increased human longevity. According to the 11th edition of the International Diabetes Federation (IDF) Diabetes Atlas, approximately 589 million adults aged 20-79 years are living with diabetes worldwide in 2024. This number is projected to rise to 853 million by 2050, underscoring the urgent need for comprehensive global strategies in prevention, early detection, and management to mitigate the societal and economic impact of this pervasive chronic disease.[2]This metabolic disease is one of the most common endocrine disorders affecting almost 6% of the world's population.[3]

Diabetic foot complications arise from a combination of factors associated with long-term diabetes. Nerve damage, or neuropathy, caused by high blood sugar levels, can lead to a loss of sensation in the feet, making it difficult to detect injuries or pressure points. This lack of sensation increases the risk of developing ulcers and infections. Additionally, diabetes often causes poor blood circulation, particularly due to peripheral arterial disease (PAD), which impairs wound healing and reduces the

body's ability to fight infections. Structural changes in the feet, such as deformities caused by neuropathy, can create pressure points that further increase the likelihood of ulcers. Collectively, these factors contribute to severe complications, including infections and gangrene, if wounds are left untreated. Proper management, including blood sugar control, foot hygiene, and wearing appropriate footwear, is crucial to preventing these issues.

NEED FOR THE STUDY

Diabetes is a prevalent chronic condition in the United Arab Emirates, with an increasing number of individuals affected by its complications. One of the most common and preventable complications of diabetes is diabetic foot problems, which can lead to severe consequences, including amputations. The ability of patients to manage their foot health is heavily influenced by their knowledge of the condition and appropriate care practices. Illiteracy has been identified as a potential barrier to effective diabetes management, particularly when it comes to foot care. This study aimed to explore the impact of illiteracy on foot care practices and diabetic foot complications among individuals with diabetes in the UAE. It highlights how illiterate patients, due to limited health literacy, are less likely to engage in proper foot care and are at higher risk for complications such as neuropathy and foot ulcers. Understanding the role that illiteracy plays in the management of diabetic foot health is essential for developing targeted education and intervention strategies. Physicians and healthcare providers should be aware of the increased vulnerability of illiterate patients and design comprehensive, culturally appropriate educational approaches to reduce diabetic foot complications.

MATERIAL AND METHODOLOGY

RESEARCH APPROACH: In this study, a quantitative research approach was used. The study aims to assess the knowledge and practice on diabetic foot care among diabetic patients admitted in selected hospital.

RESEARCH DESIGN: The research design used for the present study is a cross-sectional, descriptive survey research design. The aim of the research was to assess the knowledge and practice on diabetic foot care among diabetic patients admitted in selected hospital.

SETTING OF THE STUDY: The study was conducted in a selected hospital.

VARIABLES

EXTRANEOUS VARIABLE: - Any variable not being investigated that has the potential to affect the outcome of a research study.in present study extraneous variable is age, gender, education, occupation, monthly income, personal habit, previous knowledge regarding diabetic foot.

POPULATION: The population of the present study is newly diagnosed cases of diabetes with age between 20-90 years.

SAMPLE: In this study, samples comprise newly diagnosed cases of diabetes.

SAMPLE SIZE: Sample size round off into 100 patients. The sample size selected for this study were

100 newly diagnosed cases of diabetes.

SAMPLING TECHNIQUE: In this study, non-probability purposive sampling technique was used by the researcher to select the newly diagnosed cases of diabetes.

SAMPLING CRITERIA

The following criteria were set for the selection of samples

INCLUSION CRITERIA

1.Newly diagnosed cases of diabetes.

2. Patients of the age group between 20-90 years.

3. Both male and female patients.

4. Willing to provide informed consent available during the study period.

EXCLUSION CRITERIA

1.Participants who are not willing to participate.

2. Patients with gestational diabetes.

TOOL and TECHNIQUE

The present study intent to assess the knowledge and practice on diabetic foot care among diabetic patients admitted in selected hospital. Thus, the questionnaire and practice checklist was used for data collection.

For the present study, the tool consists of three sections

SECTION (A):

Demographic variables (Age, gender, education, occupation, monthly income, personal habit, previous knowledge regarding diabetic foot**)**

SECTION (B):

Knowledge questionnaires of the diabetic foot which comprised of introduction, sign and symptoms of diabetic foot, causes of diabetic foot and prevention of diabetic foot. Each correct answer will be given 1mark, wrong answer will be given 0 marks.

Section C: Checklist was used to assess the practice regarding diabetic foot care

ANALYSIS AND INTER PRETATION

ORGANIZATION AND PRESENTATION OF DATA

The analysis of data was organized and finalized according to the plan for data analysis and presented in the form of tables and figures. The analyzed data are presented under the following sections:

SECTION A: Describing the frequency and percentage distribution of socio demographic variables of hospital diabetic patients.

N=100

Sr. No	Demographic Variables	Category	Frequency	Percentage
1	Age in years	20-39 years	22	22
		40-59 years	27	27
		60 and above	51	51
2	Gender	Male	64	64
		Female	36	36
3	Educational Qualification	Primary	58	58
		Secondary	18	18
		Higher secondary	5	5
		Graduation and above	19	19
4	Occupation	Unemployed	29	29
		Business	14	14
		Government employee	4	4
		Private employee	29	29
		Farmer	24	24
5	Monthly income	5000-14000	9	9
		15000-29000	87	87
		30000-44000	2	2
		Above 45000	2	2

6	Personal habits	Smoking	34	34
		Tobacco chewing	23	23
		Alcohol consumption	14	14
		Any other specify	29	29
7	Previous knowledge regarding foot care	Yes	64	64
		No	36	36
8	Do you previous information	Yes	48	48
		No	52	52

SECTION B: To assess level of knowledge regarding diabetic foot care among diabetic patients.

Table No.02: Assess level of knowledge regarding diabetic foot care among diabetic patients.

N=100

Sr. No	Criterion	Range of score	No. of respondent	percentage
1	Poor Knowledge	0 to 7	7	7.00
2	Average Knowledge	8 to 14	58	58.00
3	Good Knowledge	15 to 20	35	35.00

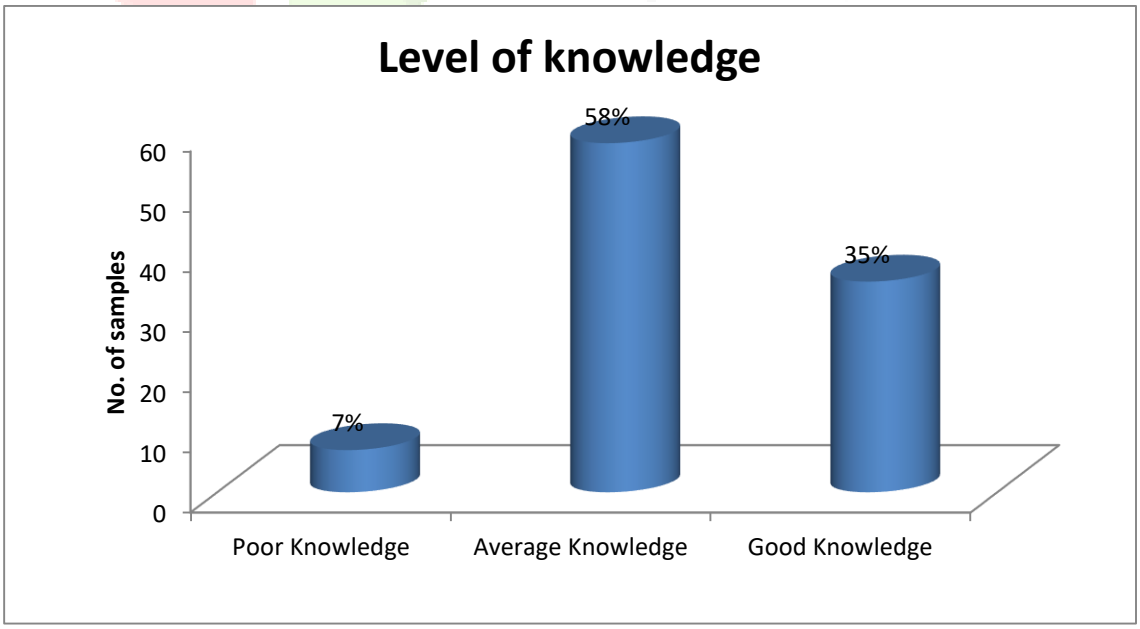

Fig. Cylindrical diagram shows level of knowledge regarding diabetic foot care.

Table depicts that knowledge regarding diabetic foot care levels shows the maximum of respondents (58%) have average knowledge regarding diabetic foot care followed by 35% good knowledge regarding diabetic foot care, and 7% diabetic patients were poor knowledge regarding diabetic foot care.

Table No.03: Assess level of practice regarding diabetic foot care among diabetic patients.

N=100

Sr. No	Criterion	Range of score	No. of respondent	percentage
1	Poor practice	0-13	27	27.00
2	Average practice	14-27	64	64.00
3	Good practice	28-40	9	9.00

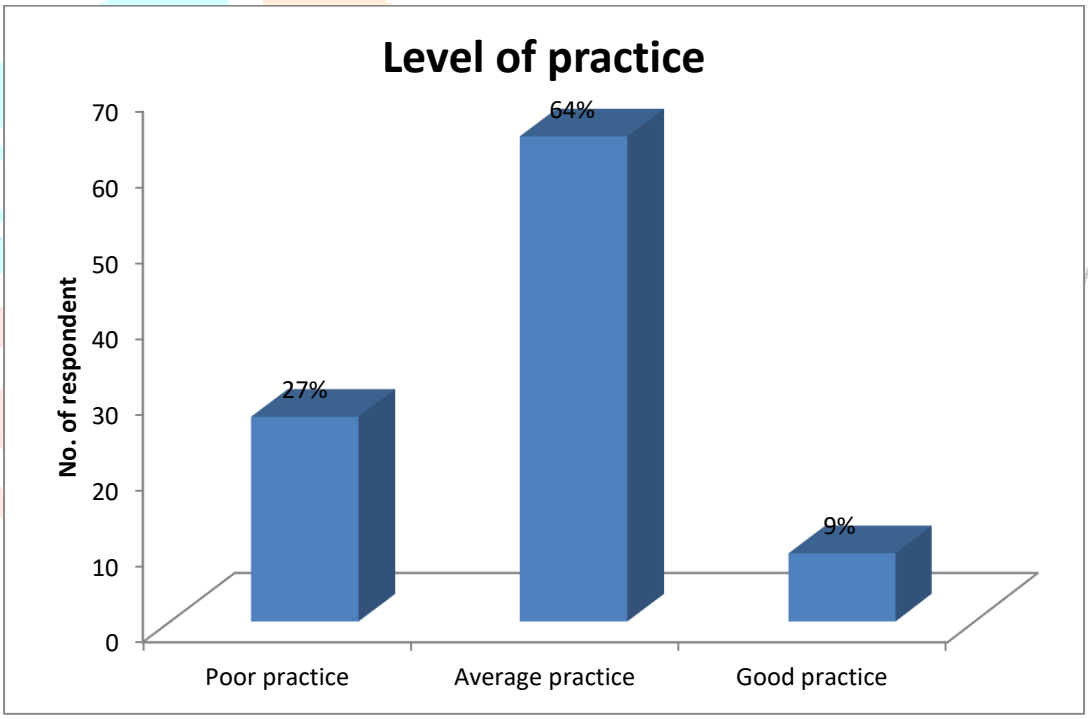

Fig.: Bar diagram shows level of practice regarding diabetic foot care.

Table depicts that practice regarding diabetic foot care levels shows the maximum of respondents (64%) have average practice regarding diabetic foot care followed by 27% diabetic patients were poor practice regarding diabetic foot care, 9% diabetic patients were good practice regarding diabetic foot care.

SECTION C: To correlate the knowledge and practice on diabetic foot care among diabetic patients.

N=100

Sr. No	Group	Mean	Standard deviation	Mean %	Correlation
1	Knowledge	14.20	3.52	71.00	0.929
2	Practice	21.78	5.22	54.46	

Table No.04 depicts that mean knowledge mean score found 14.2 standard deviation is 3.52 and mean percentage is 71% and Practice mean score found 21.78 standard deviation is 5.22 and mean percentage is 54.46% and correlation found to be 0.929 which shows positive correlation between knowledge and practice.

SECTION D: To find out association between level of knowledge and practice regarding diabetic foot care with their selected demographic variables of diabetic patients.

N=100

Sr. No	Socio demographic variables	Category	Pre test levels of knowledge						Total	Chi square value	p value
			Poor		Average		Good				
			f	%	F	%	f	%			
1	Age in years	20-39 years	2	9.09	13	59.09	7	31.82	22	1.677	0.795
		40-59 years	3	11.11	15	55.56	9	33.33	27		
		60 and above	2	3.92	30	58.82	19	37.25	51		
2	Gender	Male	5	7.81	34	53.13	25	39.06	64	1.734	0.420
		Female	2	5.56	24	66.67	10	27.78	36		
3	Educational Qualification	Primary	5	8.62	43	74.14	10	17.24	58	25.593	0.000
		Secondary	2	11.11	5	27.78	11	61.11	18		
		Higher secondary	0	0.00	4	80.00	1	20.00	5		

		Graduation and above	0	0.00	6	31.58	13	68.42	19		
4	Occupation	Unemployed	4	13.79	14	48.28	11	37.93	29	5.500	0.703
		Business	1	7.14	10	71.43	3	21.43	14		
		Government employee	0	0.00	3	75.00	1	25.00	4		
		Private employee	1	3.45	16	55.17	12	41.38	29		
		Farmer	1	4.17	15	62.50	8	33.33	24		
5	Monthly income	5000-14000	0	0.00	5	55.56	4	44.44	9	8.952	0.176
		15000-29000	7	8.05	53	60.92	27	31.03	87		
		30000-44000	0	0.00	0	0.00	2	100.00	2		
		Above 45000	0	0.00	0	0.00	2	100.00	2		
6	Personal habits	Smoking	4	11.76	19	55.88	11	32.35	34	8.778	0.186
		Tobacco chewing	1	4.35	11	47.83	11	47.83	23		
		Alcohol consumption	1	7.14	12	85.71	1	7.14	14		
		Any other specify	1	3.45	16	55.17	12	41.38	29		
7	Previous knowledge regarding foot care	Yes	5	7.81	34	53.13	25	39.06	64	1.734	0.420
		No	2	5.56	24	66.67	10	27.78	36		
8	Do you previous information	Yes	5	10.42	31	64.58	12	25.00	48	4.867	0.088
		No	2	3.85	27	51.92	23	44.23	52		

* Significant at the level of p 0.05.

Table No.05: Shows that association between level of knowledge regarding diabetic foot care with Educational Qualification, the chi square p value found to be 0.000, , it is shows significant the level of 0.05.

The association between level of knowledge regarding diabetic foot care with Age in years, Gender, Educational Qualification, Occupation, Monthly income, Personal habits, Previous knowledge regarding

foot care, Do you previous information, the chi square p value found to be 0.795, 0.420, 0.000, 0.703, 0.176, 0.186, 0.420, and 0.088 respectively, it is no significant the level of 0.05.

Find out association between level of practice regarding diabetic foot care with Socio demographic variables of diabetic patients.

N=100

Sr. No	Socio demographic variables	Category	Pre test levels of Practice						Total	Chi square value	p value
			Poor		Average		Good				
			f	%	f	%	f	%			
1	Age in years	20-39 years	7	31.82	14	63.64	1	4.55	22	1.971	0.741
		40-59 years	7	25.93	16	59.26	4	14.81	27		
		60 and above	13	25.49	34	66.67	4	7.84	51		
2	Gender	Male	20	31.25	37	57.81	7	10.94	64	2.994	0.224
		Female	7	19.44	27	75.00	2	5.56	36		
3	Educational Qualification	Primary	23	39.66	34	58.62	1	1.72	58	30.636	0.000
		Secondary	4	22.22	8	44.44	6	33.33	18		
		Higher secondary	0	0.00	4	80.00	1	20.00	5		
		Graduation and above	0	0.00	18	94.74	1	5.26	19		
4	Occupation	Unemployed	13	44.83	15	51.72	1	3.45	29	14.701	0.065
		Business	4	28.57	10	71.43	0	0.00	14		
		Government employee	0	0.00	4	100.00	0	0.00	4		
		Private employee	5	17.24	18	62.07	6	20.69	29		
		Farmer	5	20.83	17	70.83	2	8.33	24		
5	Monthly income	5000-14000	2	22.22	5	55.56	2	22.22	9	4.368	0.627
		15000-29000	25	28.74	55	63.22	7	8.05	87		
		30000-44000	0	0.00	2	100.00	0	0.00	2		

		Above 45000	0	0.00	2	100.00	0	0.00	2		
6	Personal habits	Smoking	15	44.12	18	52.94	1	2.94	34	14.648	0.023
		Tobacco chewing	5	21.74	16	69.57	2	8.70	23		
		Alcohol consumption	2	14.29	12	85.71	0	0.00	14		
		Any other specify	5	17.24	18	62.07	6	20.69	29		
7	Previous knowledge regarding foot care	Yes	20	31.25	37	57.81	7	10.94	64	2.994	0.224
		No	7	19.44	27	75.00	2	5.56	36		
8	Do you previous information	Yes	17	35.42	30	62.50	1	2.08	48	7.361	0.025
		No	10	19.23	34	65.38	8	15.38	52		

* Significant at the level of p 0.05.

Table No.06: Shows that association between level of practice regarding diabetic foot care with Educational Qualification, Personal habits, Do you previous information, the chi square p value found to be 0.000, 0.023 and 0.025, respectively it is shows significant the level of 0.05.

The association between level of practice regarding diabetic foot care with Age in years, Gender, Occupation, Monthly income, Previous knowledge regarding foot care, the chi square p value found to be 0.741, 0.224, 0.065, 0.627, and 0.224, respectively, it is no significant the level of 0.05.

DISCUSSION

Knowledge regarding diabetic foot care levels shows the maximum of respondents (58) have average knowledge regarding diabetic foot care followed by 35 good knowledge regarding diabetic foot care, and 7 diabetic patients were poor knowledge regarding diabetic foot care.

Level of practice regarding diabetic foot care levels shows the maximum of respondents (64) have average practice regarding diabetic foot care followed by 27 diabetic patients were poor practice regarding diabetic foot care, 9 diabetic patients were good practice regarding diabetic foot care.

Relationship between knowledge and practice shows, knowledge mean score found 14.2 standard deviation is 3.52 and mean percentage is 71% and Practice mean score found 21.78 standard deviation is 5.22 and mean percentage is 54.46 and correlation found to be 0.929 which shows positive correlation between knowledge and practice.

Association between level of knowledge regarding diabetic foot care with Educational Qualification, the chi square p value found to be 0.000, it is shows significant the level of 0.05. The association between level of knowledge regarding diabetic foot care with Age in years, Gender, Educational Qualification,

Occupation, Monthly income, Personal habits, Previous knowledge regarding foot care, Do you previous information, the chi square p value found to be 0.795, 0.420, 0.000, 0.703, 0.176, 0.186, 0.420, and 0.088 respectively, it is no significant the level of 0.05.

The association between level of practice regarding diabetic foot care with Educational Qualification, Personal habits, do you previous information, the chi square p value found to be 0.000, 0.023 and 0.025, respectively it is shows significant the level of 0.05.

The association between level of knowledge regarding diabetic foot care with Age in years, Gender, Occupation, Monthly income, Previous knowledge regarding foot care, the chi square p value found to be 0.741, 0.224, 0.065, 0.627, and 0.224, respectively, it is no significant the level of 0.05.

Recommendations

Based on the study finding the following recommendations have made for the further study

1. Similar study may be replicated on large samples for wider generalization.
2. Similar study can be conducted in different areas with different interventions.
3. Similar study can be conducted through experimental research approach
4. Use new innovative strategies for better live with happy and healthy.

Conclusion: -

The findings of the present study indicated the relationship between knowledge and practice demonstrates a strong positive correlation. The mean knowledge score was found to be 14.2, with a standard deviation of 3.52, and a mean percentage of 71%. The mean practice score was 21.78, with a standard deviation of 5.22, and a mean percentage of 54.46%. The correlation coefficient of 0.929 indicates a significant positive correlation between knowledge and practice, suggesting that higher knowledge levels are associated with better practice among diabetic patients.

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