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TO ASSESS THE KNOWLEDGE AND PRACTICE REGARDING FOOT CARE AMONG DIABETES PATIENTS AT KRISHNA HOSPITAL, KARAD

MANISHA C. GHOLAP[a1] AND VAISHALI R. MOHITE[b]

[ab]Krishna Institute of Medical Sciences Deemed University, Krishna Institute of Nursing Sciences, Karad, Maharashtra, India

ABSTRACT

This paper study for assess the knowledge and practices regarding foot care among diabetes patients. Determine the association between knowledge and practices regarding foot care among diabetes patients with selected demographic variables and find the co-relation between knowledge and practice regarding foot care among diabetes patients. The level of knowledge score of diabetic patients regarding foot care reveals that majority 29(58%) had average knowledge, 12(24%) had good knowledge and 9(18%) had poor knowledge. The level of practice score of diabetic patients regarding foot care reveals that majority 29(58%) had average practice, 11(22%) had good practice and 10(20%) had poor practice. There was a perfect correlation between knowledge and practice regarding foot care among diabetic patients which means there is increase in knowledge with increase in practice of the patients.

KEYWORDS : Diabetes, Knowledge, Practice, Foot Care

Diabetes mellitus is a silent disease and is now recognized as one of the fastest growing threats to public health in almost all countries of the world .It is also called the "disease of prosperity".

Diabetes mellitus is a group of metabolic diseases characterized by hyperglycemia resulting from defects in insulin secretion, insulin action, or both.(Palouse, 2005).

Diabetes has emerged as a major health care problem in India. According to Atlas published by the International Diabetes Federation (IDF) there were an estimated 40 million persons with diabetes in India 2007 and the number predicted to rise to almost 70 million people by 2025. The countries with largest number of diabetic people will be in India, china and U.S.A by 2030. WHO estimates that mortality from diabetes, heart disease and stroke costs about $210 billion in India in the year 2005. Much of the heart disease and stroke in these estimates was linked to diabetes. WHO estimates that diabetes, heart disease and stroke together will cost about $ 333.6 billion over the next 10 years in India alone. (Gupta, 2008).

Foot complications are the most common cause of hospitalization in the person with diabetes. The development of diabetic foot complications is a multifactorial process .They result from a combination of micro vascular and macro vascular diseases that place the patient at risk for injury and serious infection that may lead to amputation.

The most common type of neuropathy affecting persons with diabetes is sensory neuropathy. This can lead to the loss of protective sensation in lower extremities and coupled with other factors, this significantly increases the risk for complication that result in lower limb amputation. (Lewis et al., 2011).

STUDY

Diabetes is the third leading cause of death by disease. People with diabetes are prone to foot problems because of the disease can cause damage to the blood vessels and nerves. This in turn, may result in a decreased ability to sense trauma or pressure on the foot. Foot injury may go unnoticed until severe infection develops. Small infection can rapidly progress to the death of the skin and other tissues (necrosis), which may require amputation to the affected limb to save the patients life. (A.D.A.M., 2004).

Every 30 seconds a leg is lost due to diabetes in the world and 70% of all leg amputations were done on people with diabetes somewhere in the world. According to the international diabetic federation (IDF) in an effort to reduce the number of amputations among people with diabetes. (Altaf lal, 2005).

Every year, four million people worldwide get a foot ulcer and one in every six people with diabetes develop a foot complication in their life time. People with diabetes are up to 40%times more likely to undergo lower leg amputation. In poor countries like India, treating diabetes foot may account for 40 percent of health resources.

A study by Al-Tawfiq and Johndrow in Saudi Arabia concluded that - patients with diabetic foot ulcers require aggressive management to reduce morbidity and

[1]**Corresponding author**

mortality associated with major amputations in patients with diabetes and preventive measures for developing diabetic foot ulcers are needed for those patients identified to be at high risk for foot ulcerations.

Preventive strategies for reduction of neuropathic ulcers should include glycemic control, smoking cessation, early detection and appropriate management of those with high risk foot conditions, provider education, and patient education on proper daily foot care and foot wear.

The centers for disease control and prevention has determined that "regular foot care can reduce serious foot disease by 50 to 60% affecting the quality of life of our aging population". (Jill Heitzman.,2003).

When attended the clinical posting researchers found that many diabetes patients lack knowledge on foot care and were negligent. Some were not aware of the need of foot care. So the researchers found that this study will be useful and there would be benefit to nursing practice from this study.

MATERIALS AND METHOD

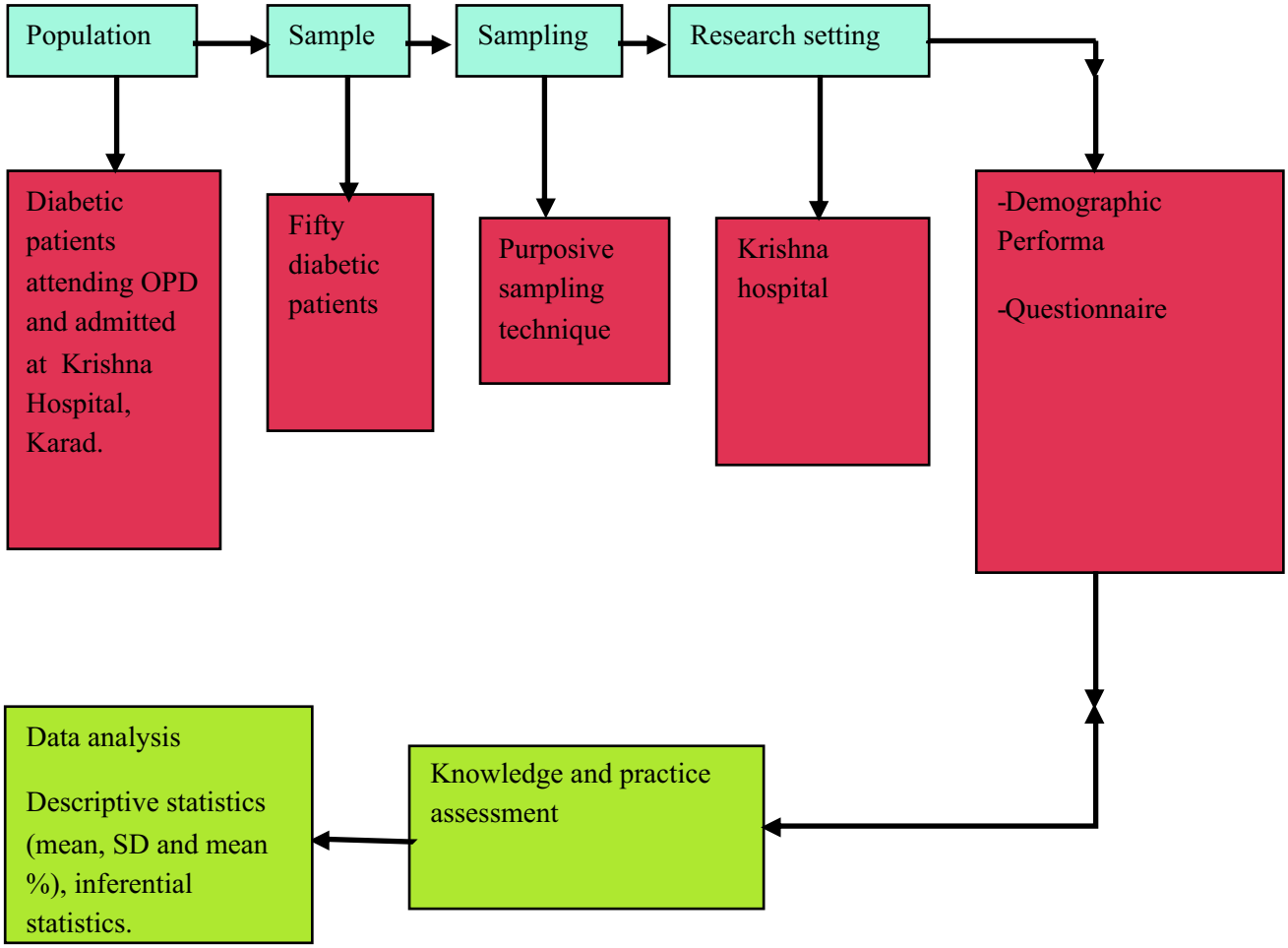
The descriptive approach was used to assess the knowledge and practice of diabetic patients regarding foot care in Krishna Hospital, Karad.

Patient diagnosed as diabetes mellitus. Patient admitted in Krishna Hospital, Karad. Patient attending OPD at Krishna Hospital, Karad.

Patient who are not willing to participate, who cannot read and write Marathi.

In the present study the data has collected by using

SCHEMATIC REPRESENTATION OF RESEARCH DESIGN



the structured questionnaire and check list for assessing knowledge and practice regarding diabetic foot care.

The self- administered questionnaire tool was designed for the study consists of 3 sections.

Section A

It consists of 16 items relating to demographic data of the subjects such as Age, Gender, Department, Education, Religion, Marital Status, Type of family, Occupational Status, Monthly Income, Residence, Habits and Personal History Including Any Associated Illness, Family History of Diabetes, Duration of Diabetes, Source of Information of Diabetes and Admitted with History of Foot Ulcer.

Section B

It consists of 10 items relating to knowledge regarding foot care in diabetes such as hygiene and skin care.

Section C

It consists of checklists of 10 items relating to practices regarding foot care.

Ethical Consideration

The research investigator took formal permission from Principle of KINS Karad and Medical Director and Nursing Director of Krishna Hospital, Karad to collect data for study. Written consent obtained from client who are willing to participate in study.

Plan for Data Analysis

The data organized and analyzed by using descriptive and inferential statistics with the help of SPSS 20 software.

RESULT

Correlation between knowledge and practice regarding foot care among diabetic patients

The correlation between knowledge and practice regarding foot care among diabetic patients is studied by Karl Pearson's correlation coefficient. According to this study the results are Numbers of subjects n = 50, Correlation coefficient (r) = o.2842.,95% confidence interval: 0.006298 to 0.5214., Coefficient of determination (r squared) = 0.08078. The two tailed p value is 0.0455, considered significant.

Hence, there was a perfect correlation between knowledge and practice regarding foot care among diabetic patients which means there is increase in knowledge with increase in practice of the patients.

DISCUSSION

Maximum number of 20(40%) of the diabetes patients belong to the age group of 51-60yrs, 18(36%) belong to the age group of 61 &above, and minimum 12(24%) belong to 41-50 yrs. Among the diabetes patients 26(52%) are males and 24(48%) are females.

The patients 26(52%) were from the OPD and the remaining 24(48%) were admitted patients. Majority of the patients education 13(26%) belong to non formal education, 13(26%) had primary education, 11(22%) had secondary education, 5(10%) had higher secondary education and 8(16%) had graduate degree respectively.

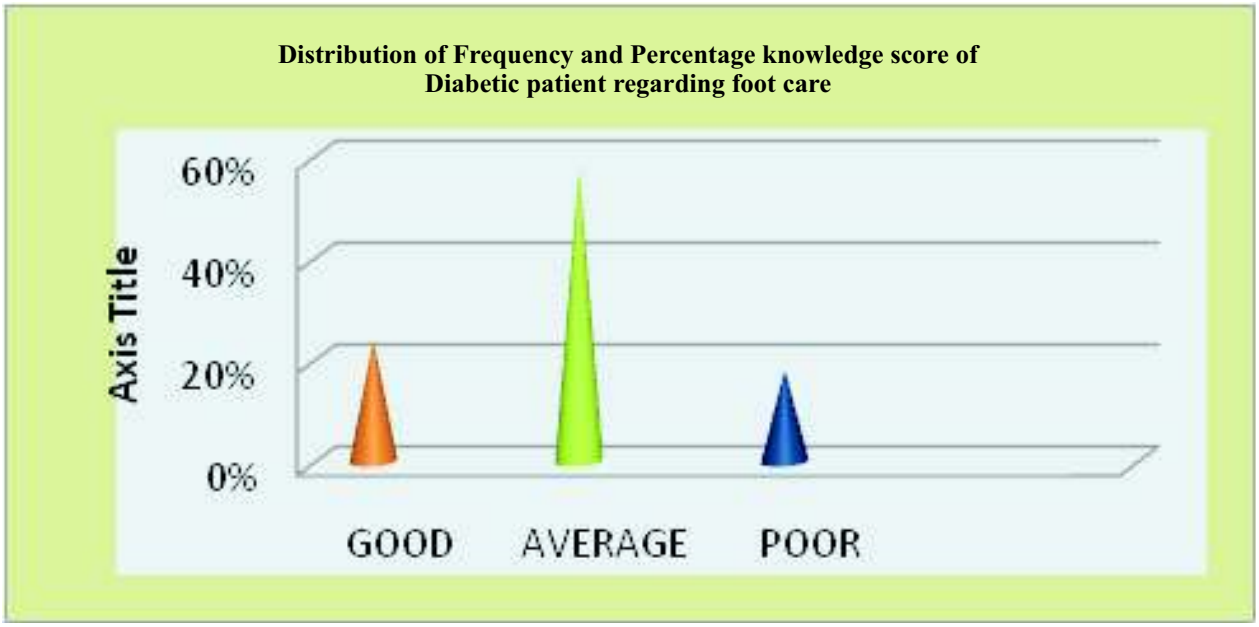
Majority of the patients 48(96%) were Hindu and only 2(4%) were Muslim. Among the patients 42(84%)

Table 1 : Distribution of Frequency and percentage of Diabetic patients according to socio-demographic variables

SR. No.	DEMOGRAPHIC VARIABLE	CATEGORY	FREQUENCY	PERCENTAGE
1	**Age of patient in years**			
		41 – 50	12	24.0%
		51 -60	20	40.0%
		61 and above	18	36.0%
2	**Gender**			
		Male	26	52.0%
		Female	24	48.0%
3	**Department**			
		OPD	26	52.0%
		IPD	24	48.0%

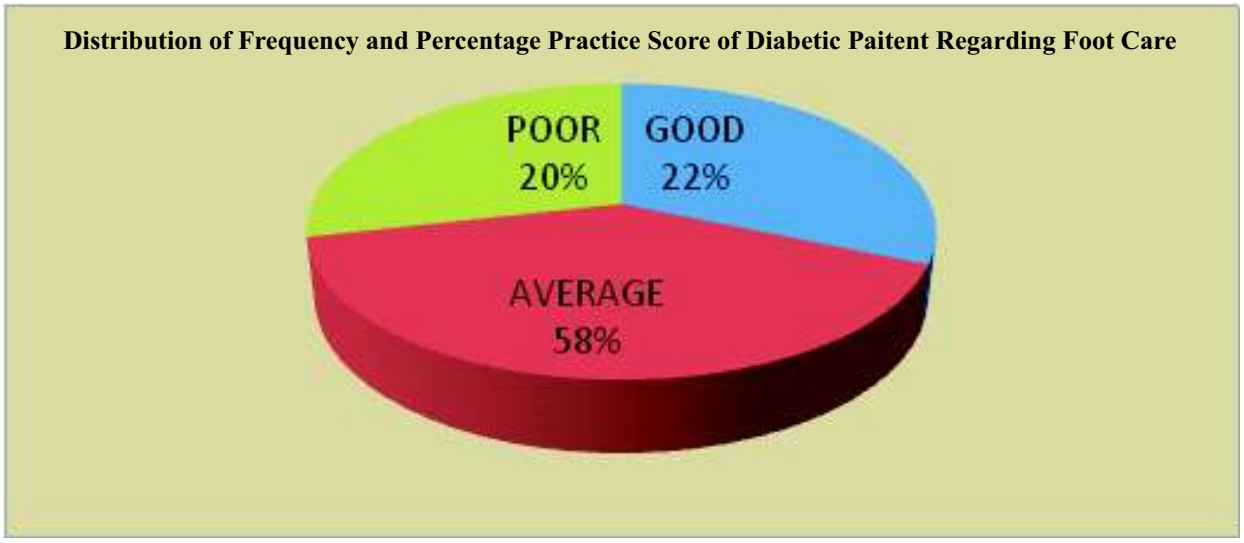
4	**Educational status**			
		Non formal education	13	26.0%
		Primary	13	26.0%
		Secondary	11	22.0%
		Higher secondary	5	10.0%
		Graduate	8	16.0%
5	**Religion**			
		Hindu	48	96.0%
		Muslim	2	4.0%
6	**Marital status**			
		Married	42	84.0%
		Unmarried	2	4.0%
		Widow/widower	6	12.0%
7	**Type of family**			
		Joint	36	72%
		Nuclear	14	28%
8	**OCCUPATIONAL STATUS**			
		Government	4	8%
		Private	2	4%
		Business	4	8%
		Retired	8	16%
		Unemployment	1	2%
		Housewife	17	34%
		Farmer	14	28%
9	**MONTHLY INCOME**			
		Below Rs 5000	23	46%
		Rs 5001 – 15000	17	34%
		Rs 15001 – 25000	16	16%
		Above 25000	2	4%
10	**RESIDENTIAL AREA**			
		Rural	32	64%
		Semi urban	12	24%
		Urban	6	12%
11	**HABITS**			
		Smoking	2	4%
		Tobacco	14	28%
		Mishery	14	28%
		Nil	20	40%
12	**ASSOCIATED ILLNESS**			
		Hypertension	16	32%
		Tuberculosis	1	2%
		Heart disease	4	5%
		Others	8	16%
		No other diseases	21	42%
13	**FAMILY HISTORY DIABETES**			
		Mother/ Father	10	20%
		Grandmother / Grand father	3	6%
		Brother / sister	2	4%
		Other relatives	4	8%
		Nil	29	58%
14	**DURATION OF DIABETES**			
		Below 5 Year	33	66%
		5 – 10 Year	10	20%
		10 – 15 Year	3	6%
		Above 15 Year	4	8%
15	**SOURCES OF INFORMATION**			
		TV / Radio	2	4%
		Relatives / Friends	2	4%
		Professionals	46	92%
16	**ADMMITED BEFORE 5 YEARS FOR FOOT ULCER**			
		Yes	7	14%
		No	43%	85%

Graph 1 : Stacked cone diagram showing percentage distribution of knowledge score of subject regarding foot care



Graph, 1 reveals that majority 29(58%) had average knowledge, 12(24%) had good knowledge and 9(18%) had poor knowledge

Graph 2 : Exploded pie in 3-D showing percentage distribution of practice score of subjects regarding foot care



Graph, 2 reveals that majority 29(58%) had average practice, 11(22%) had good practice and 10(20%) had poor practice

were married, 2(4%) were unmarried and remaining 6(12%) were widow/widower.

Maximum number of patients 36(72%) belong to Joint family type and 14(28%) belong to Nuclear family type. Majority of the female patients 17(34%) were housewives and the male patients 14(28%) were farmers.

Majority of the patients 23(46%) were having family monthly income below Rs. 5000 and minimum 2(4%) were having family income of above Rs.25000, 17(34%) were having family income Rs.5001 to 15000 and

16(16%) were having family income Rs.15001 to 25000 respectively.

Majority of the patients 32(64%) were from rural area, 12(24%) from semi urban and minimum of 6(12%) were from urban area.

The patients 20(40%) hadn't any bad habits, 14(28%) had the habit of tobacco chewing, 14(28%) were taking misery and remaining 2(4%) had the habit of smoking.

Majority of the patients 21(42%) had no other diseases, 16(32%) had Hypertension, 1(2%) had Tuberculosis, 4(5%) had Heart diseases and remaining 8(16%) had other associated illnesses.

The patients 29(58%) had no any family history of diabetes, 10(20%) patients' Father/Mother, 3(6%) patients' Grandmother/Grandfather, 2(4%) of patients' Brother/Sister and 4(8%) patients' other relatives had the family history of diabetes.

Maximum number of patients 33(66%) were having duration of diabetes below 5 yrs, 10(20%) were belong to 6-10 yrs, 3(6%) were belong to11-15 yrs and 4(8%) were belong to above 15 yrs respectively.

The patients 46(92%) received information about diabetes from Professionals, 2(4%) received information from Relatives/Friends, 2(4%) received information from T.V./Radio.

The patients 43(86%) were not admitted with foot ulcer within 5 yrs and 7(14%) were admitted with foot ulcer within 5 yrs. (Table, 1)

The level of knowledge score of diabetic patients regarding foot care reveals that majority 29(58%) had average knowledge, 12(24%) had good knowledge and 9(18%) had poor knowledge. (Graph, 1) The level of practice score of diabetic patients regarding foot care reveals that majority 29(58%) had average practice, 11(22%) had good practice and 10(20%) had poor practice. (Graph ,2)

Chi square test was used to test the association of knowledge and practice regarding foot care among diabetic patients with demographic variables and it was found that there was association between knowledge regarding foot care among diabetic patients with marital status, associated illness and type of diabetes and marital status, occupational status, residential area were associated with practice regarding foot care among diabetic patient.

Study corresponding and contrast to our study shows, the mean age of the respondents was 48 +/- 10.8 years. About 29.3% respondents had good knowledge, 40% had satisfactory knowledge and 30.7% had poor knowledge about foot care. Whereas only 14% respondents had good practices for foot care, 54% had satisfactory practices and 32% had poor practices. Education of the respondents had significant statistical association with knowledge (p-value<0.001) and practices (p-value <0.001) regarding foot care. Sex and income per capita had shown no significant statistical association with knowledge and practices regarding foot care. (Desalu,2011).

A cross sectional study was conducted with the objective to determine the knowledge and practice on diabetic foot care self reported among patient attending three tertiary hospital in Nigeria at three tertiary hospital in Nigeria , 30.1% had good knowledge and 10.2 % had good practice of DM foot care. Majority (78.4%) of patients with poor practice had poor knowledge of foot care. With regard to knowledge, 68.8% were unaware of the first thing to do when they found redness/bleeding between their toes and 61.4% were unaware of the importance of inspecting the inside of the footwear for objects. Poor foot practices include; 89.2% not receiving advice when they bought footwear and 88.6% failing to get appropriate size footwear. Illiteracy and low socioeconomic status were significantly associated with poor knowledge and practice of foot care. Desalu, 2011).

The correlation between knowledge and practice regarding foot care among diabetic patients is studied by Karl Pearson's correlation coefficient. According to this study the results are Correlation coefficient (r) = o.2842, Coefficient of determination (r squared) = 0.08078. The two tailed p value is 0.0455, considered significant. Hence, there was a perfect correlation between knowledge and practice regarding foot care among diabetic patients. Which means there is increase in knowledge with increase in practice of the patients.

The study finding are also supported by study findings of a descriptive co relational study was conducted

by outpatient department at diabetic centre, Rangpur, Bangladesh , The samples were 120 diabetic patients from outpatient department at diabetic centre, Rangpur, Bangladesh. The mean of the total knowledge score was at high level (M = 84.55) and the mean of the total practice score was at moderate level (M = 61.47). The result revealed statistically significant correlation between total knowledge and total practice at a low level (r = .33, P = <0.01).This study has shown statistically significant positive relationship between total practice and sub-dimensions of total knowledge.

CONCLUSION

The following conclusions were drawn based on the findings of the study. The study reveals that majority 29(58%) had average knowledge, 12(24%) had good knowledge and 9(18%) had poor knowledge. Whereas in the practice majority 29(58%) had average practice, 11(22%) had good practice and 10(20%) had poor practice.

Chi square test was used to test the association of knowledge and practice regarding foot care among diabetic patients with demographic variables and it was found that there was association between knowledge regarding foot care among diabetic patients with marital status, associated illness. Marital status, occupational status, residential area was associated with practice regarding foot care among diabetic patient.

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