

SELF CARE KNOWLEDGE ON DIABETES AMONG DIABETIC PATIENTS IN WARANGAL REGION

SWETHA THUNGATHURTHI^{*1}, SMITHA THUNGATHURTHI¹ AND VIJAY KUMAR G²

¹Department of Pharmacy Practice, Vaagdevi College of Pharmacy, Kakatiya University, Warangal.

²Asst professor, Department of Paediatrics, MGM Hospital, Warangal-506007, (A.P), India.

ABSTRACT

Aim: To assess the self care knowledge on diabetes among diabetic patients.

Design: Randomized study.

Materials and methods: This study was conducted on diabetic patients in Warangal region. A 30-item questionnaire consisting of basic data of awareness, knowledge, misconceptions, diabetic care, complications, insulin usage was used in evaluating the knowledge. The data was analyzed using MS-Excel and Graph pad prism version 5.

Result: Four hundred and fifty six patients participated in the study. In our study only 3.50 % diabetic population were with >80 % knowledge. 29.38 % population were with 60-79 % knowledgeable, in which men with 81 (35.52%) were more knowledgeable compared to women 53 (23.24%).

Conclusion: There is a definite need to empower patients with the knowledge required to help them obtain maximum benefit from their treatment for diabetes.

Key words: Diabetes, Knowledge, self care management.

INTRODUCTION

According to World Health Organisation (WHO), India today heads the world with 32 million diabetic patients and this number is projected to increase to 79.4 million by the year 2030. ^[1] Recent studies indicate that diabetes may affect 10-16 % of urban and 5-8% of rural population. ^[2] ^[3] There is a very little data on the level of awareness and prevalence about diabetes in developing countries like India. ^[4] Studies have shown that increasing patient knowledge regarding disease and its complications has significant benefits with regard to patient compliance to treatment and to decreasing complications associated with the disease. ^[5] This study was undertaken to identify, investigate and evaluate the knowledge on diabetes among the patients, which

would be helpful in planning health programs to the patients.

MATERIALS AND METHODS

A structured questionnaire was used to assess the knowledge of diabetes among the patients. Basic data regarding awareness, knowledge, misconceptions, insulin usage were included. Enhanced communication with patients promoted sharing of pertinent clinical data, including the objective measures in the hospitals. This study was conducted on diabetic population in Warangal, Andhra Pradesh. The data was analysed using MS-Excel and Graph pad prism version 5.

RESULTS

A total of 30 questions were interviewed to the 456 Diabetic patients which includes 228 men and 228 women. Most of the patients were in the age group of 51-60 years (31.57%). Rural DM patients (56.79 %) were more compared to urban DM patients (43.20 %). Family history was negative for 74.12 % diabetics. 82.02 % patients attended private hospital. Most of the women attended private hospital. Men (63.54%) were literate, than women (51.75 %). Occurrence of DM was more in the group of Employees 28.50% and farmers

24.12% among men. Patients who attended the interview were mostly house wives 72.80%. There were 237 (51.97%) population with no income, 187 (41%) with lower economic status and 32 (7.01%) patients were able to afford their needs completely. Homemakers 78.50% among women were more prone to DM. This study has shown that there is an increased occurrence of DM in population with less socio-economic back ground (34.64 %) among men. Most of the patients were in normal weight (61.40 %). But there was a slight increase in the patients with overweight (28.28 %).

Table 1: Socio-demographic profile of surveyed population

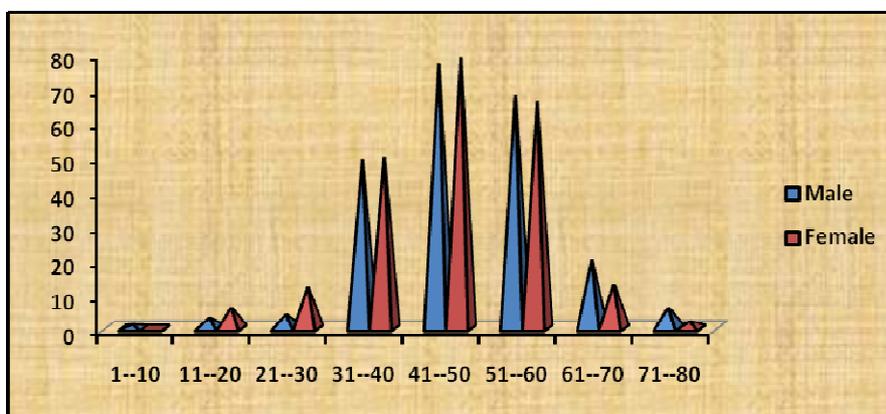
Socio Demographic Profile	Male (n=228)		Female (n=228)	
	No	%	No	%
Age				
11-20	2	0.87	4	1.75
21-30	4	1.75	9	3.94
31-40	27	11.84	27	11.84
41-50	59	25.87	57	25
51-60	67	29.38	77	33.77
61-70	49	21.49	47	20.61
71-80	19	8.33	5	2.19
81-90	1	0.438	2	0.87
Place				
Urban	88	44.16	105	55.83
Rural	140	54.44	123	45.55
Family history for DM				
Yes	56	24.12	62	27.63
No	172	75.87	166	72.36
Type of Hospital visited				
Govt	46	20.17	36	15.78
Private	182	79.82	192	84.21
Educational status				
Illiterate	45	19.73	110	48.24
Literate	183	40.13	118	25.87
Occupational status				
Dependents	2	0.87	166	72.80
Students	3	1.31	7	3.07
Business	48	21.05	3	1.31
Employees	65	28.50	6	2.63
Retired	12	5.26	4	1.754
Daily wages	43	18.85	24	10.52
Agriculture	55	24.12	18	7.89
BMI				
Under weight	0	0	2	0.87
Normal weight	144	63.15	136	59.64
Overweight	68	29.82	61	26.75
Obese	16	7.01	29	12.71

98.46 % patients were suffering from Type-2 DM. There was higher incidence of DM, between the age groups 41-50 (34.21%) followed by 51-60 (29.38%). Most of the patients attended the counselling were suffering from DM since 1- 5years (41%) followed by 6-10 years (26.75%).

Table 2: DM status

DM status	Male (n=228)		Female (n=228)	
	No	%	No	%
Type of DM				
Type 1	2	0.87	5	2.19
Type 2	226	99.12	223	97.80
Onset of DM (age)				
1-10	1	0.43	0	0
11-20	3	1.31	6	2.63
21-30	4	1.75	12	5.26
31-40	49	21.49	50	21.92
41-50	77	33.77	79	34.64
51-60	68	29.82	66	28.94
61-70	20	8.77	13	5.70
71-80	6	2.63	2	0.877
Duration with DM				
0-6 months	22	9.64	23	10.08
7-12 months	18	7.89	22	9.64
1-5 yrs	102	44.7	85	37.28
6-10yrs	58	25.4	64	28.07
11-15yrs	14	6.14	27	11.84
16-20yrs	10	4.38	7	3.07
>20yrs	4	1.75	0	0

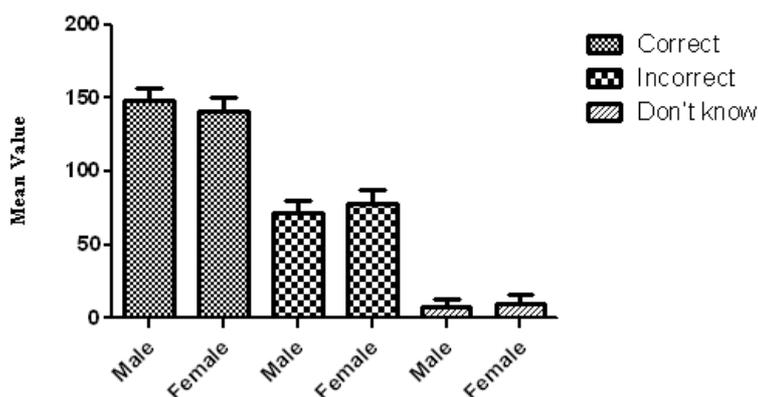
Graph 2: Onset of DM



All the 30 Questions were analysed individually. There was no much significance difference ($p < 0.0001$) found in correlation between male and female for the entire questionnaire.

Gender versus Knowledge

This study showed that male patients were significantly knowledgeable in diabetes self-care than their female counterparts ($P < 0.0001$).

Graph 5: Gender vs Knowledge

In the present study, we observed that women between the age groups of 31- 50 (56.14%) were found to be more at CV risk and men between the age groups of 41- 60 (40.35%).

Diabetes knowledge from diabetic patients

50% of the patients knew what diabetes is and remaining half of the patients were unaware of it. Only 59.46% of literates and 31.69% illiterates were aware of diabetes.

89.69% population knew about the symptoms of DM. But according to days with DM it was found that 86.40% patients were aware about the symptoms of diabetes.

52.63 % patients were lack of knowledge on their ideal blood glucose levels. The present study represented 41 % patients suffering with DM for 1-5yrs, in which male population was leading.

There was a lack of knowledge in the risk factors for DM (68.64 %) and testing the blood glucose levels at residence. However 28.50 % among male and 22.80 % among female were aware of glucometers and able to check their glucose levels by themselves.

Being regular to checkups 4.82% study population were unaware of sampling their blood for testing glucose levels and cholesterol levels. A total of 80.92% in our study were aware of dealing with hypoglycaemia (83.33% men and only 78.50% women).

The results show that most of the patients were unaware of the type of diabetes they were suffering from. About 47.80 % among men and 63.59 % among women responded incorrectly or dint knew the answer.

Misconceptions

A total of 7.23 % patient population were taking double dose when they miss the treatment regimen. In our study we observed that 8.77% men and 5.70% women were taking the double dose whenever they miss their dosage regimen.

87.71 % patients were aware of diabetes as a chronic disease. But still 12.28 % patients believe it as a curable disease.

57.01 % patients believe that DM is not hereditary. 55.48 % patients responded as obesity is not the cause of DM.

Most of the patients are aware of diabetes as non-communicable disease but still there is a misconception as DM as a communicable disease among 10.30% patient population.

For the questionnaire excess sweet intake leads to DM, there was a correct response of 63.59% saying that sweet consumptions doesn't leads to DM. It was observed in education versus knowledge, 61.40% responded correctly. In this category most of the women (43.85%) supports that excess sweet consumption leads to DM. When the same questionnaire was viewed in the sense of Days with DM versus education, only 36.62% of patient population supported that sweet consumption does not leads to DM and in this category, 66.22% men did not agree the concept. 71.71% patients dint knew whether a diabetic mother can feed her child or not.

Care

89.47% patient population were aware of preferable diabetic food. But only 39.91% were

aware of diabetic food products available commercially.

In the present study, 87.5% population knew that physical activity like exercise, aerobics, walking, and swimming were essential for healthy maintenance of blood glucose levels. It's a conflicting fact that most of the patients were not in practice of above mentioned physical activities. We have also observed that only 43.85% of population were aware about importance of physical activity according to locality they live (urban / rural).

Complications

66 % patients were aware of the type of complications caused by diabetes. There was 88.59% correct response for neuropathic

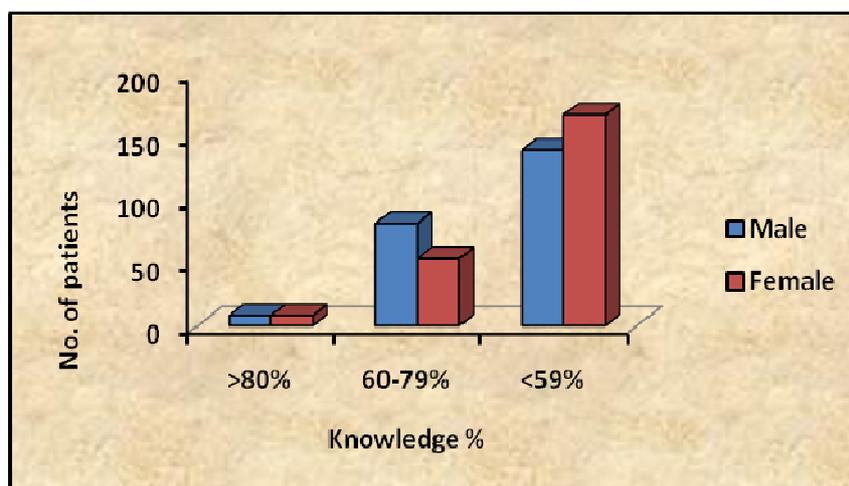
complications from both the genders. But it was observed to be bit lower (80.92%) when the knowledge was compared with the occupation of the patients.

66.22 % patients were aware about diabetic nephropathy caused by uncontrolled blood glucose levels. Only 58.77 % were aware of diabetic retinopathy. In addition to that 82.45 % patients were aware about smoking and alcohol consumption worsens diabetes.

Insulin

46.49 % patients' dint knew the proper site for administering the insulin injection. 60.08 % patients' dint knew the storage conditions for insulin. 52.41 % patients were unaware of proper timings for insulin.

Graph 6: Percentage Knowledge



Men responded well than women for most of the questionnaire. It was observed that only 3.50 % diabetic population were with >80 % knowledge. 29.38 % population were with 60-79 % knowledgeable, in which men were in the upper hand with 81 (35.52%) members compared to women 53 (23.24%). 167 (73.24 %) women were analysed with less knowledge on DM compared to their counterpart 139 (60.94%) men.

DISCUSSION

The major finding in this study was only 50% of the patient population were aware of the condition Diabetes and remaining 50% were unaware. A study by G Balachandra *et al* reported that only 50.8% of population knew the condition diabetes.^[6] Therefore, there is a need to educate people on diabetes in rural as well as urban areas.

Knowledge about complications of diabetes was known to 66% of patient population. The study conducted by G Balachandra *et al* found that 74.2% of diabetics were aware of complications.^[6]

This indicates that diabetics are paying less attention on the complications with DM.

68.64% patients were unaware of risk factors for diabetes. The study of G Balachandra *et al* reported 90.4% diabetics were aware of risk factors that cause diabetes.

CONCLUSION

This study reflects that there is a need to improve diabetic knowledge among the patients which can achieved through community health centres. It emphasizes to bring the awareness among the

people in a right path and extend the diabetic health programs in mass campaigns thoroughly. It will be beneficial if a diabetic clinic and information center for teaching diabetic patients is established. Also nurses, doctors, dietitians and

other health team members should join hands to help these diabetic patients live healthy by providing them with the right information at every available opportunity.

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