

Patient Knowledge And Awareness Of Diabetes Among People Living In Southern Rajasthan.

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Abstract

Aim: To assess Knowledge and Awareness of Diabetes amongst people living in southern Rajasthan.

Background: Awareness of various aspects of Diabetes is essential for the prevention, management and control of the disease. However, several studies have consistently shown that awareness of diabetes in the general population is low. Diabetes is a common chronic disease with increasing prevalence worldwide; it leads to devastating human, social and economic impact. Poor patient knowledge of recommended diabetic self-care practices is a major barrier toward attainment of good glycemic control and prevention of diabetic complications. In this paper, we assessed the awareness of among diabetic patients attending the outdoors and indoors of secondary health care MG Hospital, Banswara of Southern Rajasthan.

Methodology: A Study was performed on 1271 diabetic patients found most often age 45 years or above both male and female. The questionnaire was filled doctor from the diabetic patients to assess the knowledge and awareness among the People living in Southern Rajasthan.

Results: The results showed that there is a statistically significant difference in knowledge on diabetes among different age groups, but there is no significant difference in knowledge among different gender and education level. Out Of the 1271 patients 67.74% are male and 32.25% are female patients. Their age group was 0.39% was below 20 years of age, 5.27% was between 20- 39 years, 15.97% was between 40-49 years of age, 34.30% of people were between 50-59 years of age, while 44.05% of people above the age of 60 year. Out of total number of patient 42.17% people from the rural areas similarly, 57.82% of people residential at the urban areas. Only 1.02% of people having Type-I diabetes while 98.97% of people suffering from the Type-II diabetes. In drugs of diabetes 70.96% using sulfonylurea, 70.96% using Biguanides, 19.35% DPP4 inhibitor, 3.22% using SGLT2 inhibitor, 9.67% alpha-glycosidase inhibitor, while 3.22% is using insulin. Patients who were aware of their condition, 99.52% patients who have general understanding about the diabetes similarly, 0.47% people had no knowledge of the diabetes. Only 70.96% of people medical nutrition therapy similarly, 29.03% not know about the medical nutrition therapy. Only 54.83% people know about life style modification (LSM) similarly, 45.16% of people have not enough knowledge about the LSM. Only 41.93% of people know about meditation similarly, 58.06% of people not know about the meditation. Only 39.70% of people controlled diabetes similarly, 61.29% of people not having diabetes uncontrolled. Regarding the awareness of the diabetes complications only 51.61% people know about the complication heart disease similarly, 48.38% people not aware of complication. Only 64.51% people know about the complication kidney disease similarly 35.48% people not aware about complication. Only 67.74% people know about the complication diabetic retinopathy similarly, 32.25% people have no knowledge about complication. Only 63.96% of people know about the complication peripheral vascular disease similarly, 36.03% people not aware about complication. Regarding awareness of the routine investigation only 45.16% of people is aware of self monitor of blood glucose similarly, 54.83% of people not have knowledge about it. Only 55.78% of people aware to the routine investigation HBA1C similarly, 44.21% of people not aware of the investigation. Only 40.28% of people aware of the investigation lipid profile similarly, 59.71% not know about it. Only 44.68% of people aware of the fundus examination similarly 55.31% of people not aware about it. Only 38.47% of people aware of the foot examination similarly, 61.52% people not aware about that. Only 62.07% people know about the blood pressure similarly 37.92% respondent did not know about the blood pressure as routine investigation.

Date of Submission: 11-05-2024

Date of Acceptance: 21-05-2024

I. Introduction

Diabetes remains one of the four most prevalent non-communicable diseases in the world. It results in disability and premature death while creating an increasing burden on health systems, economic development,

and the wellbeing of a large proportion of the global population¹. It is associated with damage to vital organs and systems and is associated with high blood glucose. There are two broad type of diabetes type 1 and type 2, in type 1 diabetes develops as a result of autoimmunity against the insulin producing beta cell, result in complete insulin deficiency or makes very little insulin¹. In type 2 diabetes is a heterogeneous group of disorder characterized by variable degrees of insulin resistance, impaired insulin secretion, and increased hepatic glucose production¹. The International Diabetes Federation (IDF) estimates that as of 2021 there were 537 million people with diabetes worldwide, and this was predicted to increase to 783 million by 2045, 3 in 4 adults with diabetes live in low and middle income countries¹. Patients who diagnosed diabetes should be actively treated, as high level of compliance may significantly increase the quality of life and prevent long term diabetes complication¹. Patients' knowledge of diabetes plays an important role in self management of the disease. It is considered if the patient with good disease knowledge has a better understanding of the nature and consequences of diabetes and is less prone to various complication and severe exacerbations of diabetes¹. A lifestyle changes do not have immediate benefits for patients, the effect reduced long term complication. The cornerstones of healthcare to support active patient participation are guaranteeing the continuity of care, integrating education in healthcare, and encouraging patient attendance at healthcare². This method is more practicable and valuable than conventional blood glucose screening tests. These include prediction models that incorporate age, sex, BMI, physical activity, and healthy eating². Regarding residence, rural women had significantly higher awareness and rural men had significantly lower levels of awareness than their urban counterparts. It was reported that older people had a higher education level among all people with diabetes². In terms of attitudes toward the diabetes mellitus risk factor, most of people think it is possible to prevent diabetes with dietary management. Daily cigarette smoke exposure, a sedentary lifestyle, junk food consumption, and physical inactivity have been shown to have a high association with Diabetes². Regarding awareness of the diabetes risk factor, it was reported that awareness was highest for the following risk factors²:

- Obesity (63.70% of respondents indicated awareness)
- Eating a lot of sweets (68.10%)
- Family history of diabetes (63.20%)
- Older age (“found most often in adults over 45 years of age”; 60.2%)

II. Materials And Method

Study design

This is prospective observational study which was conducted at secondary health care M G Hospital, Banswara of southern Rajasthan between 1 JULY to 15 SEPTEMBER 2023 on diabetic patients coming on outdoor and indoor departments of the Hospital. A structured questionnaire form was prepared and every question from the questionnaire was asked to patient and every question filled by doctor. The questionnaire included question ascertaining personal information, Diabetic drug, associated cause, awareness of how to control diabetes, awareness about complication of diabetes.

Sample size

Total 1271 diabetic patient who enrolled in study.

Sampling technique

Simple Random Sampling technique

Study area

Banswara city is located in southern Rajasthan. It is located in northwestern side of INDIA. Banswara province has~1544 villages, including many historical and archaeological sites.

Study population

All patient was included who was consulted at outdoor and the patient who was admitted in hospital. There is no age limit in study.

Procedures

Our study participants were randomly selected from a pool of patients attending weekly diabetic clinics at the secondary health care M G Hospital, Banswara of the southern Rajasthan between 1 July to 15 September 2023 on the diabetic patient coming on outdoor and indoor departments of the hospital. briefly, the study was explained to all patients. Participants who agreed to participate were requested to provide consent by signing or thumb printing on a consent form. A two- page questionnaire was administered to the study participants. The questionnaire contained series of questions on participant's demographic characteristics and awareness of diabetes including general knowledge about diabetes, causes, complications, management and prevention. The

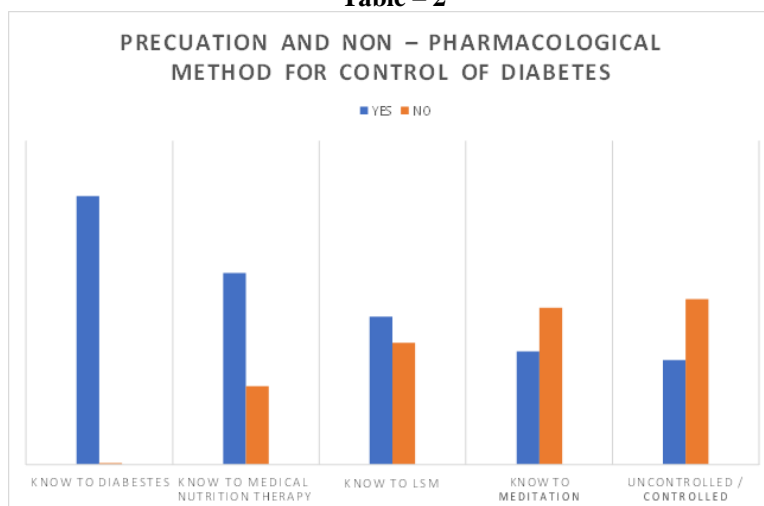
questionnaires were interpreted into local languages, to those who could not understand or read English.

III. Result

TABLE 1		
Variable	Sample n=1271	
Overall	N=1271	%
GENDER		
Male	861	67.74%
Female	410	32.25%
AGE		
<20	5	0.39%
20-39	67	5.27%
40-49	203	15.97%
50-59	436	34.30%
>60	560	44.05%
RESIDENTIAL		
Rural	536	42.17%
Urban	735	57.82%
TYPE OF DIABETES		
Type – 1	13	1.02%
Type – 2	1258	98.97%
DRUGS		
Sulfonylurea	902	70.96%
Biguanides	902	70.96%
DPP4 inhibitor	246	19.35%
SGLT2 inhibitor	41	3.22%
Alpha-glycosidase inhibitors	123	9.67%
Insulin	41	3.22%

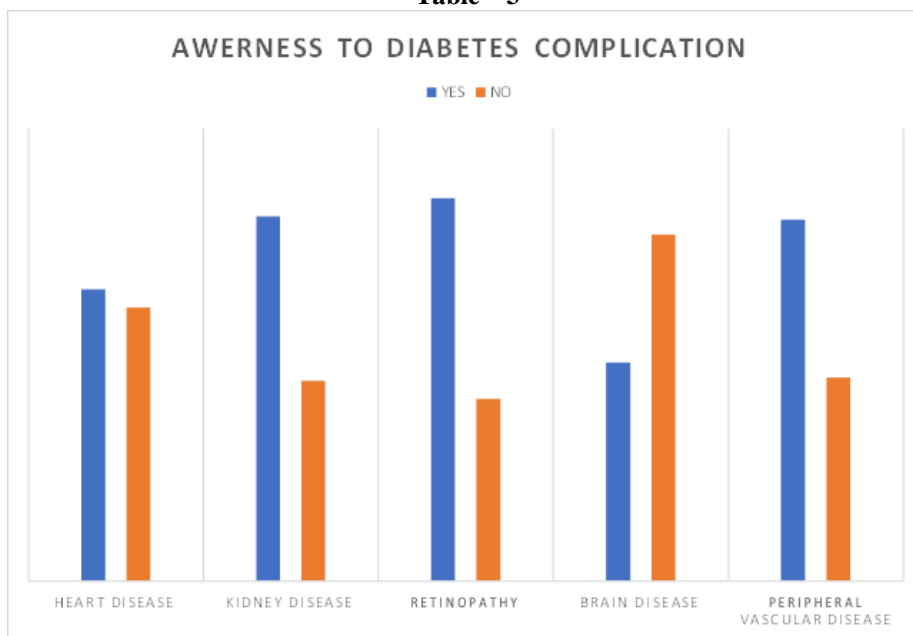
As shown in table 1 Out Of the 1271 patients 67.74% are male and 32.25% are female patients. Their age group was 0.39% was below 20 years of age, 5.27% was between 20-39 years, 15.97% was between 40-49 years of age, 34.30% of people were between 50-59 years of age, while 44.05% of people above the age of 60 year. Out of total number of patient 42.17% people from the rural areas similarly, 57.82% of people residential at the urban areas. Only 1.02% of people having Type-I diabetes while 98.97% of people suffering from the Type-II diabetes. In drugs of diabetes 70.96% using sulfonylurea, 70.96% using Biguanides, 19.35% DPP4 inhibitor, 3.22% using SGLT2 inhibitor, 9.67% alpha-glycosidase inhibitor, while 3.22% is using insulin.

Table – 2



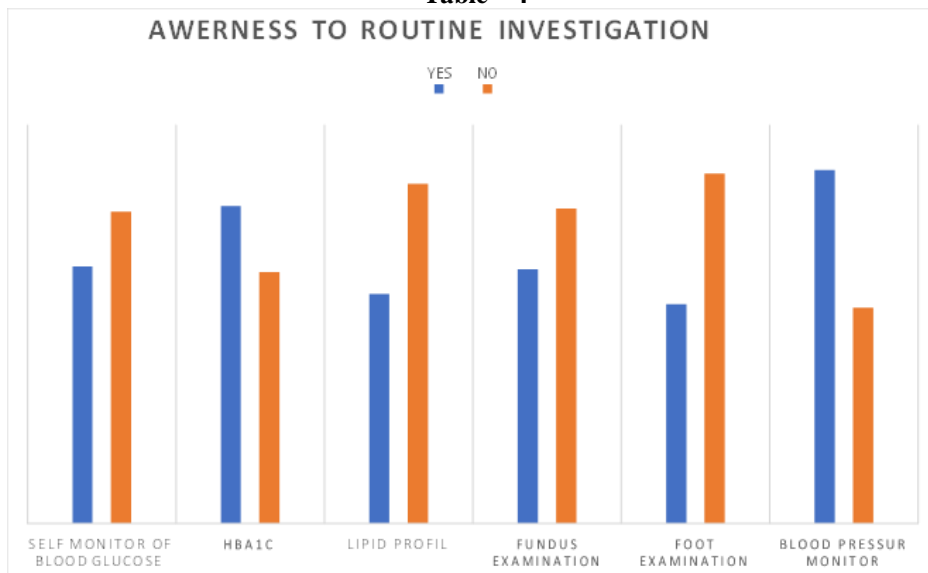
As shown in table 2 it shows the awareness about precaution and non pharmacological methods for control of diabetes. Patients who were aware of their condition, 99.52% patients who have general understanding about the diabetes similarly, 0.47% people had no knowledge of the diabetes. Only 70.96% of people medical nutrition therapy similarly, 29.03% not know about the medical nutrition therapy. Only 54.83% people know about life style modification (LSM) similarly, 45.16% of people have not enough knowledge about the LSM. Only 41.93% of people know about meditation similarly, 58.06% of people not know about the meditation. Only 39.70% of people controlled diabetes similarly, 61.29% of people not having diabetes uncontrolled.

Table – 3



As shown in the table 3 it shows the awareness among the patients about the diabetes complication. Regarding the awareness of the diabetes complications only 51.61% people know about the complication heart disease similarly, 48.38% people not aware of complication. Only 64.51% people know about the complication kidney disease similarly 35.48% people not aware about complication. Only 67.74% people know about the complication diabetic retinopathy similarly, 32.25% people have no knowledge about complication. Only 63.96% of people know about the complication peripheral vascular disease similarly, 36.03% people not aware about complication.

Table – 4



As shown in Table 4 it shows awareness regarding of the routine investigation only 45.16% of people is aware of self monitor of blood glucose similarly, 54.83% of people not have knowledge about it. Only 55.78% of people aware to the routine investigation HBA1C similarly, 44.21% of people not aware of the investigation. Only 40.28% of people aware of the investigation lipid profile similarly, 59.71% not know about it. Only 44.68% of people aware of the fundus examination similarly 55.31% of people not aware about it. Only 38.47% of people aware of the foot examination similarly, 61.52% people not aware about that. Only 62.07% people know about the blood pressure similarly 37.92% respondent did not know about the blood pressure as routine investigation.

IV. Discussion

Study aimed to assess Patient knowledge and awareness of diabetes among people living in southern Rajasthan. To assess Patients knowledge regarding precautions and non- pharmacological method for control of diabetes includes how much they have knowledge about diabetes, medical nutrition therapy, lifestyle modification (LSM), meditation, whether it is controlled/uncontrolled. This study also assesses the knowledge regarding the complication of diabetes like heart disease, kidney disease, Retinopathy, Brain Disease, peripheral vascular Disease. This study checks the awareness of the patient about the routine investigation like self monitor of blood glucose, HBA1C, lipid profile, fundus examination, foot examination, blood pressure monitor.

According to our findings in this study, most of the participants have the satisfactory knowledge about diabetes. While assessing the knowledge regarding the knowledge and Patients who were aware of their condition, 99.52% patients who have general understanding about the diabetes similarly, 0.47% people had no knowledge of the diabetes. Only 70.96% of people medical nutrition therapy similarly, 29.03% not know about the medical nutrition therapy. Only 54.83% people know about life style modification (LSM) similarly, 45.16% of people have not enough knowledge about the LSM. Only 41.93% of people know about meditation similarly, 58.06% of people not know about the meditation. Only 39.70% of people controlled diabetes similarly, 61.29% of people not having diabetes uncontrolled.

In our study, the overall awareness regarding diabetes was found awareness among the patients about the diabetes complication. Regarding the awareness of the diabetes complications only 51.61% people know about the complication heart disease similarly, 48.38% people not aware of complication. Only 64.51% people know about the complication kidney disease similarly 35.48% people not aware about complication. Only 67.74% people know about the complication diabetic retinopathy similarly, 32.25% people have no knowledge about complication. Only 63.96% of people know about the complication peripheral vascular disease similarly, 36.03% people not aware about complication.

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V. Conclusion

In conclusion patient knowledge and awareness of diabetes among people living in southern Rajasthan about diabetes is fair and health education efforts that is directed towards enhancing the knowledge and awareness about diabetes, its risk factor, complications and treatment.

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