A Cross Sectional Study on Perception & Practices of Type 2 Diabetics in G.G. Government Hospital, Jamnagar, Gujarat

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Abstract:

Introduction : In the context of an alarming increase in the magnitude of type 2 diabetes mellitus in Indian population, the prevailing perceptions & practices of diabetics assume immense importance in the control of disease. Objectives: To determine level of knowledge, attitude and practices of patients with regard to the disease. Method: A cross sectional study was conducted among 70 patients, aged more than 30 years, diagnosed with types 2 diabetes more than year back & visiting G.G. Govt. Hospital, Jamnagar for follow up from July to August 2019. Pre-tested Pre-designed questionnaire used to interview the patients regarding their sociodemographic characteristic, knowledge, attitude & practices related to disease. Results: Study revealed that knowledge regarding symptoms & complications of the disease was poor except for frequent urination (42.85%) & eye complication (61.42%); however, only 24.2% patients had gone for eye examination during the last 1 year of their treatment. Awareness on complications of diabetes like periodic eye examination, BP monitoring, hypoglycemia, foot care were found to be poor. Attitude toward regular exercise & dietary modification was found to be favorable in the majority; however while compliance to dietary modification was reported to be high (82.85%) it was low with regular exercise (30%) **Conclusion**: Diabetic patients rely mostly on drugs & dietary modification for disease control while neglecting other lifestyle modification. Promotion of healthy lifestyle modification & self -care should be incorporated as part of diabetes education in all treatment facilities.

Key Words: Perceptions, Practices, Type 2 Diabetes Mellitus

Introduction:

Around 3 million diabetes people die in worldwide every year & nearly 1 million diabetes people die in India every year. Diabetes is associated with the highest co-morbidities & complications and affects people from all socio-economic backgrounds^[1].Types-2 diabetes plays an important causal role in hypertension, dyslipidemia, obesity, coronary artery disease, blindness & renal failure^[1] Worldwide total no. of diabetes cases is estimated to be around 422 million in $2016^{[2]}$, among them >90% are type 2 diabetes. In 2016, an estimated 1.6 million people died from consequences of high blood sugar^[3]. India has been hailed as the diabetes capital of the world^[4]. Epidemiological studies from different parts of the country show that diabetes in adult urban Indian population varies from 5.4% in the northern states to south India (as high 12.3-15.5% in Chennai, 5.6% in Pondicherry), to central India(12.3-16.8% in Jaipur), while 3% of rural population above the age of 15 years have diabetes^[5-8]. Moreover, there is a large pool of subjects with impaired glucose tolerance who are at a high risk of conversion to diabetes.^[9,10] However, despite such high prevalence, awareness on diabetes and its treatment still remain major challenges, particularly in the context of developing countries like India. Prevention is important because the burden of the disease on healthcare and its economic implications are enormous.^[11] Very few studies have been carried out in our country to find the prevailing level of awareness, attitudes and practices among diabetic patients, which can help in the development of future health education programs or interventions targeting the disease.^[12,13] The objectives of this study are: To describe the distribution of patients with type 2 diabetes mellitus attending diabetic clinic of a tertiary care facility, with regard to certain socio - demographic factors. To determine their level of knowledge, attitude and practices with regard to the disease.

Method:

A hospital based cross sectional study was conducted among 70 patients attending a diabetes clinic in a G.G. Govt. Hospital, Jamnagar during the study period from July 2019 to August 2019. The study population comprised all the patients aged more than 30 years diagnosed with types 2 diabetes mellitus more than1 year back & visiting the hospital for follow up. Written informed consent was obtained from them. A questionnaire was developed and tested on 10 patients and suitably modified after consultation with experts. This pretested predesigned questionnaire was used to interview the patients regarding their socio-demographic characteristics, knowledge, attitude and practices related to diabetes mellitus. Knowledge had 13 questions regarding general awareness on diabetes mellitus, its symptoms, complications, prevention and control. 08 questions related to attitude regarding the usefulness of influencing/modifying life style factors and investigations in the management of the disease. Practice had 08 questions regarding life style and dietary habits, monitoring of blood glucose, drug compliance, eye examination and foot care. The data were obtained, compiled and analyzed using simple proportions.

Results:

The mean age of the patients was 52 ± 7.21 years; In this study, 53 (75.71%) patients were males and 17 (24.28%) were females.17 patients (24.28%) were illiterate and the remaining 53 (75.71%) were educated. 11 males (20.75%) were unemployed and 16 females (94.11%) were housewives. Only 40 patients (57.14%) knew that diabetes is a condition characterized by raised blood sugar, 17 patients (24.28%) knew that it resulted from a defect in insulin, 50 patients (71.42%) responded that the disease affects people in the economically productive age group, 53 (75.71%) knew that both sexes could be affected and only 30 persons (42.85%) regarded it as a lifelong disease. Only 2.8% knew that the disease could be asymptomatic. Frequent urination was reported as the most common symptom of diabetes by 30 patients (42.85%). Regarding complications resulting from diabetes, awareness on eye disorder was found to be the highest in 43 patients (61.42%)followed by kidney diseases 41 (58.57%) and heart diseases 24 (34.28%). Healthy diet was believed to be the most common lifestyle factor that could prevent the disease. Knowledge on other lifestyle factors was poor (Table 1).

Table 1: Distribution of respondents according
to their awareness on symptoms, complications
and prevention of diabetes $(n = 70)$

Issues on awareness	Correct responses N (%)
Symptom(s) of diabetes	
Weight gain/loss	8 (11.4)
Frequent urination	30 (42.8)
Frequent hunger	25 (35.7)
Frequent thirst	4 (5.7)
Asymptomatic	2 (2.8)
Complication(s) of diabetes	
Heart disease	24 (34.2)
Kidney disease	41 (58.5)
Eye disease	43 (61.4)
Stroke	4 (5.7)
Foot problem	4 (5.7)
Death	8 (11.4)
Others	13 (18.5)
Lifestyle factor(s) which can prevent diabetes	
Healthy diet	53 (75.7)
Regular exercise	27 (38.5)
Weight control	5 (7.1)

Drugs and dietary modification were the most common management options reported by 56 patients (80%) and 50 patients (71.42%), respectively. Awareness on hypoglycemia, need for periodic eye examination, BP monitoring and foot care in diabetics was found to be very low (Table 2).

Attitude toward dietary modification and regular exercise was favorable in 82.8% and 60.1% of diabetics, respectively. But 17.1% patients believed that once diabetes is controlled, eating restrictions are not required and 38.5% felt that insulin was the last treatment option and should be avoided as far as possible (Figure 1). Regarding their self-reported practices during the previous 1 month, it was found that only compliance to taking drugs (>5 days/week) as per doctor's instructions was present in majority (94.2%) of the patients and 82.8% took a modified diet, mostly, as prescribed by the doctor and/or dietician. Only 17 persons (24.2%) had their eye and foot examination done in the last 1 year. The practices regarding regular exercise for 30 minutes (>5 days/week) and routine (once monthly) blood glucose monitoring were found to be low (Figure 2).

to their awareness on care in diabetes (ii = 70)		
Care in diabetes	N (%)	
Diabetes is treated with		
Drugs	56 (80)	
Insulin	41 (58.5)	
Healthy diet	50 (71.4)	
Regular exercise	46 (65.7)	
Weight control	11 (15.7)	
Quit smoking	2 (2.8)	
Symptom(s) of hypoglycemia		
Sweating	3 (4.2)	
Dizziness	2 (2.8)	
Weakness/fatigue	6 (8.5)	
Control of hypoglycemia	4 (5.7)	
Allied care		
Blood sugar examination	48 (68.5)	
Eye examination	14 (20)	
Foot care for diabetics	2 (2.8)	
BP monitoring	4 (5.7)	

Table 2: Distribution of	f respondents according
to their awarer	ness on care in diabetes (n = 70)

Figure 1: Distribution of diabetes according to their attitude toward diabetes control measures







Discussion:

This preliminary study was conducted with the aim of assessing the socio-demographic profile of patients attending a diabetes clinic in a G.G. Govt. hospital, Jamnagar, Gujarat and their knowledge, attitude and practices regarding the disease. The findings of our study revealed that nearly 24.2% of the patients were illiterate, one-fifth of the males were unemployed and majority of the females were housewives. Overall, it was observed that diabetic patients were aware of only a few aspects regarding the symptoms, complications, prevention and control of their disease condition. Only 34.2% patients knew that the disease could run in families. Regarding symptoms of the disease, knowledge was poor except for that on frequent urination (42.8%).Regular annual screening for diabetes complications allows treatable diseases to be identified.^[14] Patients' lack of knowledge about diabetes care can hamper their ability to manage their disease or its complications. Eye complication was stated to be the most common complication of diabetes by 61.4% patients but only 24.2% patients had gone for eye examination during the last 1 year of their treatment. Awareness on measures to detect early complications of diabetes like periodic eye examination, BP monitoring and awareness on hypoglycemia were found to be poor, which highlights the need for these aspects to be focused in diabetes education programs. For management of diabetes, majority (94.2%) responded that drugs were used for treatment. Lifestyle interventions, namely nutrition and exercise, are the cornerstones of successful diabetes therapy. Cigarette smoking is associated with poor

control of blood glucose and also strongly causally related to hypertension and heart diseases in people with diabetes.^[15] Our study found awareness on lifestyle modification related to weight control and quitting of smoking was low. Some authors have shown that higher education (16.0 versus 12.0, P <0.0001) and professional or executive jobs (17.0 versus 15.0, P < 0.0001) were significantly associated with a better awareness.^[16] Other authors have shown that even patients with lower levels of education are well informed on various aspects of diabetes in presence of a well-equipped diabetic clinic with facilities for patient education.^[11] The poor awareness in our study patients might have been confounded by the fact that majority had low level of education and occupational status in addition to lack of organized diabetes education facilities in our clinic. Attitude toward regular exercise and dietary modification in diabetics was found to be favorable in the majority; however, while compliance to dietary modification was reported to be high (82.8%) it was not the case with regular exercise (30%) possibly due to lack of time. The study found that monitoring of blood glucose at home was very low due to lack of awareness and cost factors but prescription compliance was very high (94.2%).. Physicians have an important role to play in the long-term control of the disease and prevention of complications. However, physician barriers like suboptimal knowledge of guidelines, constraints of time and facilities, focus on acute management rather than preventive care, competing care demands and delay in clinical response to poor control impede appropriate management of the disease.^[17] For people affected by diabetes, self-management education training is important since people with diabetes and their families provide 95% of their care themselves.^[18,19] The need for regular patient counseling or group education at follow- up visits by health care professionals in improving patients' knowledge and ultimately modifying their practices cannot be overemphasized. However, the ground reality is that proper diabetes education programs are lacking in most government hospitals even at the tertiary care levels and the existing programs are weak and fragmented. Inadequacies in primary health care systems which are not designed to cope with additional challenges posed by noncommunicable diseases result in poor detection, suboptimal treatment leading to unnecessary disabilities and complications.^[19] The CURES study concluded that awareness and knowledge regarding diabetes among general population and diabetics are still grossly inadequate in India and massive diabetes education programs are urgently needed both in urban and rural India.^[13]

Conclusion:

The findings of this study reveal that diabetic patients rely mostly on drugs and dietary modification to control their disease condition. Promotion of healthy lifestyle modifications and selfcare should be incorporated as part of diabetes education in all treatment facilities. For people affected by diabetes, self-management education training is important since people with diabetes and their families provide 95% of their care themselves. It is possible that consultation with doctors regarding drugs and dietician was directly responsible in motivating them to adopt such practices.

Recommendation:

Patient education in self-management of the disease is the need of the hour. Special emphasis should be laid on educating the patients about complications of the disease and need for lifestyle modification along with drug compliance and periodic laboratory investigations. One limitation of this study was that the findings are restricted to patients attending the diabetic clinic in G.G. Govt hospital, Jamnagar, Gujarat and hence may not be generalizable to patients from different socioeconomic backgrounds in other parts of the country. Additional investigation in a larger sample size in other study populations is needed to replicate and extend these findings. However, since the sociodemographic profile of patients attending a diabetic clinic in G.G. Govt hospital, Jamnagar, Gujarat is not expected to be very different, this preliminary study throws some light on the prevailing level of knowledge, attitude and practices of diabetics in this area.

Declaration:

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Conflict of Interest : Nil

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