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A CROSS SECTIONAL STUDY OF KNOWLEDGE, ATTITUDE AND PRACTICE AMONG PATIENTS WITH TYPE 2 DIABETES MELLITUS AT A TERTIARY CARE HOSPITAL

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ABSTRACT: Diabetes mellitus is emerging as a major health problem in India; it is affecting all class of society with varied clinical manifestation. Increasing awareness about the disease is very important to prevent the epidemic manifestation of diabetes. **METHODOLOGY:** A cross sectional study with 120 respondents conducted over a period of 6 months to assess the knowledge, attitude and practice among type 2 diabetes mellitus patients. Structured questionnaire was used to collect data. **RESULTS:** The study revealed that the awareness of patients regarding the definition and the causation was poor. 61% patients were not aware of the common symptoms of the disease and less than 20% knew about the complications. Medications (73.33%) were the main method of control of diabetes followed by dietary changes (62.5%) and exercises (60.8%). Screening for complication was also very less; only 14.16% of the participants have ever undergone checkups to look for complications. **CONCLUSION:** Our study revealed that the knowledge among majority of the respondents was poor. The attitude and practices towards prevention and control of diabetes was not satisfactory. There is a need for regular conduct of awareness programmes to improve attitude and practices of diabetic patients to promote better compliance towards diet, exercise and medications.
KEYWORDS: Knowledge, Attitude, Practice, Diabetes type 2.

INTRODUCTION: Diabetes mellitus is a major public health problem affecting more than 171 million people worldwide and the number is expected to rise to 366 million by 2030.[1] Type 2 Diabetes will continue to account for 90% of all the cases. The total number of diabetics in India was 41 million in 2006 and that this would rise to 70 million by the year 2025.[2] Increased prevalence in India is attributed to the life style changes coupled with urbanization and rapid industrialization. Poor awareness and practices among diabetic patients are some of the important variables influencing the progression of diabetes and its complications, which are largely preventable.[3] Epidemiological studies conducted at different part of the country showed a prevalence of diabetes varying from 5.4% in north eastern states to as high as 15.5% in south Indian state of Tamilnadu.[4]

In a developing country like India where majority of the people belong to the lower socioeconomic status and low level of education makes it still vulnerable to lifestyle diseases like diabetes and hypertension. Compared with the general population incidence of Coronary heart diseases and stroke are more among patients of diabetes. Their quality of life is further impacted by complications like diabetic renal disease and diabetic retinopathy and neuropathy which are frequently occurring among the patients having poor glycemic control.[5]

There is always a need to investigate knowledge, attitude and behavior among diabetic patients to aid in future development of national health programmes and techniques for effective

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health education.[6] With this background the study was conducted to assess the general characteristics of type 2 diabetes patients and their baseline knowledge, attitude and behavior towards diabetes mellitus.

METHODOLOGY: A cross sectional descriptive study conducted at a tertiary care hospital over a period of six months among 120 diabetic patients attending the Medicine OPD at McGann Hospital, Shimoga.

The study population comprised of the known type 2 diabetes patients diagnosed and being treated for the disease and those who are attending the hospital for follow up care. Data was collected using a pretested and structured questionnaire after taking an informed consent. Information regarding socio-demographic characteristics, knowledge, attitude and practices related to type 2 diabetes regarding general awareness, symptoms, complications, prevention and control were collected. Data collected were entered on to Microsoft excel, analyzed and interpreted using percentages and proportions.

RESULTS: Basic socio-demographic characteristics of the respondents are as shown in table 1. A total of 120 diabetic patients consented and participated in the study of whom 63 (52.5%) were male and 57(47.5%) female. Age ranged from 36 years to 68 years with majority of the participants (48.50%) in the age group of 41-50 years. Socioeconomic status was assessed by using modified Kuppuswamy classification in which majority of the participants' belonged to lower class 72 (60.10 %). Most of the respondents, 58(48.33 %) were recently diagnosed or had a duration of disease between 1 to 5 years.

Regarding the knowledge about diabetes, only 12(9.1%) knew that it is condition caused due to deficiency of insulin leading to increased blood sugar level. Most of the respondents (61%) were not aware of the common symptoms of diabetes such as frequent thirst, urination and hunger, also the knowledge was less when the complications of diabetes were concerned (Table 2). Only few participants had an idea that long standing diabetes can complicate heart (37.5%), kidney disease (12.5%) and can leads to stroke, eye disease (26.66%) and foot problems (44.16%).

When Awareness regarding diabetes control was inquired patients responded that medications (73.33%) and diet (62.5%) were chosen as most common method followed by regular physical exercise (60.8%) and self-care. Attitude towards dietary modification and regular exercise was found positive in 30.83% and 35.84% of the patients respectively. 32.5% of patients knew the long standing nature of the disease and were willing to take the medicine for the length of the disease.

About 14.16 % of the participants have ever undergone investigations for other complications like eye examination, foot care and to test for the normal functioning of kidneys. Majority of the patients (32.5%) were taking the medications regularly as prescribed by the physicians, 19.16% and 22.5% of patients took modified diet and engaged in some form of physical exercise. Regular routine blood examination was found to be very low (20%) among the respondents (Table 3).

DISCUSSION: The present study conducted at a tertiary care hospital among subjects having type 2 diabetes assess the knowledge among diabetes patient and their attitude towards the disease and common practices followed by them.

The present study revealed that 52.5 % of patients were male, 68.33% were illiterates, 23% were unemployed and majority of the females were housewives. The overall knowledge about the

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disease in terms of causation, prevention and control was poor. Only 39% were aware of symptoms and less than 20% of the respondents knew about the complications of the disease. This finding is consistent with many other studies; Chennai urban population study[7]and Murugesan et al[6] who conducted their studies at many of south Indian states.

As far as knowledge regarding the complications of diabetes is concerned; in the current study only few patients knew about the complications and how to avoid them. The awareness about diabetes complications in the present study is lower than that reported by many studies.[8, 9]

Changes in the lifestyle and dietary modifications play an important role in control of diabetes and prevention of complications[10]. Majority of the participants (73.33%) in our study responded that medicines were used to control diabetes. Exercises and dietary changes were employed as control measure among 35.83% and 30.83% of the patients. Higher the education and occupation was positively associated with better compliance as far as self-care practice and lifestyle changes are concerned. Similar findings are available with other authors who have documented that education and occupational status are better associated increased knowledge and practices among their patients.[11]

Diabetes is associated long term complications like diabetic retinopathy, nephropathy and neuropathy which can be better prevented by frequent examination of the relevant system to detect the development of complication at an early stage and to prevent the progress the disease. In this study we observe that a very few patients (14.16%) have undergone periodic checkups to detect the complications. Diabetic health education must be made an integral part of patient management. In countries like India where there is large number of patients are managed by limited resources, counselors can play an important in the patient health education. The finding of this study may help in providing the baseline data for the proper implementation and working of recently launched National program for prevention and control of diabetes, cardiovascular diseases and stroke (NPDCS).

Our study has limitations due to convenience sampling, which may limit generalization of the findings. Also the majority of the patients were poor and illiterate, the study findings needs to be supported by nationwide statistics to bridge the gap caused due to our limitations.

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Variable	Number (%)
Age (yrs.)	
35-44	23(19.16)
45-54	46(38.33)
55-64	32(26.66)
>65	19(15.83)
Sex	
Male	63(52.5)
Female	57(47.5)
Socioeconomic status	
Upper	05(4.1)
Middle	43(35.83)
Lower	72(60)
Literacy	
Literate	38(31.66)
Illiterate	82(68.33)
Locality	
Urban	49(40.8)
Rural	71(59.2)
Table 1: Sociodemographic profile of study participants	

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Variable	Number (%)
Cause	
Hereditary	28(23.3)
Lifestyle	14(11.66)
Symptoms	
Frequent urination	48(40)
Frequent thirst	42(35)
Frequent hunger	28(23.3)
Complications	
Eye problems	32(26.66)
Heart problems	45(37.5)
Kidney problems	15(12.5)
Foot problems	53(44.16)
Infections	44(36.66)
Prevention	
Medicines	88(73.33)
Diet	75(62.5)
Exercise	73(60.8)
Quit smoking/alcohol	56(46.66)

Table 2: knowledge of participants regarding causes, symptoms, complications

Variable	Number (%)
Dietary changes	37(30.83)
Exercise	43(35.8)
Quit smoking/alcohol	56(46.66)
Taking medicines regularly	39(32.5)
Regular systemic examinations	17(14.16)
Regular blood sugar estimation	24(20)

Table 3: Attitude and practice towards diabetes control

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