

Knowledge, Attitude and Practice of Diabetes amongst Rural Population - An Institutional based Study

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ABSTRACT

Introduction: Type 2 diabetes mellitus is becoming a global epidemic which causes significant disability, premature death and is responsible for huge medical costs. The increase in diabetes amongst low-resource countries is partly due to lack of knowledge and awareness about the disease as it is insidious in onset and people remain undiagnosed until major complications set in. The present study was conducted with the aim to determine the knowledge, attitude and practice of diabetes amongst rural population.

Material and methods: The present cross sectional study was conducted by the Department of Medicine, MIMS during a period of 6 months. A total of 1100 subjects were interviewed and made to fill a pretested, predesigned questionnaire. The questionnaire consisted of three parts. In the first part there was information regarding the demographic detail of the subject like age, gender, education level etc. Percentage of the answers was established. All the data was arranged in a tabulated form and analysed using SPSS software.

Results: There were 44.8% (n=493) males and 55.2% (n=607) females who were enrolled in the study. Majority of the subjects were between 25-34 years of age (32.3%). there were only 17.6% subjects (n=194) who were greater than 40 years of age. There were 69.3% of the subjects who had never heard about diabetes. Only 30.4% had heard about diabetes in their life. According to 41.4%, age was not a risk factor for diabetes. 33.5% had no idea about this. The role of genetics in diabetes was known by only 10.4% of the study subjects. There were 48.2% subjects who didn't think physical activity was necessary to prevent diabetes. There were 38.3% subjects who had no idea about relation between weight and diabetes.

Conclusion: In our study the knowledge about diabetes was poor. There was a very less proportion of population that had an idea about the risk factors and management strategies

Keywords: Awareness, Diabetes, Management, Screening

plays a pivotal role in any development of disease and its early detection and prevention. Patients with diabetes should have positive knowledge, attitude and practice. All these elements are closely related to each other and are dependent on each other. As diabetes is concerned, the knowledge, attitude and practice are dependent on socioeconomic background, habits and cultural beliefs.³ Proper knowledge of diabetes mellitus can prevent the occurrence of chronic complications associated with DM, which significantly influence the quality of life of patients with diabetes.

Various studies have reported that there is an increased need for inculcating more awareness about prevention, control, diagnosis and risk factors associated with diabetes.⁴⁻⁷ Studies conducted in South India regarding awareness about diabetes have shown that educated and diligent individuals with diabetes mellitus have greater self care and hence longer term control.⁵ The chief concern of managing a case of diabetes mellitus is to the various macrovascular and microvascular complications and achieve optimal glycemic control.⁸ For this various lifestyle modifications needs to be opted for like regular exercise, healthy and balanced diet and drug therapy. Therefore, health education is an important part of the diabetes management. There is paucity of data in literature on the awareness of people regarding diabetes risk factors, knowledge about lifestyle modification and attitude of people. There were very few studies in literature regarding the awareness of the disease and there was virtually no data on the population as a whole.^{9,10} The present study was conducted with the aim to determine the knowledge, attitude and practice of diabetes amongst rural population.

MATERIAL AND METHODS

The present cross sectional study was conducted by the Department of Medicine, MIMS during a period of 6 months. The subjects who were more than 18 years of age and willing to participate were included in the study. Subjects who were medically compromised and already had diabetes were not included in the study. The study was approved by the Institute's ethical committee and all the subjects were informed about the study and a written consent was obtained

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INTRODUCTION

A major fast growing and non communicable disease that is a threat to global public health is diabetes. Type 2 diabetes mellitus is becoming a global epidemic which causes significant disability, premature death and is responsible for huge medical costs.¹ The number of people affected with diabetes is expected to double by 2030 with significant increase amongst people of asia.¹ Globally, 70% of type 2 diabetes mellitus have seen to occur in developing countries.² The increase in diabetes amongst low-resource countries is partly due to lack of knowledge and awareness about the disease as it is insidious in onset and people remain undiagnosed until major complications set in. Knowledge

from all.

A total of 1100 subjects were interviewed and made to fill a pretested, predesigned questionnaire. The questionnaire consisted of three parts. In the first part there was information regarding the demographic detail of the subject like age, gender, education level etc. The 2nd part they were tested about the knowledge of diabetes and in the third part attitude of the individuals were tested. All the questions had three options- yes, no, don't know. Percentage of the answers was established.

STATISTICAL ANALYSIS

All the data was arranged in a tabulated form and analysed using SPSS software. Descriptive statistics like mean and percentages were used to interpret the data.

RESULTS

Table 1 shows the sociodemographic details of the study population. There were 44.8% (n=493) males and 55.2% (n=607) females who were enrolled in the study. Majority of the subjects were between 25-34 years of age (32.3%). there were only 17.6% subjects (n=194) who were greater than 40 years of age. There were 20.1% subjects between 35- 40 years. There were 331 subjects who were less than 24 years of age. Majority of the subjects were married (62.4%). There were 32.6% (n=359) and 4.9% (n=54) who were single and divorced respectively. Majority of the rural people were illiterate (45.7%). There were only 30.1% subjects who were graduates and 24.2% subjects had completed their postgraduation. There were 50.8% (n=559) subjects who belonged to lower class. Only 9.1% subjects belonged to upper class and 40.1% (n=441) subjects belonged to middle class.

Table 2 illustrates the knowledge, attitude and behaviour of the subjects towards diabetes. There were 69.3% of the subjects who had never heard about diabetes. Only 30.4% had heard about diabetes in their life. According to 41.4%, age was not a risk factor for diabetes. 33.5% had no idea about this. The role of genetics in diabetes was known by only 10.4% of the study subjects. There were 54% of the subjects who had no idea about this. Obesity as a risk factor for diabetes was known by only 22.7% of the subjects, 65.5% had no idea about it. 32.4% thought exercise was useful in preventing it. There were 25.6% subjects who did not think exercise to be useful. Diet played a role in causing diabetes was known by only 12.6% of population. 45.6% thought there was no role of diet. Very few had an idea about the signs and symptoms associated with diabetes. Only 32.5% thought increased urination was a symptom. There were 41.5% who thought thirst had nothing related to diabetes. Weight loss as a symptom of diabetes was known by only 34.3% of the population. 40.7% knew that diabetes is associated with high blood sugar. Insulin injection as a mode of treatment was known by 33.2% subjects. 51.1% subjects had no idea that it could be managed by medications also. Only 22.5% knew that regular eye check up was necessary. Diabetes can lead to heart failure and amputation of limb

Variable		Frequency	%
Gender	Male	493	44.8
	Females	607	55.2
Age	<24	331	30.1
	25-34	354	32.2
	35-40	221	20.1
	>40	194	17.6
Marital status	Single	359	32.6
	Married	687	62.4
	Divorced	54	4.9
Education	Illiterate	503	45.7
	Graduate	331	30.1
	Post graduate	266	24.2
Socioeconomic status	Upper class	100	9.1
	Middle class	441	40.1
	Lower class	559	50.8

Table-1: Socio demographic distribution of the study population

was known by only 10.1% and 8.4% subjects respectively. There was still a portion of population who thought diabetes to be a taboo and didn't want anyone to know (33.5%). Screening of family members was necessary only for 41.6% of the subjects. There were 48.2% subjects who didn't think physical activity was necessary to prevent diabetes. There were 38.3% subjects who had no idea about relation between weight and diabetes.

DISCUSSION

From the present study we can say that rural people have poor knowledge and attitude towards diabetes. Knowledge, attitude and practice (KAP) with respect to diabetes varies greatly according to socioeconomic status, cultural belief and habits. In our study, there were 44.8% (n=493) males and 55.2% (n=607) females who were enrolled in the study. Majority of the subjects were between 25-34 years of age (32.3%). there were only 17.6% subjects (n=194) who were greater than 40 years of age. There were 20.1% subjects between 35- 40 years. There were 331 subjects who were less than 24 years of age. Majority of the subjects were married (62.4%). There were 50.8% (n=559) subjects who belonged to lower class. Only 9.1% subjects belonged to upper class and 40.1% (n=441) subjects belonged to middle class. Proper understanding of these variables plays a crucial role in designing of various protocols for the prevention and control of diabetes. Various studies conducted in the past have shown that knowledge about diabetes is poor amongst diabetic patients of developed and developing countries.¹¹⁻¹⁵ In a study conducted by Shah VN et al, amongst patients who attended tertiary care hospital at Gujarat found that there were 51% of the patients who had knowledge that exercise helped in diabetes control. There were 75% who knew that diet played a crucial role in controlling diabetes and only 7% knew about smoking as a health risk to diabetes.¹⁵ In our study, there was still a portion of population who thought diabetes to be a taboo and didn't want anyone to know (33.5%). Screening of family members was necessary only for 41.6% of the subjects. There were 48.2% subjects

Variable	Yes		No		I Dont know	
	N	%	N	%	N	%
Have you heard about diabetes ?	334	30.4	444	40.4	322	29.3
What are the risk factors for diabetes?						
Age	277	25.2	455	41.4	368	33.5
Genetic	114	10.4	392	35.6	594	54
Overweight/obesity	250	22.7	130	11.8	720	65.5
Pregnancy	113	10.3	160	14.5	827	75.2
Diet	139	12.6	502	45.6	459	41.7
No exercise	356	32.4	281	25.6	463	42.1
What are the signs and symptoms						
Increased urination	357	32.5	462	42	281	25.5
Increased thirst	283	25.7	457	41.5	360	32.7
Weight loss	377	34.3	433	39.4	290	26.3
High blood sugar	448	40.7	277	25.2	315	28.6
Increased hunger	203	18.5	367	33.4	530	48.2
Weakness	312	28.4	243	22.1	545	49.5
Management						
Insulin injections	365	33.2	397	36.1	338	30.7
Medicines	118	10.7	420	38.2	562	51.1
Exercise	148	13.5	338	30.7	614	51.8
Diet regulation	137	12.5	366	33.3	597	54.3
Eye checkup	248	22.5	430	39.1	422	38.4
Feet and toes checkup	112	10.2	446	40.5	542	49.3
Complications						
Blindness	254	23.1	618	56.2	228	20.7
Kidney failure	102	9.3	405	36.8	593	53.9
Heart failure	111	10.1	453	41.2	536	48.7
Amputation of limb	92	8.4	239	21.8	769	69.9
Attitude						
I don't mind if others know that I am with DM	405	36.8	368	33.5	327	29.7
Do you think family members should be screened for DM	456	41.6	248	22.6	396	36
Do you think that you should be examined for DM	503	45.7	343	31.2	254	23.1
Do you think physical activity can prevent risk of DM	155	14.1	530	48.2	415	37.7
Do you think maintaining a healthy weight is important in management of	170	15.5	509	46.3	421	38.3

Table-2: Knowledge, attitude of subjects regarding diabetes

who didn't think physical activity was necessary to prevent diabetes.

In a study conducted by Kassahun CW et al, at south east ethopia, there were 49.5% subjects who thought that diabetes can affect any body part with 49% knowing that it is related to high blood sugar. There were 40.2% who knew that it is incurable.¹⁶ According to a study done at Debre Tabor there were 51.3% participants who knew that it is incurable. There were 43.3% subjects according to whom diabetes mellitus affects all the parts of body. There were 41.2% subjects who thought that condition was because of high sugar in blood.¹⁷ In our study, there were 69.3% of the subjects who had never heard about diabetes. Only 30.4% had heard about diabetes in their life. According to 41.4%, age was not a risk factor for diabetes. 33.5% had no idea about this. The role of genetics in diabetes was known by only 10.4% of the study subjects. There were 54% of the subjects who had no idea about this. Obesity as a risk factor for diabetes was known by only 22.7% of the subjects, 65.5% had no idea about it. 40.7% knew that diabetes is associated with high blood sugar. A survey conducted amongst the rural population of

Bangladesh showed that low knowledge is directly related with poor management of diabetes and association with risk factors.¹⁸

We can clearly see that patients with or without diabetes mellitus, who are attending health care centres have poor knowledge and awareness about diabetes. Various steps need to be taken to close the gap that exists between patients and health care providers so that proper and complete education can be provided to the patients. Education is considered to play a key role in management of diabetes but in practicality it remains quite low and very less number of clinicians follows this. We only require counselling patients about diabetes as it will have a direct impact in improving the perception of the disease, dietary and lifestyle changes and hence leading to an improvement in glycemic index in order to prevent the complications related to diabetes.

CONCLUSION

In our study the knowledge about diabetes was poor. There was a very less proportion of population that had an idea about the risk factors and management strategies. If this condition

continues to prevail like this then soon diabetes will become an epidemic. Awareness and screening programmes should be conducted at a large scale to solve this issue.

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