

ORIGINAL RESEARCH**A study of the knowledge of diabetes mellitus in the patients of diabetes mellitus in Karnal, Haryana****¹Dr. Amandeep Singh Kaloti, ²Dr. Jyoti Kadian, ³Dr. Aseem Garg, ⁴Dr. Rajesh Garg, ⁵Dr. Vikram Garg**

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Abstract

Introduction: India's public health challenges include diabetes. According to studies, people who are more informed about their condition adhere to their treatment regimens better and experience fewer difficulties. Therefore, the study's objective is to evaluate the patients' knowledge about diabetes mellitus in Karnal, Haryana.

Materials and methods: Over the course of three months, a cross-sectional study was going to be carried out at the department of Medicine at the Kalpana Chawla Government Medical College in Karnal, Haryana. After obtaining written informed consent, the study comprised of 211 type 2 diabetes mellitus patients.

Results: The mean age was 56.39 ± 12.34 years. Among 211 participants 97.63% were married, 33.18% had a family history of diabetes mellitus, 58.77% had comorbidities, and 21.33% participants had a history of alcohol intake.

Conclusion: The most effective method for preventing diabetes and postponing the onset of illness in high-risk persons is community education on risk factors.

Keywords: Complications, Diabetes mellitus, Knowledge

Introduction

The epidemic of diabetes mellitus has spread worldwide. By the year 2040, it is predicted that the prevalence of diabetes will have increased from 8.8% to 10.4% worldwide [1]. An estimated 69.2 million Indians are expected to have diabetes as of 2015, and the International Diabetes Federation's (IDF) Diabetes Atlas predicts that number would increase to roughly 123.5 million by 2040, when every fifth diabetic person worldwide will be an Indian [1]. Diabetes manifests ten years sooner in our region of the world than it does in Europe, and late detection of this illness has a major negative impact on youngsters during their peak years of productivity. When they are diagnosed with diabetes, many diabetics have micro and macrovascular problems. The individual's understanding of the condition will play a significant role in preventing both the development of diabetes in that person as well as the consequences. Numerous research has been carried out in India to determine how well-aware diabetics are of the disease. In a survey undertaken in four Indian regions, the Indian Council of Medical Research (ICMR) discovered that just 43.2% of the total study population had ever heard of the term "diabetes." Another study revealed that 17% of participants had inadequate understanding and that more than half thought it was a contagious illness.

Complete understanding of the illness would be very beneficial [2]. It is now widely accepted that educating the public on diabetes mellitus, its risk factors, and healthy lifestyle choices will likely have a significant positive impact on disease prevention. [3] Regrettably, the general population is not sufficiently informed of the true scope of the issue. A lack of knowledge about current illness preventive interventions is another issue. [4] Although there is a wealth of information on the prevalence of diabetes mellitus from India, to our knowledge, no thorough study on knowledge of diabetes mellitus has been conducted to far. Hence, the aim of the study is to assess the knowledge of diabetes mellitus in patients of diabetes mellitus at Karnal, Haryana.

Materials and methods

Over the course of three months, a cross-sectional study was going to be carried out at the department of Medicine at the Kalpana Chawla Government Medical College in Karnal, Haryana. After obtaining written informed consent, the study comprised all type 2 diabetes mellitus patients presenting to the hospital's medical OPD and being admitted to the medical wards. The Institutional Ethics Committee gave its ethical blessing. The study excluded individuals with type 1 diabetes mellitus, those on insulin, and women who were pregnant (gestational diabetes).

The study subjects completed a questionnaire after receiving a thorough explanation. Age, sex, occupation, place of residence, education, family history of diabetes, and history of alcohol consumption sociodemographic data were gathered. Eight questions on knowledge of diabetes mellitus and knowledge of complications of complications of diabetes mellitus are included in the questionnaire. The questions have three possible answers: Yes, No, and Don't know. The Yes response would receive a score of 1, while the No response or don't know would receive a score of 0. [5] The categorization of diabetes mellitus on the basis of the scores was:

Knowledge of Diabetes Mellitus-	
0-1	Poor
2-3	Average
>3	Good
Knowledge of complications of Diabetes Mellitus-	
0-1	Poor
2-3	Average
>3	Good
Overall-	
0-3	Poor
4-6	Average
>6	Good

A knowledge score of < 3 was deemed bad, 4-6 was deemed average, and >6 was deemed good. SPSS version 11 was used to analyse the data (SPSS Inc., Chicago, USA). Sociodemographic factors were subjected to descriptive analysis.

Results

A total of 211 participants were enrolled in the study. Out of all the participants, 50.71% were females and 49.49% were males. The mean age was 56.39 ± 12.34 years. Among 211 participants 97.63% were married, 33.18% had a family history of diabetes mellitus, 58.77% had comorbidities, and 21.33% participants had a history of alcohol intake (table 1).

Age	56.39 ± 12.34
Gender	N (%)
Male	104 (49.29)

Female	107 (50.71)
Marital status	N (%)
Unmarried	3 (1.42)
Married	206 (97.63)
Widow	2 (0.95)
Family History	N (%)
Yes	70 (33.18)
No	141 (66.82)
Comorbidities	N (%)
Yes	124 (58.77)
No	87 (41.23)
Alcohol intake	N (%)
No	166 (78.67)
Yes	45 (21.33)
Table 1: Demographic details	

Knowledge regarding Diabetes Mellitus	Yes N (%)
1. Have you heard about diabetes Mellitus?	209 (99.05)
2. Do you know it is a chronic disease?	174 (82.46)
3. Do you know glycaemic control is important?	190 (90.05)
4. Do you know about the symptoms of diabetes mellitus?	148 (70.14)
Knowledge regarding its complications	Yes N (%)
1. Do you know about the Diabetes Mellitus related complications?	134 (63.51)
2. Do you know about that persistent hyperglycemia affects eyes, heart, kidney?	88 (41.71)
3. Do you know about diabetic foot?	124 (58.77)
4. Do you know about diabetic neuropathy?	95 (45.02)
Table 2: Knowledge of Diabetes Mellitus and its complications	

Knowledge regarding diabetes mellitus and its complications was discussed in table 2. Out of all the subjects, 99.05% responded yes when asked "Have you heard about diabetes Mellitus?", 82.46% said yes when asked "Do you know it is a chronic disease?", 90.05% said yes when asked "Do you know glycaemic control is important?" and 70.14% said yes, when asked "Do you know about the symptoms of diabetes mellitus?". When the patients were asked about the complications of diabetes mellitus, 63.51% responded yes for "Do you know about the Diabetes Mellitus related complications?", 41.71% responded yes for "Do you know about that persistent hyperglycemia affects eyes, heart, kidney?", 58.77% responded yes for "Do you know about diabetic foot?", and 45.02% responded yes for "Do you know about diabetic neuropathy?"

Discussion

Knowledge is a logical prerequisite for intentional performance of a health-related behaviour. Changes in attitudes begin to emerge as knowledge grows, and these changes eventually result in changes in behaviour [6]. For planned behaviour, such as lifestyle modifications and treatment compliance, understanding diabetes is essential. It is widely accepted in the medical literature that diabetes cannot be prevented unless the whole public, especially high-risk groups, is aware of how to take care of oneself [7–9].

It is commonly known that understanding risk factors is a requirement for illness prevention, and that failing to recognise risk factors hinders preventive measures like adopting a healthy lifestyle. [10] Improving awareness of the diabetes risk factors must be given top priority because lifestyle changes and increased physical activity are the mainstays of diabetes prevention. [11]

To enable people to prevent and manage diabetes, it is essential to be aware of the complications associated with diabetes [12]. Surprisingly, even among diabetics, the majority were ignorant of problems. The outcomes agree with those of investigations conducted elsewhere [7,11,13]. It partially reflects the fact that patients are not aware of the diabetes complications, which can have terrible outcomes in terms of mortality and morbidity. This has been attributed to a number of factors, such as a lack of time, an inadequate method of information delivery, and a shortage of trained support personnel, such as diabetic educators. [11,14]

Conclusion

Due to its high literacy rate, particularly among women, India is at par with most developed countries in terms of health and socioeconomic development while yet battling a triple burden of disease. The study population's understanding of diabetes mellitus, however, illustrates the reality that being literate does not guarantee that a person is equally concerned with their health. The survey found that although most people were aware of diabetes mellitus, they lacked in-depth understanding. The community must be educated on risk factors because doing so can stop diabetes from occurring and postpone its start in high-risk persons. Additionally, individuals who had diabetes reported having less awareness of consequences and treatments. Therefore, it is crucial to inform patients about the significance of following their treatment plan while also teaching them to spot diabetes-related complications as soon as the disease is identified. Positively, there has been an improvement in understanding of the lifestyle changes required to manage diabetes; however, it has to be determined whether this has been converted into actual practise.

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