

# Assessment of Knowledge Regarding the Complications of Diabetes Mellitus Type 2 among Patients in GMCH - 32 Chandigarh

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## ABSTRACT

A quantitative study with a descriptive study design to assess the knowledge regarding the complications of diabetes mellitus type II among diabetic patients in GMCH – 32, Chandigarh was carried out in full compliance with the ethical standards provided by the Research and Ethical committee of GMCH to carry out the study and approval was taken from the aforementioned committee of the institution. The objectives of the study were to assess the knowledge regarding complications of diabetes mellitus type among diabetic patients and to find out the association between knowledge score with selected socio-demographic variables and to develop a health education booklet for patients having diabetes mellitus. A purposive sampling technique was used to select 70 subjects visiting GMCH – 32, Chandigarh. Data was obtained from study subjects by using the proformas developed by the researchers consisting of Part A- to collect socio-demographic data and Part B- to assess the knowledge regarding complications of diabetes mellitus type II. Data analysis was done by calculating mean, median, standard deviation, percentage, frequency by using descriptive and inferential statistics at  $p < 0.05$  was considered statistically significant. Findings revealed that 64% of diabetic subjects had average knowledge, and 36% had poor knowledge regarding complications of diabetes mellitus type II. The association of age, gender, religion, occupation, education status, type of family, family history, monthly income, duration of diabetes, any undergoing treatment, source of health information has no association with knowledge score whereas the area of residence and comorbidity has an association with the knowledge score.

## KEYWORDS:

- 1. Diabetes** – Diabetes is a class of metabolic diseases marked by high blood glucose levels (hyperglycemia) caused by a deficiency in insulin secretion, insulin action, or both.
- 2. Knowledge** - Knowledge regarding complications of diabetes mellitus type II.
- 3. Complications** - It is an undesirable outcome of disease, health condition, or treatment, such as diabetes mellitus in this situation. Complications can have a negative impact on the prognosis or outcome of an illness.

## BACKGROUND OF THE STUDY

Diabetes mellitus is a severe clinical and public health issue that causes 4.6 million deaths worldwide each year. According to the International Diabetes Federation, around 366 million people worldwide

have diabetes, with 80 percent living in low- and middle-income countries. The fact that nearly half of persons with diabetes go untreated is even more concerning. According to the Indian Council of

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Medical Research's India Diabetes Study (ICMR-INDIAB), India has 62.4 million diabetics in 2011. By 2030, these figures are expected to rise to 101.2 million.<sup>1</sup> Retinopathy, diabetic foot, renal issues, stroke, cardiac complications, neuropathy, hypertension, and sexual dysfunction are among the most common complications of diabetes. Diabetes and its consequences are becoming more common, putting a strain on people and the healthcare system.<sup>2</sup> India is one of the six countries that make up the South East Asia (IDF SEA) area of the International Diabetes Federation. According to this, 69.1 million people in India were diagnosed with diabetes in 2015. Diabetes affected 8.7% of persons aged 20 to 79 years. Although the Indian health system provides services for diabetic care and prevention, self-management education is minimal. With prevalence rates as high as 20% in some areas, India's economic boom has coincided with a surge in the number of people with diabetes and those at risk of developing the condition.<sup>3</sup> Knowledge is crucial in the development of future diseases, as well as their early prevention and identification. Diabetes knowledge can help diabetic patients avoid the onset of chronic DM comorbidities, which have a substantial impact on their quality of life. People can use the information to estimate their diabetes risk, motivate them to seek adequate treatment and care, and inspire them to manage their disease for the rest of their lives.<sup>4</sup> Diabetic care requires a thorough understanding of the disease. Many studies have demonstrated that enhancing patient education of their disease and its complications has a considerable impact on patient adherence to treatment and the reduction of disease-related problems.<sup>5</sup> The majority of DM issues can be avoided by raising awareness. The first step in managing sickness, as well as facilitating prevention and control measures, is to raise awareness of the condition, its treatment, and its repercussions. Adherence to treatment also necessitates knowledge of the disease's nature and complications. Lack of knowledge of diabetic complications, on the other hand, correlates to increased incidence of complications.<sup>2</sup> According to a cross-sectional study conducted using a semi-structured questionnaire to assess the knowledge of diabetes, its complications, and treatment adherence on a total of 120 patients visiting Vydehi Institute of Medical Science and Research Centre in Bangalore, patients with more knowledge adhered to their treatment better. This emphasizes the significance of providing patients with relevant disease information.<sup>3</sup>

### NEED OF THE STUDY

India is among the top 10 countries with an estimate of 77 million people suffering from type II diabetes

mellitus. If not controlled, it can lead to severe complications such as diabetic foot, nephropathy, neuropathy, retinopathy etc. as cited in studies in review of literature, still the knowledge of people regarding the complications of type II diabetes mellitus is inadequate. Most of the patients only know the complications they have seen among the diabetic patients. Those who are diagnosed with diabetes experience significant health concerns because the disease itself has proven to be the catalyst for other health problems giving rise to complications. So, the study was undertaken to assess the knowledge regarding complications of diabetes mellitus type II among patients in GMCH – 32, Chandigarh. Our research serves to help create a better future for those impacted by diabetes. The other aim is to develop knowledge related to diabetes mellitus and its complications along with preventive measures. The research will enable the researchers to improve the lifestyle of the people who struggle with diabetes every day.

### PROBLEM STATEMENT

A study to assess the knowledge regarding the complications of diabetes mellitus type II among subjects in GMCH – 32, Chandigarh.

### OBJECTIVES

1. To assess the knowledge regarding the complications of diabetes mellitus type II among subjects in GMCH – 32, Chandigarh.
2. To find the association of knowledge with the selected socio-demographic variables.
3. To develop a health educational booklet on prevention of complications of diabetes mellitus.

### Research approach

A quantitative approach was used in this study as the investigation aimed to assess the knowledge regarding the complications of diabetes mellitus type II among patients in GMCH – 32, Chandigarh.

### Research design

Descriptive Study Design was used to assess the knowledge regarding the complications of diabetes mellitus type II

### Sample size

70 subjects

### Sampling techniques

The consecutive sampling technique was used. Under this, every subject meeting the criteria of inclusion was selected until the required sample size was achieved.

### Tools & Techniques

After an extensive review of literature and discussion with experts, the tool was developed that includes:

Part A: Socio-demographic data includes: Age, Gender, Religion, Occupation, Education status, Type of family, Family history of diabetes mellitus, Monthly income, Area of residence, Duration of diabetes, Co-morbidity, Undergoing any treatment, Source of health information regarding diabetes mellitus.

Part B: Self-structured knowledge assessment questionnaire consisting of 21 questions.

**SCORING CRITERIA**

Level of knowledge	Score
Good	15-21
Average	08-14
Poor	00-07

Technique: The questioning (self-report) technique (questionnaire) was used.

**RESULT**

**Objective I:** To assess knowledge regarding complications of diabetes mellitus type2 among subjects in GMCH – 32, Chandigarh.

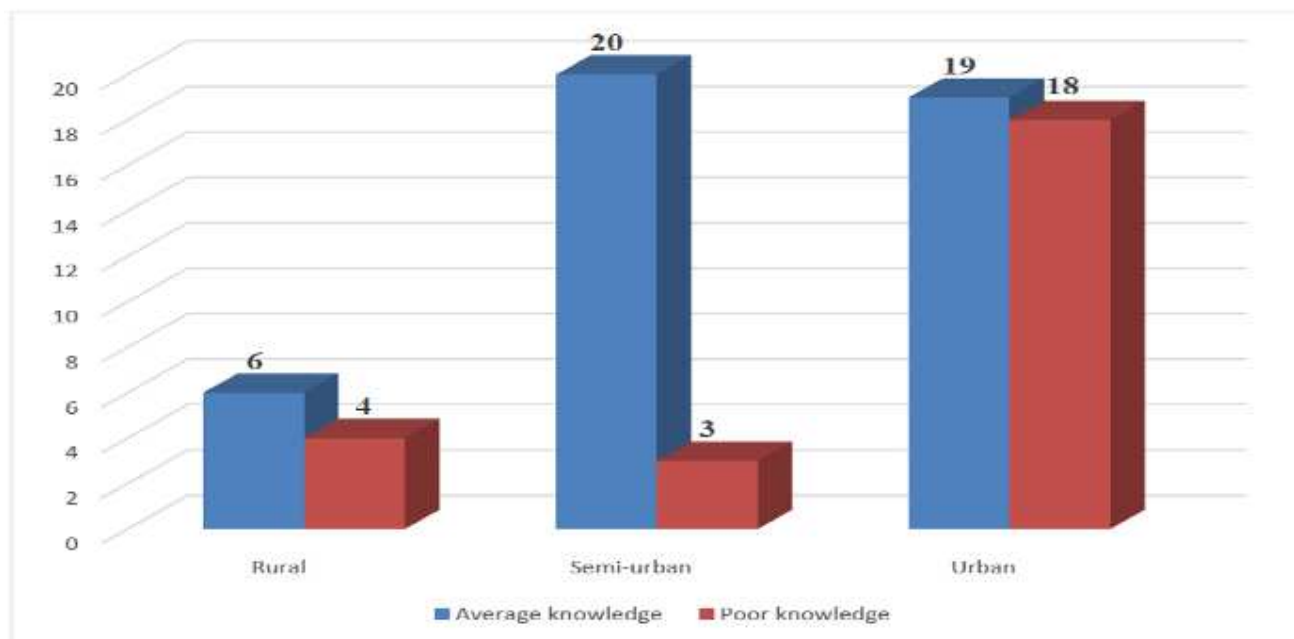
The knowledge score revealed that 64% had average knowledge, 36% had showed poor knowledge whereas no participant show good, thorough knowledge regarding complications of diabetes mellitus.

N=70

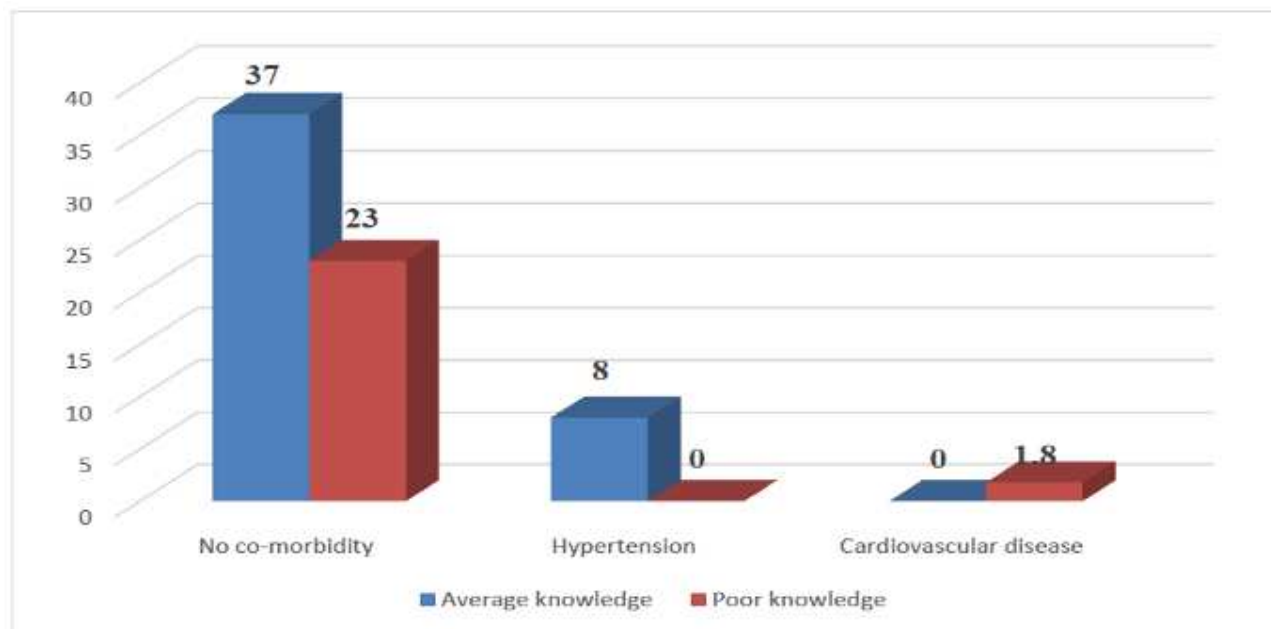
Knowledge	n	%	Mean±SD
Poor knowledge	25	36	8.30±2.43
Average knowledge	45	64	

**Objective II:** To find out the association between knowledge score and selected socio – demographic variable.

This study finding showed that there was no significant association present between knowledge score of the subjects according to their age, gender, religion, occupation, education status, ty[e of family, family history, monthly income, duration of diabetes, any undergoing treatment, source of health information but knowledge score had significant association with area of residence ( $p=0.019<0.05$  at  $df=2$ ) and co-morbidity ( $p=0.016<0.05$  at  $df=2$ ) as depicted in figure 1 and 2.



**Fig 1 Association between knowledge score and area of residence**



**Fig 2 Association between knowledge score and co-morbidity**

**Conclusion:** The purpose of this study was to examine the knowledge of 70 subjects who visited GMCH-32 Chandigarh about complications of diabetes mellitus type 2. According to the study findings, 64% had average knowledge, 36% had showed poor knowledge whereas no participant showed good, thorough knowledge. Our study shows association of area of residence ( $p=0.019<0.05$  at  $df=2$ ) and co-morbidity ( $p=0.016<0.05$  at  $df=2$ ) with the knowledge score.

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