International Journal of Medical and Health Research
www.medicalsciencejournal.com
ISSN: 2454-9142
Received: 30-09-2025, Accepted: 31-10-2025, Published: 15-11-2025
Volume 11, Issue 6, 2025, Page No. 8-12

Diabetes as a pandemic: A sociological study on awareness, negligence and lifestyle at Howrah District

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Abstract
Diabetes does not directly cause death, but elevated glucose levels make individuals highly susceptible to serious health complications. High blood sugar can result in heart attacks, strokes, kidney disease, nerve damage, and eye problems, making diabetes the fifth leading cause of blindness worldwide. Rapid urbanisation, technological advancement, and increasingly sedentary lifestyles have significantly reduced physical activity, worsening the problem. Often referred to as a "silent killer," diabetes progresses unnoticed until it causes severe organ damage or disability. This study highlights how lack of awareness, poor lifestyle habits, and negligence contribute to the growing diabetes burden, particularly in India. Despite medical advancements, the lack of awareness and preventive care remains concerning. (WHO, 2021) The study emphasises the urgent need for early detection, regular screening, balanced diets, and lifestyle modification. Strengthening public health initiatives, promoting education, and improving access to healthcare are essential to combat this silent yet deadly epidemic effectively.

Keywords: Diabetes Mellitus, silent killer, public health, dietary habits, screening

Introduction

In 2017, the number of adults living with diabetes globally was 42.5cr, and by 2045, this figure is expected to reach around 62cr. India is currently leading in this diabetes race. We represent 49% of the world's diabetic population and are among the top three countries with the highest number of diabetic people, along with China and the US. Therefore, we are rightly called the diabetic capital of the world. In 1980, when India's total population was 70cr, around 1cr Indians were suffering from diabetes. By 2017, this number had reached around 8cr, while the total population was 134cr (WHO, 2021). While the population has almost doubled over these years, the number of diabetic patients has increased nearly sevenfold. By 2025, it is estimated that close to 15cr people in India will be suffering from diabetes. All these numbers are based on reported cases. Globally, 1 in every 2 individuals remains undiagnosed. So, the situation is actually worse than these figures suggest. Worldwide, and especially in India, diabetes is spreading almost like an epidemic. In fact, in 2006, the United Nations declared 14 November as World Diabetes Day (IDA, 2019).

The number of people with diabetes is constantly rising, and India has become the diabetic capital of the world. There are several reasons for this. Research has shown that Indians have a genetic makeup that results in a low threshold for diabetes risk factors. However, genetics is only one aspect. In addition, our lifestyles have changed in ways that exacerbate this risk. Recent statistics indicate that people living in urban areas are more prone to developing diabetes. Twenty-eight percent of the urban population is affected, while in rural areas this figure is just 5%. According to an Indo-US collaborative study, in Delhi alone, around 3 million people are suffering from diabetes. There are many reasons for this. Today, India is one of the fastest-growing economies in the world, and urbanisation is increasing across the country. In the 1950s, the urbanisation rate was around 17%; today, it is about 35%. As a result, the socio-economic development of recent decades has significantly changed our lifestyles. Due to technological advancements and busy schedules, physical activity has almost disappeared. According to a recent survey, around 30% of Indians aged between 18 and 47 years do not engage in any form of physical exercise, particularly in urban areas (Mohan *et al*., 2019) [12].

Diabetes occurs when we eat something and the glucose level in our body increases (also referred to as the sugar level). When the glucose level rises, the pancreas releases insulin, which balances the glucose level in our body. Diabetes is not strictly a disease, but rather a metabolic imbalance in which the body loses the ability to produce insulin or to assimilate it effectively, leading to increased glucose levels in the blood. When we engage in any form of physical exercise or activity, our muscle cells use insulin and glucose more efficiently. However, if physical activity decreases in our lives, muscle cells lose their sensitivity to insulin. Physical activity is declining, and at the same time, we are eating out more frequently (Misra *et al*., 2011) [11]. As a result, the consumption of diets rich in sugar, fat, and calories has increased. Additionally, mental stress has risen. All these factors have contributed to increased obesity among Indians. When we are obese, insulin production in the body decreases.

There are three different types of diabetes. Type 1 diabetes occurs when the body produces very little insulin or loses the ability to produce insulin altogether. This usually results from an autoimmune process, in which the immune system mistakenly destroys the insulin-producing cells. Of the total diabetic population worldwide, around 10% have Type 1 diabetes. Type 2 diabetes occurs when the body is unable to use the insulin produced properly. This usually happens due to excess body weight, lack of physical activity, and stress. It is the most common form of diabetes, accounting for around 80% of the diabetic population worldwide. Gestational diabetes occurs during pregnancy and can pose serious health risks for both the mother and the child (Hu *et al*., 2021). Diabetes affects the body in various ways, causing both short-term and long-term complications if not properly managed. Common symptoms include frequent

urination (polyuria), excessive thirst (polydipsia), increased hunger (polyphagia), fatigue, unexplained weight loss (especially in Type 1 diabetes), blurred vision, and slow wound healing. Short-term effects may include hypoglycaemia (low blood sugar), which causes shakiness, sweating, and confusion, or hyperglycaemia (high blood sugar); leading to fatigue, dry mouth, and frequent urination. In severe cases, diabetic ketoacidosis may occur, causing nausea, vomiting, and confusion, and requires immediate medical attention. Long-term uncontrolled diabetes can damage vital organs, resulting in nerve damage (neuropathy), eye problems (retinopathy), kidney disease (nephropathy), and cardiovascular issues such as heart attack and stroke. Poor circulation may also cause foot ulcers or amputation, while skin and dental problems such as infections and gum disease are common (ADA, 2022).

The question arises: if diabetes is not considered a disease, and if it is so common and manageable, why should we be so concerned, and do we really need to take it seriously? According to the World Health Organisation, an estimated 3.4 million people worldwide die every year due to complications related to high blood sugar (WHO, 2021). Diabetes itself does not kill you, but an increase in glucose makes you prone to many other diseases and complications. Due to high glucose, one can have a heart attack, stroke, kidney ailments, eye problems, nerve damage, and more. Furthermore, diabetes has become the fifth leading cause of blindness worldwide. Diabetic retinopathy is one of the major causes of visual impairment and blindness among diabetic patients. Increased blood sugar levels can permanently damage the nerves in one's retina. For example, a diabetic patient is 25 times more vulnerable to the possibility of becoming blind compared to a healthy individual. Around 18% of India's diabetic population has a diabetic retinopathy problem, but very few undergo regular eye check-ups with dilated retinal examinations (IDF, 2019). This is due to a lack of awareness about diabetes, resulting in unnecessary blindness. Regular monitoring, a proper diet, medication, and healthy lifestyle habits can prevent these complications and maintain overall well-being.

Review of Related Literature

Diabetes mellitus, widely recognised as a "silent killer", is one of the most challenging non-communicable diseases (NCDs) due to its progressive nature and multiple systemic complications. According to Wild, S. *et al*. (2004) [17], diabetes prevalence has raised dramatically worldwide, leading to higher mortality and disability rates. The authors emphasise that diabetes often remains undetected until serious complications such as cardiovascular disease, kidney failure, or neuropathy develop. Ramachandran, A. *et al*. (2010) examined the growing burden of diabetes in India, noting that rapid urbanisation, unhealthy diets, and sedentary lifestyles have contributed to an increasing incidence of both type 1 and type 2 diabetes. Their study highlights that diabetes not only affects blood glucose regulation but also aggravates other metabolic and vascular conditions, making it a major cause of premature death in the country.

Venkataraman, K. *et al*. (2012) [15] explored the relationship between diabetes and cardiovascular complications, finding that individuals with uncontrolled diabetes have a two- to fourfold higher risk of developing heart disease and stroke. They emphasised early diagnosis, lifestyle modification, and regular monitoring as key preventive measures. Similarly, Zheng, Y. *et al*. (2018) [20] reviewed global trends in diabetes and its complications, observing that diabetes accelerates the onset of chronic kidney disease, retinopathy, and peripheral neuropathy. The study stressed that most diabetes-related deaths result not from high blood sugar itself but from its secondary complications.

Chan, J.C.N. *et al*. (2020) [4] examined the coexistence of diabetes and hypertension, noting that these conditions together increase the risk of cardiovascular and renal disorders. Their findings indicate that integrated management strategies focusing on both blood pressure and glucose control lead to better outcomes. Misra, A. *et al*. (2021) [10] highlighted the rising prevalence of diabetes among younger populations in India, calling for nationwide screening and awareness programmes. Wang, L. *et al*. (2022) [16] reported that diabetic patients are more vulnerable to severe COVID-19 outcomes, demonstrating how diabetes weakens immunity and complicates other diseases. The World Health Organization (2023) reported that diabetes is a leading cause of death globally, complicating cardiovascular, renal and neurological disorders, and emphasises awareness, early diagnosis and stronger preventive healthcare systems.

Objectives

- To analyze the current scenario and effects of diabetes on public health.
- To highlight the negligence in diabetes treatment and its impacts.
- To promote awareness of diabetes and its complications with other diseases.

Methodology

The study adopted a descriptive mixed-method research design, integrating both quantitative and qualitative paradigms through the third research path. One hundred respondents were selected for this research paper. Data were collected directly from the respondents through random sampling with the help of a structured interview schedule, and respondents were selected from a government hospital, primary health center and sub-center. Secondary data were also collected from the government portal, relevant books, journals and several international reports that had already been conducted.

Research area

The research data were collected from Howrah district of West Bengal.

Results and Discussion

Negligence in diabetes treatment can lead to serious and long-term health complications. Irregular blood sugar monitoring, skipping medication, or neglecting diet and lifestyle management may result in uncontrolled glucose levels. Over time, this can cause nerve damage, kidney failure, vision loss, heart disease, and delayed wound healing. Lack of timely medical care and awareness further increases the risk of disability or death (Kazakou, 2022) [9]. The present study aims to examine the level of awareness, diagnosis patterns, and management practices related to diabetes among respondents. The collected data highlight variations in knowledge, health-seeking behaviour, and

lifestyle management among diabetic and non-diabetic individuals, followed by descriptive analysis and interpretation.

Table 1:

Indicators	Response	Percent
People know details about blood sugar	Yes	13 %
	No	87 %
People know the downside of diabetes	Yes	3 %
	No	97 %
Measure blood sugar before diagnosed	Yes	89 %
	No	11 %
Diagnosed as diabetes patient	On other checking	93 %
	On diabetic test	7 %
Patients faced any other problems	Yes	24%
	No	76%
Measure diabetes monthly	Yes	86 %
	No	14 %
Patients have miss medication problem.	Yes	6 %
	No	94 %
Patients maintain diet and doing physical exercise regularly.	Yes	79%
	No	21%

Awareness about Blood Sugar Levels

The study reveals that only 13% of respondents have adequate knowledge regarding blood sugar levels, whereas a significant 87% do not possess any detailed understanding of what blood sugar is, its normal range, or its health implications. This finding highlights a considerable gap in basic health literacy among the population. Despite the widespread prevalence of diabetes in India, awareness at the grassroots level remains poor. The lack of knowledge about blood sugar levels indicates that most individuals are unaware of the early signs of diabetes, the importance of periodic testing, and preventive measures.

The low level of awareness can be attributed to factors such as low educational attainment, poor access to health information, inadequate health communication strategies, and reliance on traditional or informal sources of knowledge. This lack of awareness often delays diagnosis and management, resulting in complications that could have been prevented through timely intervention**.**

Consciousness about Complications of Diabetes

The findings further show that only 3% of respondents are aware of the adverse health effects or complications associated with diabetes, while 97% remain uninformed. This lack of understanding about the long-term consequences – such as neuropathy, kidney failure, vision problems, cardiovascular diseases, and delayed wound healing – represents a critical gap in health education.

The absence of awareness regarding the complications of diabetes indicates that people often do not recognise the seriousness of the disease until it becomes symptomatic or life-threatening. This also suggests that preventive health education campaigns are either insufficient or fail to reach the target audience effectively. Public health interventions should therefore prioritise raising awareness about the chronic and potentially fatal nature of uncontrolled diabetes.

Measurement of Blood Sugar before Diagnosis

Interestingly, the study reveals that 89% of respondents had measured their blood sugar level before being formally diagnosed, while only 11% had never undergone any blood sugar testing prior to diagnosis. This high percentage of people undergoing blood sugar measurement before diagnosis indicates that screening facilities are available and being utilised to some extent. However, it also suggests that, although testing may occur, interpretation of results or follow-up actions may be inadequate.

This finding may indicate that most individuals underwent blood sugar tests incidentally, perhaps during other health check-ups or hospital visits, rather than as a preventive measure. Thus, while awareness of testing is higher, understanding of its purpose and implications appears limited.

Diagnosis of Diabetes

The data show that 93% of respondents were diagnosed as diabetic patients during other routine medical check-ups rather than through specific diabetic screening initiatives. This reflects a reactive rather than proactive approach to health management. It suggests that diabetes often remains undetected until another health problem prompts a medical examination. The absence of structured screening programmes and the low level of preventive health behaviour contribute to delayed diagnosis.

These findings highlight the importance of implementing community-level screening and health awareness programmes that encourage individuals to test their blood sugar levels regularly, even when they have no symptoms. Early detection can prevent disease progression and reduce the risk of complications.

Experienced through others problems

When asked whether they had experienced any symptoms before diagnosis, only 24% reported recognisable symptoms such as fatigue, frequent urination, thirst, or blurred vision, while the majority (76%) had not noticed any symptoms prior to diagnosis. This suggests that diabetes often remains asymptomatic in its early stages, making regular testing essential.

The low proportion of symptomatic individuals indicates that diabetes often progresses silently, making it difficult for patients to recognise their condition until it becomes severe. This finding reinforces the need for regular screening, particularly for high-risk groups such as the elderly, obese individuals, and those with a family history of diabetes.

Frequency of Blood Sugar Monitoring

The data show that 86% of diabetic patients measure their blood sugar levels monthly, while 14% do not do so regularly. Regular monitoring of blood sugar levels is a vital aspect of diabetes management, as it assists in adjusting medication, diet, and physical activity accordingly. The high percentage of regular monitoring reflects a positive attitude among most patients towards self-management and adherence to medical advice. However, the remaining 14% who do not monitor their blood sugar regularly represent a vulnerable group. Irregular measurement may result from financial constraints, lack of motivation, or inadequate counselling. These individuals are at higher risk of developing complications due to uncontrolled blood glucose levels. Therefore, periodic counselling and community-based follow-up programmes are recommended to improve compliance.

Medication Adherence

The study reveals that only 6% of patients have problems with missing their medication, while a significant 94% adhere to their prescribed treatment regimen. This indicates a high level of medication compliance among respondents. Adherence to medication plays a crucial role in maintaining stable blood glucose levels and preventing complications. However, even a small percentage of non-compliance can have serious consequences. Reasons for missed medication may include forgetfulness, side effects, lack of awareness about the importance of continuous medication, or economic barriers. It is therefore essential to ensure that patients receive on-going guidance and motivation to adhere to their prescribed therapy.

Dietary Management and Physical Exercise

One of the most significant findings of this study concerns lifestyle management. Seventy-nine per cent of respondents reported maintaining a proper diet and engaging in regular physical exercise, while the remaining 21 per cent did not follow these practices. This distribution highlights a mixed pattern of health behaviour among diabetic patients.

Dietary control and regular exercise are critical components of diabetes management. The 79 per cent who maintain a healthy routine are likely to experience better glycaemic control and overall well-being. In contrast, the 21 per cent who neglect these aspects are at risk of worsening their condition. Factors such as lack of motivation, busy schedules, limited access to nutritious food, and lack of awareness about the importance of lifestyle changes may contribute to this gap.

Public health programmes must emphasise lifestyle modification as a primary preventive and management strategy. Counselling by dieticians, community-based fitness programmes, and peer support groups could significantly improve adherence to healthy practices.

Conclusion and Suggestions

The study reveals a mixed pattern of awareness, diagnosis, and management of diabetes among respondents. While there is a fairly good level of diagnostic testing and medication adherence, awareness about the disease, its causes, and complications remains extremely low. Lifestyle management practices, such as dietary control, exercise, and regular health check-ups, are found to be inconsistent. Many people still hold misconceptions about the causes and management of diabetes. This highlights the urgent need for comprehensive diabetes education programmes that extend beyond medical treatment to include lifestyle, behavioural, and preventive measures. Awareness campaigns should particularly target rural and semi-urban populations, where health information and access to healthcare services are limited.

In India, diabetes is increasing at an alarming rate. Despite being one of the most common non-communicable diseases, many people remain unaware that they have diabetes until it reaches an advanced stage. Often, individuals only discover the condition after developing complications such as vision problems, fatigue, or infections. This late detection is mainly due to a lack of regular medical check-ups and low awareness of early symptoms (WHO, 2021). Therefore, it is essential to promote timely screening and health awareness at the community level.

A common misconception is that diabetes is caused only by consuming sweets. While eating sweets does raise blood sugar levels, the issue is not limited to sugary foods. Any food high in carbohydrates – such as rice, bread, potatoes, or processed items like bakery products and foods containing transfats – can contribute to elevated blood sugar levels. The real problem arises when the body fails to produce sufficient insulin or becomes resistant to it, resulting in an accumulation of glucose in the blood. Therefore, awareness should be raised not only about avoiding sugar but also about balanced nutrition, portion control, and maintaining healthy eating habits (Kaveeshwar *et al*., 2010) [8]. It is equally important to emphasise that having diabetes does not mean one must eat bland or tasteless food. There are many diabetic-friendly recipes that are both healthy and enjoyable. Dietary discipline, rather than complete food restriction, is essential. At the same time, those without diabetes should also adopt preventive measures, as Indians are genetically more susceptible to developing this condition. Prevention is truly better than cure. A healthy lifestyle – consisting of a balanced diet, fibre-rich foods, daily exercise, or even simple walks – is essential for people of all age groups. Regular blood sugar testing, at least once a year, helps detect pre-diabetic conditions and allows for early intervention (Misra, 2011) [11]. With timely lifestyle changes, the onset of diabetes can be delayed or even prevented. Once diabetes develops, however, it cannot be completely cured, only managed for life.

Financial barriers also play a significant role in the lack of regular screening. Many people in India cannot afford routine diabetes check-ups, prompting the government to provide free testing services in government hospitals and health centres. Some states have already implemented large-scale screening programmes to identify diabetic patients early. It is now crucial that all states adopt similar awareness and prevention measures. Every Indian should have access to at least one free diabetes screening per year (NPCDCS).

Awareness should also begin within families. Every member should be attentive and supportive towards those living with diabetes. If someone in the family neglects the condition, others should encourage medical consultation and lifestyle changes. Doctors also have an important role in educating patients about the disease, its complications, and the importance of regular monitoring.

In conclusion, the findings of this study highlight a significant gap between awareness and practice regarding diabetes. While many individuals undergo testing and take prescribed medications, their understanding of the disease remains limited. To bridge this gap, a coordinated effort involving individuals, families, communities, healthcare professionals, and government agencies is essential. Together, we must pledge – whether diabetic or not – to undergo regular health check-ups, maintain a healthy lifestyle, and spread awareness. Such collective action will not only improve diabetes management but also help build a healthier and more informed society for the future.

Acknowledgement

This study was made possible by the support of diabetic patients, to whom I express my sincere gratitude for their valuable assistance and shared experiences. Also, I would like to express my sincere gratitude to Dr. Prabhdeep Kaur ma'am, Head of ICMR-NIE, for giving me the opportunity to work as a Technical Assistant (STS) in the IHCI project.

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