International Journal of Scientific Engineering and Research (IJSER)
ISSN (Online): 2347-3878
SJIF (2024): 6.623

Diabetes As An Epidemic: A Sociological Study on Awareness, Management and Lifestyle Modification among Young Female Learner of Hooghly District

Dr. Soumita Dutta

Assistant Professor, Department of Sociology, Arambagh Girls' College, Hooghly
Email: *drsoumitadutta[at]gmail.com*

Abstract: ***Diabetes is a health condition where the body either doesn't produce enough insulin or cannot use insulin properly. Insulin is the hormone that helps control blood sugar (glucose). When insulin doesn't work properly, blood sugar becomes too high, which affects different parts of the body over time. If not controlled, high blood sugar can affect many organs and cause problems like heart attack, stroke, kidney damage, blurred vision, cataracts, retinopathy, neuropathy, infections etc. Factors like urbanization, easy access to fast food, sedentary lifestyle, high stress level, low-activity routine contribute towards the rise of diabetes in modern society. Additionally, genetic predisposition and hormonal disorders increase the risk, making diabetes a growing health concern today. In 2021 as per WHO records, about 537 million adults globally (aged 20–79) were living with diabetes (diagnosed or undiagnosed). A large fraction of people with diabetes remain undiagnosed, or inadequately managed (lack of access to medicines, monitoring tools, preventive care) - especially in low- and middle-income countries. Awareness matters not only at the level of individuals (knowing risk factors, symptoms, and the need for check-ups) but also at the societal / policy level- so that governments, communities, and health systems can ensure access to care, affordable medicines, and prevention programs. This paper would try to learn about individual awareness level among young female learns of Hooghly district and emphasises on the urgent need for early diagnosis, regular screening- monitoring, dietary habit analysis, balanced diets, and lifestyle modification. How far these individuals perceive themselves to be important in strengthening public health initiatives, awareness program and improving access to healthcare to combat this silent yet deadly epidemic. How far these young students can structurally help the process of community based education and dispel common myths or misconceptions regarding diseases like PCOs or Diabetes is crucial and need of the hour***.

Keywords: Diabetes, silent killer, public health, epidemic, dietary habits, balanced diet

1. Introduction

WHO (2024) data notes that around 830 million people worldwide currently have diabetes and that more than half are not receiving treatment, contributing to serious complications like heart disease and kidney damage. The number of people living with diabetes rose from 200 million in 1990 to 830 million in 2022. Prevalence has been rising more rapidly in low- and middle-income countries than in high-income countries. 89.8 million Adults (age 20–79) in India were living with diabetes in 2024 according to the IDF Diabetes Atlas (2025 edition). India has one of the largest diabetes populations in the world. By 2050, the number of adults living with diabetes in India is expected to reach 156.7 million ie a sharp 75 % increase from 2024 estimates. The overall burden of diabetes has been rising over decades in the U.S., driven by lifestyle, obesity, aging population, and other risk factors. Millions of children and adolescents in the U.S. are living with diabetes, including substantial numbers with type 1 diabetes and increasing cases of type 2 diabetes, especially among certain populations (ADA, 2022). Diabetes affects many organ systems. WHO (2021) report emphasises that poorly controlled diabetes leads to serious, often life-threatening complications. Over time diabetes causing rise in blood sugar level damages blood vessels and nerves, leading to complications in almost every organ.

2. Methodology

One would try to analyse a. To assess students' awareness of diabetes (causes, symptoms, types). b. To evaluate their knowledge about diabetes management (medication, lifestyle, complications). c. To determine the level of screening practices (blood sugar testing, family history awareness). d. To study dietary habits and their relationship with diabetes risk. Informed consent obtained from participants (N=30 female students) and Structured questionnaire was administered (Purposive Sampling).

3. Awareness about Diabetes

Questions were administered to understand if young female students (N =30) understand about diabetes. All these young female college students are mostly about to bear their first child or about to get married and henceforth need to be more careful of gestation diabetes. They were asked if they knew about symptoms of diabetes (thirst, frequent urination, weight loss). How far they were aware of types (Type 1, Type 2) of diabetes and its severity for them or their future family.

4. Diabetes Screening and Knowledge about its' Management

Students' experience of blood sugar testing were taken into account. If they knew their Family history of diabetes was another point of importance. How far they knew about the role of exercise, role of medicine, importance of early detection, daily intake of fruits, vegetables, role of sugary drinks & fast food. A brief study on meal patterns revealed how frequently they skipping meals. Their dietary pattern seemed to be so deranged that they cannot ascertain, "How many times did you consume sugary snacks in a last 3 days?"

5. Knowledge and practice of measurement of diabetes

This study tried to know if blood sugar was measured ever. If measured, then last test date and result. How far they know about their family history related to diabetes from first-degree relatives. Diabetes monitoring machine (manual/ automatic) were not common names in most of the households.

6. Diabetes and Dietary Habit

Dietary habits and markers of diabetes risk among students were attempted to be studied. How far they knew about associations between diet and anthropometric risk markers (BMI, waist circumference) were tried to be studied. Their meal patterns were taken into account. Number of meals per day, skipping breakfast or not were asked to them. Sum of frequencies for weekly consumption of unhealthy items like sugar-sweetened beverages, fried snacks, fast food, sweets, packaged juices were collected for the study. How far they considered hydration and balanced diet to be important (scale 0-9).

7. Diabetes and Physical Exercise

They were asked the importance of physical activity in preventing diabetes (scale 0-9). If they knew about hypoglycaemia or indulge in exercise before consumption of first meal. If they practice simple activities like brisk walking 30 minutes every day was asked. Most of the female students suffer from Polycystic Ovary Syndrome (PCOS) and they are at high-risk group for developing diabetes in the future. How far they take into account their symptoms of PCOs (irregular menstrual cycles, irregular sleep and increasing weight or abdominal fat). Even 70% students suffering from PCOS (42% detected, other suffering symptoms) know about PCOS symptoms but not about the risk of diabetes or proper exercise guidelines. Most of them believe weight loss to be only about dieting, not physical activity. They often underestimated that exercise (Yoga, free hand exercise, brisk walking, Pilates) can reduce PCOS symptoms even without weight loss.

Female students, especially adolescents and young adults, are at increasing risk of lifestyle-related health issues such as PCOS. Public health strategies and community interventions play an important role in improving their health outcomes at the community and institutional levels through awareness, screening, and preventive activities. How far they access or contribute towards community fitness programs providing accessible, supportive group environments encouraging physical activity. Dietician counselling helps young women adopt healthy and sustainable eating habits tailored to their nutritional needs but how far they adhered to or has actually considered any dietician counselling.

8. Understanding diabetes and its related knowledge among female students through Sociological lens

Understanding diabetes knowledge among female students is not only a medical or educational issue- it is also shaped by social, cultural, economic, and behavioural factors. Sociology theory provides a lens, which would help to explain why female students behave the way they do regarding health awareness, lifestyle, and disease risk. Young female students' knowledge of diabetes is influenced not only by personal understanding but also shaped by broad social factors. Sociological theories help to explain this relationship from various lens. The Health Belief Model shows how perceived risk, benefits, and barriers influence students learning about diabetes or adopt healthy habits. It explains what motivates or stops female students from learning about diabetes and changing or modify their behaviour. Health behaviour of young females (sample of the study) like any other women is influenced by society (peer influence, family behaviour, institutional, cultural, religious and economic affluence etc.) at many levels, not just individual choice. Feminist perspectives add that gender roles, safety issues, and body image pressures affect females' ability to exercise and manage diet, increasing diabetes risk. Together, these sociological frameworks demonstrate that diabetes awareness among female students is a complex interplay of personal beliefs, social environment, and cultural norms.

9. Conclusion and Suggestion

The findings indicate a mixed level of awareness among participants regarding diabetes, its management, and associated complications. While a proportion of respondents demonstrated basic knowledge about diabetes as a chronic condition characterized by elevated blood glucose levels, gaps were evident in their understanding of effective management practices and long-term complications. Many participants were aware of common management strategies such as dietary control and medication use; however, awareness of the importance of regular physical activity, blood glucose monitoring, and routine medical follow-ups was inconsistent. Knowledge regarding complications- including cardiovascular disease, kidney damage, vision loss, neuropathy, and foot ulcers- was limited, with several respondents unable to identify more than one complication of uncontrolled diabetes.

Despite increasing prevalence of diabetes and Polycystic Ovary Syndrome (PCOS) among young people, many students hold incorrect beliefs and misconceptions about these conditions. These misconceptions can delay prevention, early diagnosis, and effective management. These misunderstandings negatively influence health-seeking behaviour, lifestyle choices, and early prevention. In rural areas, lack of awareness, myths, and delayed healthcare access often result in late diagnosis and complications, especially among women and adolescent girls. Awareness campaign in rural areas on Diabetes and PCOS is essential for improving public health. The awareness campaigns would not only increase awareness on diabetes and its prevention but dispel common myths and misconceptions. These campaigns would empower women and girls to take charge of their health and improve public health to a larger extent.

Group meetings at village centres, Anganwadi centres, Panchayat halls can be conducted for organising Community Awareness Sessions. Door-to-Door Education can be

conducted by ASHA workers. On part of the suggestion, College students can work as volunteers and communicate medically correct information in those interactive question-answer sessions of community awareness programmes. If college students are given brief orientation from medical personal, then these aware young minds can work as resource for conducting one-to-one counselling for women and become long term assets or beneficial product of community based education. Other women from unprivileged background would easily open to young college students coming from similar background and community rather than someone external resource person. To shatter common belief like Irregular periods are normal among young girls, PCOS affects only overweight women, only older people get diabetes, diabetes can be controlled only with avoidance of sugar resource person needs to be an internal person not external agent. These young students especially females if trained or oriented properly can reduce some burden of public health through effectively addressing myths in targeted awareness programs. There shared information or education would essentially help in early detection, effective management, and prevention of long-term complications.

References

[1] Ahuja A, Gupta J, Gupta R. Diabetes Silent Killer: Medical focus on Food Replacement and Dietary Plans, Advances in Bioresearch, Volume 11 (Issue 5), September 2020.
[2] World Health Organisation report on Diabetes. Geneva: WHO 2021
[3] Misra A, Ramachandran A, Saboo B, Kesavadev J, Sosale A, Joshi S, et al. Screening for diabetes in India should be initiated at 25 years age. Diabetes Metabolic Syndrome: Clinical Research Reviews, 2021:15(6):102321
[4] Nettledon S (1995) The Sociology of Health and Illness. Polity Press, Cambridge
[5] Davies Karens, Awakening the sociological imagination of the DSN (Psychosocial Issue), Journal of Diabetes Nursing, 1999: 3 (4)
[6] https://medicaldialogues.in/diabetes-endocrinology/news/international-diabetes-federation-releases-diabetes-atlas-11th-edition-2025-top-10-key-takeaways-from-india-146394?utm_source=chatgpt.com.
[7] https://diabetesatlas.org/data-by-location/country/india/?utm_source=chatgpt.com