

A Study to Assess the Prevalence of Modifiable Risk Factors of Diabetes Mellitus Among Adults in Selected Urban Community Areas, Gurugram

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Abstract: ***Background:** Type 2 Diabetes Mellitus (T2DM) is a major public health issue, with modifiable risk factors such as obesity, sedentary lifestyle, and poor diet contributing to its rise. Understanding community knowledge and attitudes is vital for prevention. **Methods:** A descriptive survey was conducted in urban Gurugram (Sector 43 Sushant Lok, DLF Phase 1). Using probability simple random sampling, 100 adults aged 18–45 years were selected. Data were collected through a self-structured knowledge questionnaire and a five-point Likert scale for attitudes. Reliability of tools was $r = 0.72$. Analysis employed descriptive and inferential statistics. **Results:** Findings revealed that 58% of participants had average knowledge, 40% poor, and only 2% good knowledge of modifiable risk factors. Attitudes were more favorable, with 66% showing positive attitudes toward awareness, lifestyle modification, and prevention, while 34% had negative attitudes. Family history of diabetes was present in 28% of subjects, and 66% reported no prior knowledge of the disease. **Conclusion:** The study highlights limited knowledge but relatively positive attitudes toward T2DM prevention. Educational interventions and informational guidelines are urgently needed to improve awareness and promote healthier lifestyles.*

Keywords: Diabetes Mellitus Type 2, modifiable risk factors, knowledge, attitude, Gurugram

1. Introduction

Diabetes is a fast gaining the status of a potential epidemic in India. Type 2 Diabetes Mellitus is a new morbidity in adults and adolescents. Diabetes in India is multifactorial and includes genetic factors coupled with environment influences such as obesity associated with rising living standards, steady urban migration and lifestyle changes. According to Wild et al the prevalence of diabetes is predicted to double globally from 171 million in 2000 to 366 million in 2030 with a maximum increase in India. It is predicted that by 2030 Diabetes Mellitus may afflict up to 79.4 billion individuals in India, while the current number of diagnosed individuals is already over 62 million. This alarming trend underscores the urgent need for targeted public health interventions.

1.1 Background

Diabetes is a serious, chronic disease that occurs either when the pancreas does not produce enough insulin (a hormone that regulates blood glucose), or when the body cannot effectively use the insulin, it produces. Raised blood glucose, a common effect of uncontrolled diabetes, may, over time, lead to serious damage to the heart, blood vessels, eyes, kidneys and nerves. More than 400 million people live with diabetes. This condition is increasingly prevalent in India, necessitating comprehensive strategies to address modifiable risk factors associated with diabetes management and prevention.

1.2 Importance of Studying Modifiable Risk Factors

Addressing modifiable risk factors is crucial for reducing the incidence of diabetes, as lifestyle changes can significantly improve health outcomes and enhance patient adherence to treatment plans. Implementing effective public health strategies that promote physical activity and healthy eating is

essential to mitigate the rising prevalence of diabetes in urban populations. Furthermore, community-based interventions targeting lifestyle modifications can foster sustainable changes in dietary habits and physical activity levels, ultimately contributing to diabetes prevention and management.

2. Objectives of the Study

- 1) To study the prevalence of modifiable risk factors of Diabetes Mellitus among adults in selected urban community areas, Gurugram
- 2) To develop an informational guideline related to prevention of modifiable risk factors of Diabetes Mellitus

3. Literature Review

Patil and gothankar 2019, conducted a cross-sectional study to assess the prevalence of Diabetes Mellitus Type 2 in randomly selected wards under the field practice area of Urban Health Training Center of Private Medical College, Pune, Maharashtra. A total of 425 subjects aged 20 years and above residing in the study area were screened for diabetes mellitus. Risk factors such as age, waist circumference, waist-to-hip ratio (WHR), family history of diabetes, and physical activities were recorded. The prevalence of diagnosed cases of diabetes mellitus found in this study was 9.88%. There was a significant increase in the prevalence of diabetes as age increased (age 20–34 years: 1.66%, 35–49 years: 7.53%, ≥ 50 years: 15.66%, and $P < 0.05$). Risk factors such as rising age, family history of diabetes mellitus, lack of physical activity, and central obesity were the most common factors found in diagnosed cases of diabetes mellitus.

4. Methodology

Descriptive survey design was used. The study setting was

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conveniently selected, and it was in the sushanklok Dlf phase 1, urban community in gurugram. The study includes 100 non-diabetic adults between 18 to 45 years.

Data Collection Tools

The data collected under the following sections, Section 1: (Socio demographic variables), Section II: (Structured knowledge questionnaire), Section III:(Attitude checklist)

5. Results

Majority 58% of adults had average knowledge, 40% had poor knowledge and only 2% people had good knowledge regarding Modifiable risk factors of Diabetes Mellitus type 2. Majority 66% of adults had positive attitude towards Diabetes Mellitus Type 2 risk factors, care, lifestyle etc. and rest 34% had negative attitude.

6. Discussion

The present study highlights that while a majority of adults in the Gurugram community demonstrated average knowledge of modifiable risk factors for Type 2 Diabetes Mellitus, only a small fraction exhibited good knowledge. This knowledge gap is concerning, given the rising prevalence of diabetes in urban India. Interestingly, despite limited knowledge, attitudes toward lifestyle modification and diabetes prevention were largely positive. This suggests that individuals may be receptive to health education interventions, but lack adequate information to translate attitudes into effective practices.

Comparison with Other Studies

The findings are consistent with Patil and Gothankar (2019), who reported that central obesity, family history, and lack of physical activity were common risk factors among diagnosed cases. Similar studies in other urban Indian populations have also demonstrated poor awareness of diabetes risk factors, despite relatively high willingness to adopt preventive measures. This pattern underscores the need for bridging the gap between knowledge and behavior through structured community interventions. Unlike studies conducted in older populations, our sample of younger adults (18–45 years) revealed that knowledge deficits are present even before the age group traditionally associated with diabetes onset, highlighting the importance of early preventive education.

7. Future Directions

Further research should explore the effectiveness of tailored educational interventions in improving knowledge and practices. Longitudinal studies could assess whether positive attitudes translate into sustained lifestyle changes over time. Additionally, comparative studies between urban and rural populations may reveal differences in risk factor prevalence and awareness.

8. Conclusion

The present study revealed that while most adults in Gurugram demonstrated average knowledge of modifiable

risk factors for Type 2 Diabetes Mellitus, only a small proportion exhibited good knowledge. Despite this, attitudes toward lifestyle modification and prevention were largely positive, suggesting receptiveness to health education. The findings highlight a critical gap between awareness and practice, emphasizing the need for structured community-based interventions and informational guidelines to improve knowledge, foster sustainable lifestyle changes, and ultimately reduce the burden of diabetes in urban populations.

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