



PREVALANCE OF TYPE 2 DIABETES MELLITUS AND ITS RISK FACTORS AMONG URBAN ADULTS RESIDING AT CHAKIA, EAST-CHAMPARAN, BIHAR: A CROSS-SECTIONAL STUDY

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ABSTRACT

India, a country experiencing rapid socioeconomic progress and urbanization, carries a considerable share of the global diabetes burden. The WHO estimate – for the number of people with diabetes, worldwide, in 1990 was around 200 million and increased to at least 830 million in 2022. More than half of people living with diabetes did not take medication for their diabetes in 2022. Two major concerns are that much of this increase in diabetes will occur in developing countries, due to population growth, ageing, unhealthy diets, obesity and sedentary lifestyles, and that there is a growing incidence of Type 2 diabetes – which accounts for about 90% of all cases – at a younger age. The number of deaths attributed annually to diabetes is around 3.2 million. Diabetes has become one of the major causes of premature illness and death in most countries, mainly through the increased risk of cardiovascular disease (CVD).

Objectives: 1. To find the prevalence of Type 2 Diabetes mellitus among adults above the 20 years of age in selected urban area. 2. To study the factors associated with diabetes mellitus

Materials and Methods: This is a community based cross sectional study in urban wards of Chakia Nagar Parishad area conducted from 1st November 2025 to 30th April 2026 that included 706 participants. Data was collected from the participants by using pretested semi structured proforma. The participants above 20 years of age were selected by using cluster sampling method.

Results: The prevalence of type 2 DM was found 12.61% in this study. Males had a higher prevalence i.e. 15.40% than females i.e. 10.13%. The variables age, family history, obesity, smoking and physical inactivity showed significant relation with diabetes.

KEYWORDS: Diabetes Mellitus, Prevalence, Risk Factors, Urban Health.

Introduction

India leads the world with largest number of diabetic subjects earning the dubious distinction of being as “DIABETIC CAPITAL OF WORLD”. Diabetes is leading cause of death, disability and economic loss throughout the World[1]. The impact of the worldwide explosion of type 2 diabetes mellitus can be witnessed with just 200 million people living with diabetes in 1990 rose to 830 million in 2022. Indian studies have shown the prevalence rate of diabetes mellitus to be 8.9% in rural and approx. 16.4% according to ICMR-INDIAB & WHO data among urban dwellers due to industrialization and urbanization. More than half of people living with diabetes did not take medication for their diabetes in 2022. Previously a disease of middle aged and elderly Type 2 DM has escalated in all age groups and is now being seen in younger age groups including adolescents especially high risk population[2].

In addition to the undisputed strong genetic predisposition of DM, studies have also revealed the influence of the interaction of host factors like age, sex, family history, obesity and environmental factors like sedentary life style, dietary pattern, socioeconomic status and habits like smoking[3,4].

Aim and Objectives

- To find the prevalence of Type 2 Diabetes mellitus among adults above the 20 years of age in selected urban area.
- To study the risk factors associated with diabetes mellitus.

Review of Literature

Aretaeus, a contemporary of Galen, provided the first accurate description of the symptoms of diabetes. He was the first to use the term “Diabetes”, derived from the Greek word for “Siphon”. Aretaeus’ classic description begins “Diabetes is a wonderful affection, not very frequent among men, being a melting down of the flesh and limbs into urine”[5].

The ancient Hindus were the first to coin the term “honey urine,” a thousand years before the first Europeans recognized it in patients with diabetes. The Hindu physicians Charaka, Sushruta, and Vagbhata also described polyuria and glycosuria. They noted the attraction of flies and ants to the urine of those affected by this ailment.

Sushruta described diabetes (madhumeha) as a disease characterised by passage of large amount of urine, sweet in taste, hence the name “madhumeha” — honey like urine. He goes on to say that diabetes primarily affects obese people who are sedentary and emphasized the role of physical activity in amelioration of diabetes[6].

Paul Langerhan’s most famous histological finding, the pancreatic islets, was presented in his doctoral dissertation at

the University of Berlin in 1869. Langerhans acknowledged that he did not know the function of these ductless cells, which were later named “Islets of Langerhans”, in his honour by the French histologist Laguesse.

In its 1998 report, the congressionally mandated Diabetes Research Working Group recognized the great urgency and extraordinary opportunities facing us today in diabetes research. Mapping of the human genome marks a new era in medical research, paving the way for the treatment and cure of many serious diseases. In the 21st century, we are witnessing an exciting new chapter being written in the history of diabetes. There is genuine optimism in our search for a cure[5].

Diabetes mellitus is metabolic syndrome, clinically characterized by polyuria, polyphagia, polydipsia, hyperglycaemia, and glycosuria, due to absolute or relative deficiency of hormone insulin (either by action or by secretion or both, resulting in type 1 or type2 DM respectively) that controls the metabolism of carbohydrate, protein, fat and electrolytes.

Diabetes mellitus (DM) comprise a group of common metabolic disorders that share the phenotype of hyperglycaemia. Depending on the aetiology of DM, factors contributing to hyperglycaemia may include reduced insulin secretion, decreased glucose utilization, and increased glucose production. The metabolic dysregulation associated with DM causes secondary patho-physiologic changes in multiple organ systems that impose a tremendous burden on the individual with DM and on the health care system[7].

Pathogenesis of Type 2 Diabetes Mellitus

Insulin resistance and abnormal insulin secretion are central to the development of T2DM mellitus. Most studies support that the primary defect is the insulin resistance which precedes insulin secretion defects and diabetes develops only if the insulin secretion becomes inadequate.⁷ Earlier it was known as Non-insulin dependent diabetes mellitus (NIDDM). It constitutes about 85% of all cases of diabetes in developed countries and the majority of cases in some developing countries, especially those with a high prevalence of diabetes[8,9].

Risk Factors for Type 2 DM¹⁰

The term risk factor is used by different authors with at least 2 meanings:

- An attribute or exposure that is significantly associated with the development of a disease.
- A determinant that can be modified by intervention there by reducing the possibility of occurrence of a disease or other specified outcomes. Risk factors may characterize the individual, the family, the group, the community or the environment.

The main risk factors independently associated with diabetes are:

Non modifiable risk factors:

1. Age
2. Family History of Diabetes

Modifiable risk factors:

1. Socioeconomic status
2. Alcohol consumption
3. Lack of physical activity
4. Lack of exercise
5. Dietary habits
6. Obesity

Diagnosis of Diabetes¹¹

Criteria for the diagnosis of diabetes mellitus

1. Symptoms of diabetes plus casual plasma glucose concentration ≥ 200 mg/dl (11.1 mmol/l). Casual is defined as any time of day without regard to time since last meal. The classic symptoms of diabetes include polyuria, polydipsia, and unexplained weight loss.

Or

2. FPG ≥ 126 mg/dl (7.0 mmol/l). Fasting is defined as no caloric intake for at least 8 hours.

Or

3. 2-h post load glucose ≥ 200 mg/dl (11.1 mmol/l) during an OGTT. The test should be performed as described by WHO, using a glucose load containing the equivalent of 75 g anhydrous glucose dissolved in water.

In the absence of unequivocal hyperglycaemia, these criteria should be confirmed by repeat testing on a different day. The third measure (OGTT) is not recommended for routine clinical use.

Signs and Symptoms¹²

The Classic Symptoms

- | | |
|------------------------------------|----------------|
| • Polyphagia (frequently hungry): | Blurred vision |
| • Polyuria (frequently urinating): | Fatigue |
| • Polydipsia (frequently thirsty): | Weight loss |

Other Symptoms Might Include

- Poor wound healing
- Dry mouth
- Dry or itchy skin
- Impotence (male)
- Recurrent infections such as
- Vaginal yeast infections, groin rash, or external ear infections (swimmers ear).

Note: It is important to remember that not everyone with diabetes will have all these.

Management of Diabetes Mellitus⁷

- Glycemic control
- Treatment of associated conditions

- Screening / Management complications

1. Life style modification (Dietary control & Exercise)
2. Medication
3. Dyslipidaemia
4. Hypertension
5. Obesity
6. CAD
7. Retinopathy
8. Nephropathy
9. Neuropathy
10. Other Complications

Life –style modification (LSM)**Dietary Control**

Individualization is necessary while advising on food to match needs, preferences and culture. Intake of high amount of sugar, fat and alcohol should be reduced[13].

Exercise

Physical activities should be introduced gradually as per the ability and willingness of the patient. It should be raised up to 30–45 minutes on 3–5 days per week or an accumulation of 150 minutes of physical activity per week. The medication and intake of carbohydrate should be adjusted when patient is on exercise regimen[7,13].

Medication

Medications for management of diabetes are of two types. First is supplementation of exogenous insulin and the second one is Oral Hypoglycaemic Agents (OHAs) which lowers the blood glucose level.

Problem Statement**Global Scenario**

Diabetes mellitus has become a major public health problem across the world and is associated with enormous personal, social and economic burden. The prevalence of diabetes is rapidly rising all over the globe at an alarming rate[14]. The estimated number of adults with diabetes in 2022 was 830 million of these, 80% live in developing countries, the largest numbers on the Indian subcontinent and in China. Approximately 85–95% of all cases of diabetes are type 2 diabetes and the worldwide explosion of this disorder is a major health care burden[15].

Indian Scenario

India is expected to experience the largest increase in T2DM by the year 2030. Diabetes in urban Indians is reaching an epidemic scale[16]. The prevalence of T2DM in Asian Indians ranges from 8.9% in rural India to 16.4% in urban India and up to 16–22% in migrant Indians living in Europe, USA, Africa, and Fiji[17,18,19]. This increase is of great concern because of the high morbidity and mortality and the cost associated with the treatment of the complications of diabetes[20,21].

Urbanisation

The developing countries are undergoing rapid urbanization and migration of population to urban areas. Urbanisation is associated with increasing obesity, decreased physical activity and other risk factors associated with development of diabetes. Urban rural differences in the prevalence of diabetes has been consistently reported from India.

Methodology

Study Setting

Study was conducted at chakia an urban area near Motihari belongs to East-Champaran district in Bihar. Participants were selected for my study by cluster sampling technique. The total sample size of 706 subjects was selected from these areas.

Study Population

People of age group above 20 yrs. residing in Chakia nagar parishad area were the study participants.

Inclusion Criteria

All individuals above 20 years of age irrespective of disease status are screened for diabetes mellitus.

Exclusion Criteria

Pregnant women, not willing to give consent, Non co-operative subjects.

Study Period

The study was carried out for a period of one year from 1st November 2025 to 30th April 2026.

Sample Size

The National Urban Diabetes Survey (NUDS), a population based study was conducted in six metropolitan cities across India in 2001 including Bangalore, the study included[10], 216 subjects aged 20 years and above representative of all socio-economic strata, according to this study prevalence of Diabetes Mellitus was found to be 12.4%[15]. This prevalence is considered to find out the sample size. The formula used for the calculation of the sample size $n = 4pq / d^2$ Where, n is the required sample size P is the prevalence = 12.4 in this study. Using the above formula, the sample size estimated was 706.

Sampling Technique: Cluster Sampling

There are total 25 wards in chakia nagar parishad. Each ward is considered as a cluster, so totally there were 25 clusters. The total population of that area according to 2011 census was 20,686. Then the first cluster is selected for the study by randomly choosing a number less than the sampling interval, the next cluster is selected by adding sampling interval to the randomly chosen number. In this way 25 clusters were selected for this study. The required number of study subjects in each cluster was selected by.

Systematic random sampling technique. i.e. 29 subjects per cluster, particular area is selected by using spinning the bottle method, then every fifth house is visited till the required number of subjects are covered. All the members of age group above 20 years of household were included for the study.

Methods of Data Collection

The data was collected using a pretested semi structured questionnaire. This questionnaire was tested for appropriateness by conducting a pilot study. Before collection of the data consent was taken from the study subjects after explaining the importance of the study in detail. The data was collected by interview method. Questionnaire included information regarding age, sex, education, occupation, diet, smoking, family history. The anthropometric measurements were noted down. Weight, height, of all the subjects were measured.

Materials Used

Weighing Machine: Every day the machine was checked against a known weight.

Measuring Tape: UNICEF'S measuring tape was employed. It is flexible non stretch type.

Glucometer: By using digital Acucheck (finger prick method)

Methods of Data Analysis: A database was created in MS Excel and, analysis was performed using SPSS Version 20.

Statistical Tests Used: Chi-square test

Study Variables: The criteria adopted for the study are detailed here:

Age: Age was recorded in completed years as revealed by the subjects.

Education: Illiterate, Below 10th, above 10th & 12th, Graduate, Postgraduate and above.

Socioeconomic Status: Self-reported per capita monthly income was recorded. Kuppaswamy's classification was used to assess the socio-economic status of the study participants.

Smoking: H/O Smoking was recorded from subjects and classified as Current users, Ex users, Non-users.

Physical Activity: Sedentary Worker as Male (Teacher, Barber, Executives, Retired persons, Businessman, Landlords, Government servant) & Female (Unemployed, Teacher, Executives, Nurses). Moderate Worker as Male (Agricultural labour, Goldsmith, Carpenter, Driver, Electrician) Female (Housewife, Maid, Basket maker). Heavy Worker as Male (Coolie, Stonecutter, Manual labourer) & Female (Coolie).

Family history of Diabetes: History of type 2 DM among first degree relatives of the subject was taken.

Anthropometric examination i.e. weight, height to be measured as per WHO standard and BMI calculated.

Blood glucose estimation: Random capillary blood glucose was determined using glucometer (Acu-check) under aseptic precautions.

- Normal: <200mg/dl
- Diabetes: Signs and symptoms of diabetes mellitus Plus RBS $\geq$ 200 mg/dl

Results

The present study showed that majority of the study subjects were in the age group 21-30 years 207 (29.32%) and only 4.10% above 70 years. Majority of the study subjects i.e.

375 (53.12%) were females and 331 (46.88%) were males (Table 1).

Out of 706 subjects, 241 (34.13%) of them had studied up to 10th & 12th, 212 (30.02%) were graduates, 121 (17.13%) had studied below 10th and 102 (14.44%) were illiterate, and very few 30 (4.24%) were postgraduates and above (Table 2).

Kuppuswamy SES classification was adopted for socioeconomic classification. Out of 706 subjects, 247 (34.98%) of the study subjects were from upper middle class, 163 (23.08%) were from upper class and only 22 (3.11%) were from lower class (Table 3).

Table 1: Age & Sex Wise Distribution of Study Subjects

Age (in years)	Male	Female	Total
21-30	94 (28.39%)	113 (30.13%)	207 (29.32%)
31-40	60 (18.12%)	77 (20.53%)	137 (19.40%)
41-50	78 (23.56%)	93 (24.80%)	171 (24.22%)
51-60	60 (18.12%)	48 (12.80%)	108 (15.29%)
61-70	25 (7.55%)	29 (7.73%)	54 (7.64%)
>70	14 (4.22%)	15 (4.00%)	29 (4.10%)
Total	331 (46.88%)	375 (53.12%)	706 (100%)

Table 2: Education Wise Distributions of the Study Subjects

Education	Male	Female	Total
Illiterate	17 (5.13)	85 (22.66%)	102 (14.44%)
Below 10th	44 (13.29%)	77 (20.53%)	121 (17.13%)
10th & 12th	112 (33.83%)	129 (34.40%)	241 (34.13%)
Graduate	136 (41.08%)	76 (20.26%)	212 (30.02%)
Postgraduate & above	22 (6.64%)	8 (2.13%)	30 (4.24%)
Total	331 (46.88%)	375 (53.12%)	706 (100%)

Table 3: Socio -Economic Status of the Study Subjects

Socio-economic status	No.	Total percentage
Upper	163	23.08%
Upper Middle	247	34.98%
Lower Middle	129	18.27%
Upper Lower	145	20.53%
Lower	22	3.11%
Total	706	100%

Table 4: Body mass index (bmi) of the study subjects

BMI	Male	Female	Total
<18.5	24 (7.25%)	38 (10.13%)	62 (8.78%)
18.5-24.99	216 (65.25%)	209 (55.73%)	425 (60.19%)
25-29.99	73 (22.05%)	100 (26.66%)	173 (24.50%)
30-34.99	16 (4.83%)	21 (5.60%)	37 (5.24%)
35-39.99	02 (0.60%)	07 (1.86%)	9 (1.27%)
Total	331 (46.88%)	375 (53.12%)	706 (100%)

Table 5: Prevalance of Diabetes Mellitus among Study Population

Status	Number	Prevalence
Diabetics	89	12.61%
Non-Diabetics	617	87.39%
Total	706	100%

Table 6: Sex Wise Prevalance of Diabetes Mellitus

Gender	Diabetic	Non-Diabetic	Total
Male	51 (15.40%)	280 (84.59%)	331 (46.88%)
Female	38 (10.13%)	337 (89.87%)	375 (53.12%)
Total	89 (12.61%)	617 (87.39%)	706 (100%)

Table 7: Management Adopted by the Study Subjects with Diabetes Mellitus

Management	Number	Percentage
OHA	61	68.53%
Insulin	5	5.61%
OHA & Insulin	6	6.74%
Diet restriction& exercise	2	2.24%
Ayurvedic treatment	3	3.37%
No treatment	12	13.48%
Total	89	100%

OHA*: Oral Hypoglycaemic agent

Majority of the study subjects 425 (60.19%) persons had normal BMI, 173 (24.50%) were in pre obese state and 46 (6.51%) were obese. No cases were found with severe obesity. Though there was a higher prevalence of above normal BMI among female participants, it was statistically not significant as compared to the male participants (Table 4).

The overall prevalence of diabetes was found to be 12.61% among the total study populations (Table 5).

The prevalence of diabetes mellitus is 15.40% in males

and 10-.13% in case of females among all diabetic persons. The difference between male and female is found to be statistically significant (Table 6).

It was also observed that 68.53% participants with diabetes were taking OHA only to control diabetes while 5.61% were taking Insulin and 6.74% (6) were taking both OHA and Insulin, 2.24% were on dietary control and exercise. Most important that still 13.48% were not taking any medicine (Table 7).

Table 8: Relation between education and diabetes mellitus :among study subjects

Education	Diabetic	Non-Diabetic	Total
Illiterate	11 (12.35%)	91 (14.75%)	102 (14.44%)
Below 10th	15 (16.85%)	106 (17.17%)	121 (17.13%)
10th & 12th	34 (38.20%)	207 (33.55%)	241 (34.13%)
Graduate	22 (24.71%)	190 (30.79%)	212 (30.02%)
Postgraduate	7 (7.86%)	23 (3.73%)	30 (4.24%)
Total	89 (12.61%)	617 (87.39%)	706 (100%)

Table 9: Relation between socioeconomic status and diabetes mellitus among study subjects

Socio-economic status	Diabetic	Non-Diabetic	Total
Upper	33 (37.07%)	130 (21.06%)	163 (23.08%)
Upper Middle	29 (32.58%)	218 (35.33%)	247 (34.98%)
Lower Middle	12 (13.48%)	117 (18.96%)	129 (18.27%)
Upper Lower	11 (12.35%)	134 (21.72%)	145 (20.53%)
Lower	4 (4.49%)	18 (2.92%)	22 (3.11%)
Total	89 (12.61%)	617 (87.39%)	706 (100%)

Table 10: Relation between family history of diabetes mellitus and diabetes mellitus among study subjects

Family History	Diabetic	Non-Diabetic	Total
Absent	53 (59.55%)	508 (82.34%)	561 (79.46%)
One parent	24 (26.96%)	96 (15.56%)	120 (16.99%)
Both parent	12 (13.49%)	13 (2.10%)	25 (3.55%)
Total	89 (12.61%)	617 (87.39%)	706 (100%)

Table 11: Relations between smoking and diabetes mellitus among study subjects

Smoking Habit	Diabetic	Non-Diabetic	Total
Current users	48 (53.92%)	62 (10.05%)	110 (15.58%)
Ex-users	16 (17.98%)	13 (2.11%)	29 (4.11%)
Non-users	25 (28.09%)	542 (87.84%)	567 (80.31%)
Total	89 (12.61%)	617 (87.39%)	706 (100%)

The present study also reveals the prevalence of diabetes among different educational groups and it was observed that the prevalence diabetes mellitus is highest in participants with 10th & 12th educated 34.13% and lowest in post graduates and above i.e. 4.24%, the association between educational status and type 2 DM is not significant (Table 8).

The present study shows the prevalence of diabetes mellitus is highest among upper middle socioeconomic class i.e. 34.98% and lowest i.e. 3.11% in lower class. The association between socioeconomic status and diabetes mellitus is found to be statistically significant (Table 9).

The prevalence of diabetes mellitus is 26.96% in cases having positive family history in one parent and 13.49% cases having positive family history in both parents. Statistically it is also found that diabetes is significantly higher among people who have the positive family history (Table 10).

The prevalence of diabetes mellitus is 53.92% in current smokers, 17.98% in past smokers and 28.09% among non-smokers. The association between diabetes mellitus and smoking is found to be statistically significant (Table 11).

Table 12: Relations between physical activity and diabetes mellitus among study subjects

Physical activity	Diabetic	Non-Diabetic	Total
Sedentary	66 (74.16%)	347 (56.24%)	413 (58.50%)
Moderate	21 (23.60%)	266 (43.11%)	287 (40.65%)
Heavy	2 (2.24%)	4 (0.65%)	6 (0.85%)
Total	89 (12.61%)	617 (87.39%)	706 (100%)

Table 13: Relation between bmi and diabetes mellitus among study subjects

BMI	Diabetic	Non-Diabetic	Total
<18.5	1 (1.12%)	61 (9.89%)	62 (8.78%)
18.5-24.99	44 (49.44%)	381 (61.75%)	425 (60.19%)
25-29.99	27 (30.34%)	146 (23.66%)	173 (24.50%)
30-34.99	13 (14.61%)	24 (3.89%)	37 (5.24%)
35-39.99	4 (4.49%)	5 (0.81%)	9 (1.27%)
Total	89 (12.61%)	617 (87.39%)	706 (100%)

The prevalence of diabetes is highest 74.16% among sedentary workers and lowest i.e. 2.24% among heavy workers respectively. There is significant association between physical activity and diabetes mellitus (Table 12).

In this study it was found that diabetes among the pre-obese (173) and obese I (37) participants were found 15.61% & 35.14% respectively which is much higher as compared to the underweight and normal BMI participants, and found to be significant also (Table 13).

Discussions

The present study is a community based cross-sectional study carried out in chakia nagar parishad area in district of east champaran, bihar, aimed at identifying the prevalence of type 2 DM and its associated risk factors. The present study revealed that the prevalence of Type 2 Diabetes mellitus is 12.61%.

There was a rise in number of diabetic cases from fourth decade of life to fifth decade and then a gradual decline as the age increases. It is also observed that there is an increase in the prevalence of diabetes beyond 7th decade of life, which further confirms that as the age increases the prevalence of diabetes raises.

The prevalence of diabetes mellitus is found to be high in males i.e.15.40% and 10.13% in case of females, with a comparable male to female ratio. Singh TP, Singh AD, Singh TB in their study on prevalence of diabetes mellitus in Manipur. reported a higher prevalence of diabetes mellitus in males than in females[22].

The socio-economic status influences occupation, life style and nutrition of social classes which in turn would influence

the prevalence and profile of glucose intolerance and diabetic complications. The prevalence of diabetes mellitus in the present study is more among higher socioeconomic class than lower class The results of this study is supported by study of Ramchandran et al. which reported prevalence of diabetes mellitus to be more among high –income group.

Studies in India had revealed that prevalence of diabetes in urban areas was found to be lower in the low socio-economic groups as compared with higher socioeconomic groups[22]. The present study shows the prevalence of diabetes mellitus is highest among upper middle socioeconomic class i.e. 34.98% and lowest i.e. 3.11% in lower class which shows the similarity also.

The present study revealed that 26.96. % of cases having positive family history in one parent, 13.49% in both the parents statistically it was also found that diabetes was significantly higher among people having positive family history in comparison to person having negative family history. Ramachandran A et al[23]. had described that prevalence of diabetes was significantly higher in those with the family history (28.1%) than in those without family history (11.4%).

The prevalence of diabetes was higher among smokers 53.92% and 28.09% in non-smokers. Sherman JJ²³ in his study had found the prevalence of smoking among people with diabetes is similar to that in the general population but in the present study it is observed that smoking habit was higher among the diabetics as compared to non-diabetics Solberg L et al[24]. in his study had linked smoking with increasing insulin resistance which later on induces full blown diabetes. Similar observations were also made by

Kawakammi N et al[25]. and Rimm EB et al[26].

Physical activity has an impact on many of the components of the metabolic syndrome. The rapid globalization and industrialization occurring in developing countries has produced much advancement on the social and economic front. These improved socio-economic conditions have resulted in a decrease in physical activity and an increase in obesity. In a study conducted by Bhatti JS²⁷ it was found that sedentary working pattern was significantly higher among diabetics than in control group. Mohan V et al²⁸ had also found that sedentary life style as an important risk factor for development of diabetes.

Conclusions

In the present study the overall prevalence of diabetes mellitus is 12.61% which is comparable with National urban diabetes study. The present study showed that majority of the study subjects were in the age group 21-30 years 207 (29.32%) and only 4.10% above 70 years. Majority of the study subjects i.e. 375 (53.12%) were females and 331 (46.88%) were males. The prevalence of diabetes mellitus is 57.30% in males and 42.69% in case of females among all diabetic persons. The prevalence of diabetes is highest 74.16% among sedentary workers and lowest i.e. 2.24% among heavy workers respectively. The present study also reveals the prevalence of diabetes among different educational groups and it was observed that the prevalence diabetes mellitus is highest in participants with 10th & 12th educated 34.13% and lowest in post graduates and above i.e. 4.24%. The prevalence of diabetes mellitus is 53.92% in current smokers, 17.98% in past smokers and 28.09% among non-smokers. The association between diabetes mellitus and smoking is found to be statistically significant.

Recommendations

- All subjects of age group more than 25 years with family history of diabetes mellitus should be screened.
- Measures must be taken to prevent the emergence of modifiable risk factors of Diabetes mellitus at school level.
- Media has to be involve for creating awareness among population as most of the risk factors are modifiable.

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Nil

Conflict of Interest

Nil

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