



NUTRITIONAL SURVEY ON PREVALENCE OF DIABETES IN ADULTS

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INTRODUCTION:

Diabetes Mellitus is a chronic metabolic disorder that prevents the body to utilise glucose partially or completely, characterised by raise in glucose concentration in the blood and elevation in carbohydrates, protein and fat metabolism.

The beta cells of the islets of Langerhans of pancreas produce insulin which is necessary by our body to regulate glucose metabolism. The blood sugar levels are controlled by a hormone called insulin. Therefore, decreased production of beta cells of pancreas due to increased blood glucose level in the body thereby reduces the amount of insulin produced or due to the cells of the body not responding to insulin produced causes diabetes mellitus. Caused due to lifestyle or genetical predisposition. Diabetes is further classified into:

Type 1 diabetes mellitus is also known as juvenile onset diabetes which is the sudden onset and occurs in young age. It is an autoimmune disease occurs when the pancreas fail to produce sufficient insulin thereby the cells producing insulin is destroyed. Insulin is necessary in our body to transport the glucose from the blood to our body cells for the production of energy hence when there is no production of insulin the glucose level in the blood gets too high and causes diabetes mellitus. It might be caused due to genetics or environmental factors such as infections, acute stress, immunological problems, etc.

Type 2 diabetes mellitus is also called as non insulin dependent diabetes usually occurs in adults. Here, this condition is caused when the insulin is produced by the body but the pancreas are unable to use them properly. It develops slowly and is usually mild. This condition might also be caused due to genetics or environmental factors such as lifestyle, age, obesity, family history. Gestational Diabetes is the Diabetes that is caused during pregnancy due to the hormones produced by the body and that causes change in body's cell to use insulin less effectively, a condition called insulin resistance are if not controlled they be at higher risk for developing type 2 diabetes in later life.

Symptoms of diabetes mellitus are hyperglycaemia, glycosuria, fluid and electrolyte imbalance, polydipsia, polyphagia, blurred vision and dehydration, etc

OBJECTIVE:

- To know about the knowledge on diabetes mellitus in adults
- to check on the awareness they know about this condition along with the symptoms
- To know about the regular check-up or treatment done on blood sugar level with the modification done on food consumption and lifestyle and the intake of medication during this specific condition.

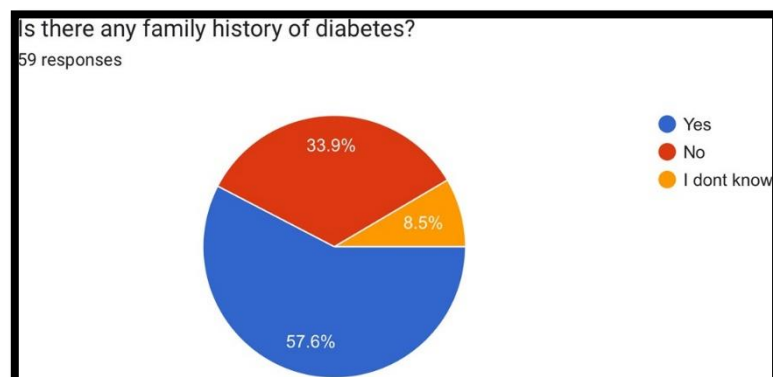
METHODOLOGY:

A study was conducted among 50 individuals of both the sexes belonging to adult group (19+) from Mangalore. The questionnaire was formulated and the survey was conducted over online mode with the aid of google forms. <https://forms.gle/A8MNG5yt97rAx82L7>

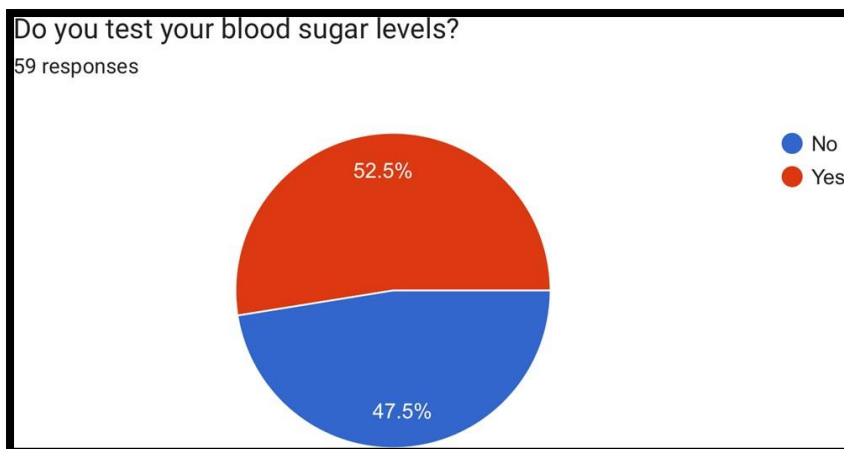
RESULT:

The questionnaire consisted of different types of questions regarding the blood sugar monitoring and the regular follow up on the tests along with the medical advice and also upon taking insulin and medication taken along with the changes done to eating on being diagnosed with diabetes. The questionnaire was answered by 59 adults out of which 42.37% were male and 57.63% were female. The age ratio of survey population consisted of 30.52% of individuals belonging to the age group of 20-30 years, 40.7% of individuals belonging to the age group of 30-40 years and 28.8% of individuals belonging to the age group above 50-60 years. In this survey study we also get to know on 83.1% knew about diabetes, 5.1% had little idea about diabetes and 11.9% didnot know on diabetes, where it was also found that 79.7% of individuals did not suffer from diabetes and 15.3% individuals were suffering from diabetes for more than 1 year.

Graph 1: Family history of Diabetes



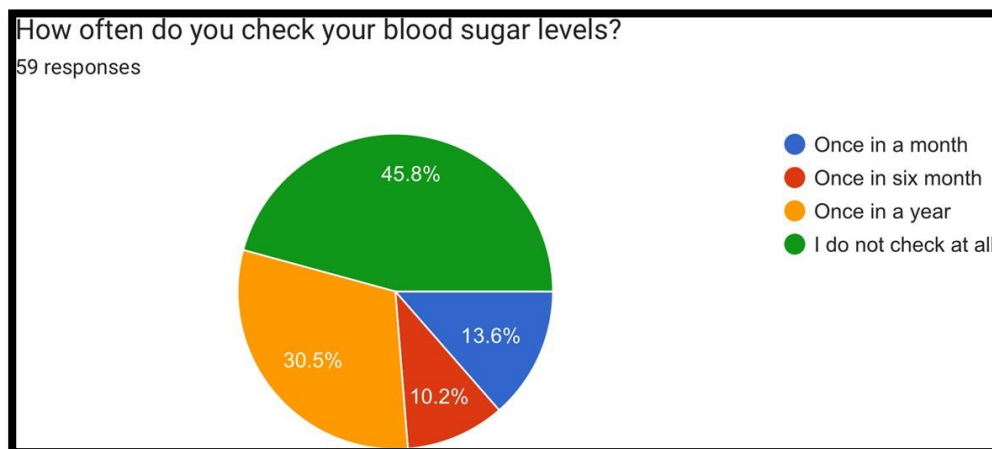
On asking about the family history of diabetes 57.6% of the population had history of diabetes, 33.9% of the population did not have any family history on diabetes and 8.5% of the population did not know if they had any family history suffering from diabetes mellitus.



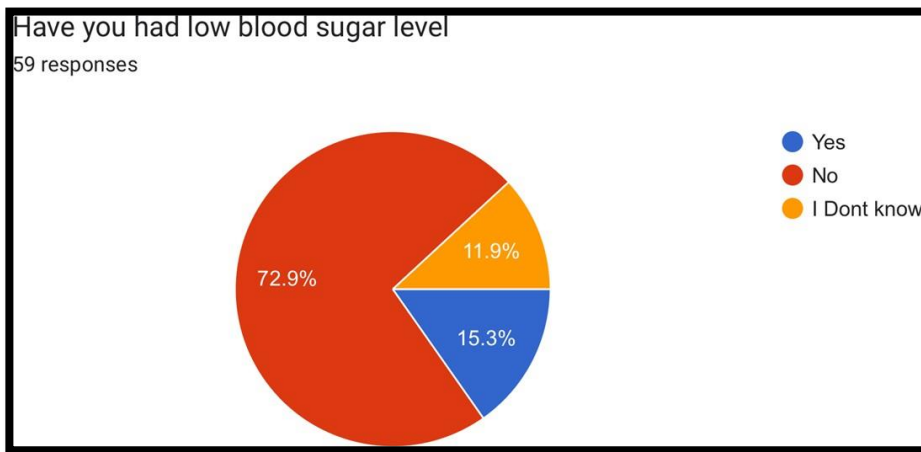
Graph 2: Monitoring of Blood Sugar Levels

On questioning concerning the monitoring of blood sugar level 52.5% did the test for blood glucose level and 47.5% has not done the test for blood glucose level. Almost 33.3% have done random blood sugar test and 33.3% have done HBA1C test and 29.6% have done fasting blood sugar test.

Graph 3: Frequency of Check up

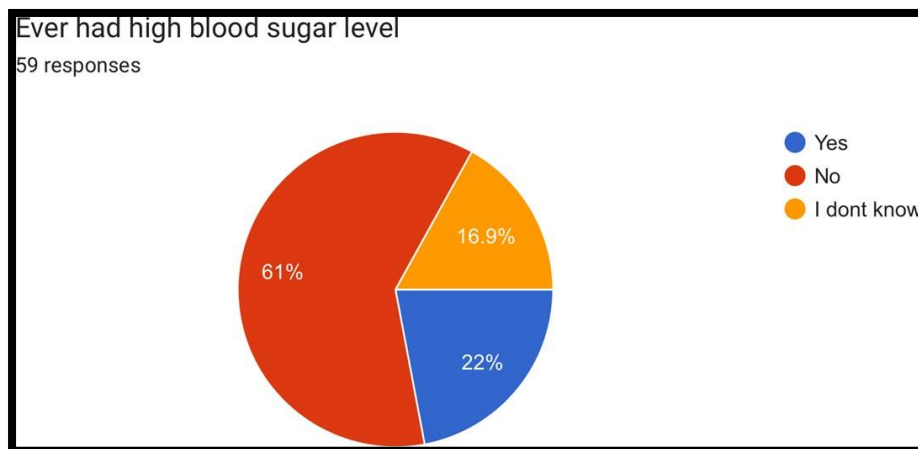


Upon asking about how often they check on blood sugar level, majority of the population 45.8% have not checked at all, 30.5% of the population checks once in a year and 13.6% checks once in a month and 10.2% of population checks once in six months.



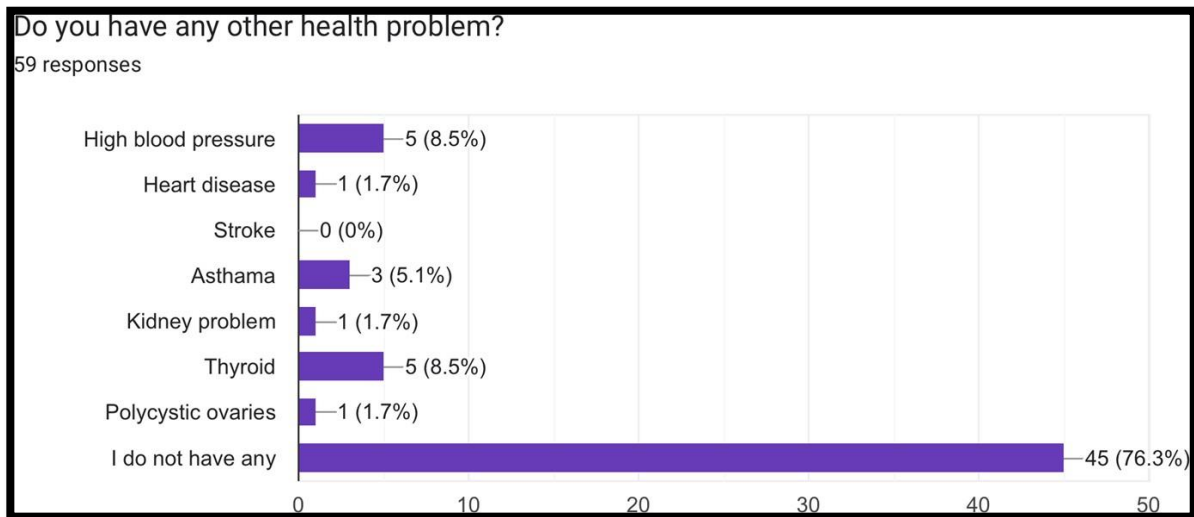
Graph 4: Population with Low blood sugar level

Upon asking if they had low blood glucose level 72.9% have never had low glucose level, 11.9% did not know if they ever had low blood glucose level and little of them 15.3% had low blood glucose level.

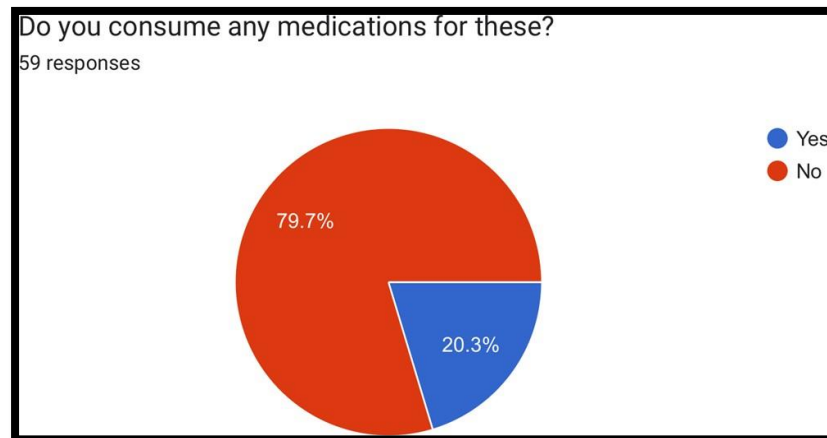


Graph 5: Population with High blood sugar level

Moreover, when questioned on high blood glucose level, majority of population 61% did not have high blood glucose level, 22% had high glucose level and 16.9% never knew about the highglucose level.

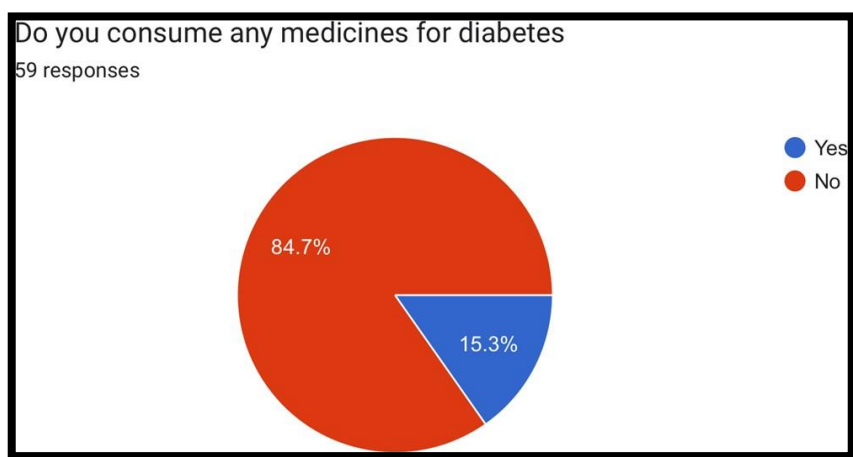


Graph 6: Prevalence of any other Comorbidities



Graph 7: Consumption of Medicines for Comorbidities

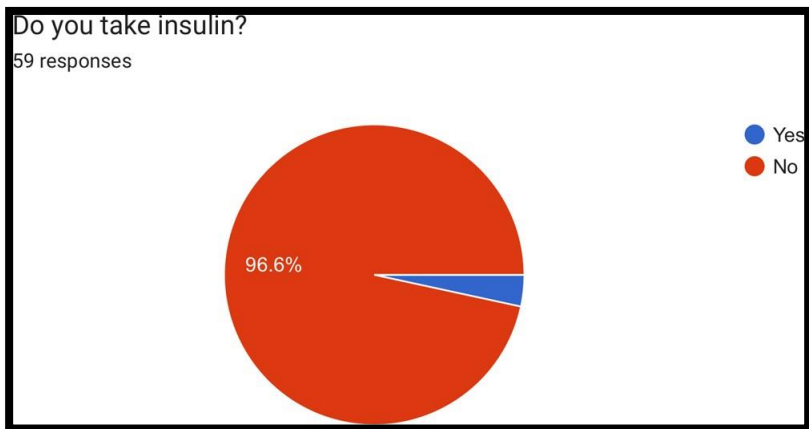
Upon asking regarding any other health problem, majority of them 76.3% did not have any comorbidities, 8.5% had high blood pressure, 8.5% had thyroid, 5.1% asthma, 1.7% are suffering from heart disease, kidney problem and polycystic ovaries and on further asking on consumption of medications for the specific disease majority of population 79.7% does not consume any medication and 20.3% did consume the medication for the particular diseased state.



Graph 8: Consumption of Medicines for Diabetes

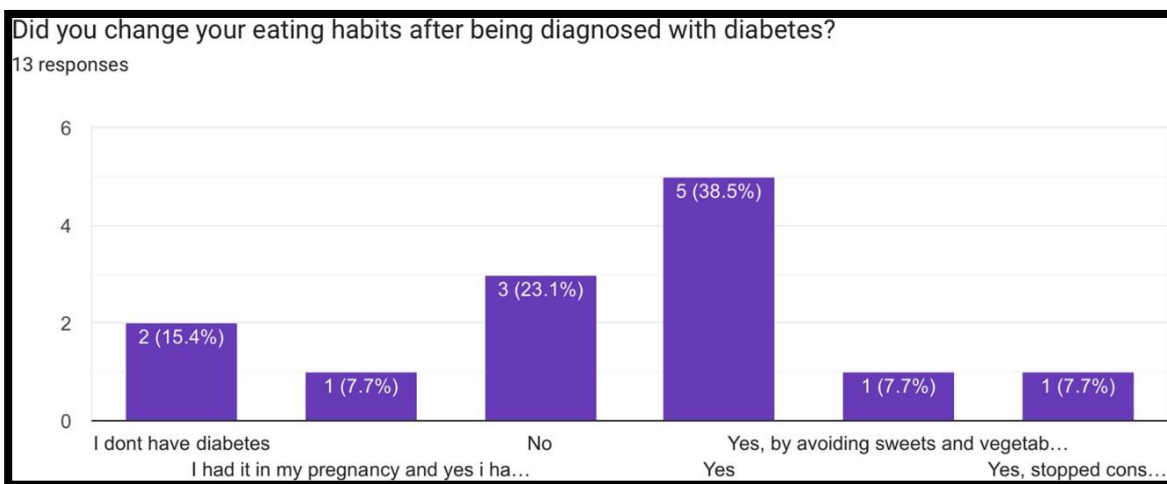
Upon asking regarding the consumption of medicines for diabetes which is very essential in order to maintain the blood glucose level in the body so that it does not cause of diabetes which may further lead to complications 84.7% of the population does not consume medication and 15.3% of them do take medication for the specific condition

On further questioning about the medicine and the dosage very few responses on these isobserved and the medicines such as Actrapid and lavemir, tringlins-2, glycomet-GP-4, dapavel-5, glykind-M, glucoford and zukonorm M-500 were the medicines taken by few individuals suffer from diabetes in order to maintain the blood glucose level in the body



Graph 9: Usage of Insulin

Upon asking the question on taking insulin which is vital for replacing the insulin that doesn't produce by the body in order to maintain the desired level of blood glucose level in the body, where 96.6% does not have insulin therapy which thereby gives an assumption that majority of them suffering from diabetes does not have excess of blood glucose level in the body hence are taking medicines than the insulin therapy.



Graph 10: Modification in eating habits

Further, when the subjects were asked on changes in eating habits after being diagnosed with diabetes, 38.5% of the individuals suffering from diabetes did changes, 23.1% did not do any modification in diet, 15.4% of them did not have diabetes and 7.7% did change the eating pattern by reducing the intake of starchy products and sweets by avoiding the junks.

DISCUSSION:

From this survey, it can be seen that majority of the population have knowledge about diabetes. Were most of the older adults are seen to suffer from type 2 diabetes and need extra care since diabetes will cause body trouble in producing insulin which is used to reduce the blood glucose level in the body which is mainly caused due to lifestyle factor or genetic predisposition. Usually type 2 diabetes is seen where it is non reversible and hence must be controlled by the consumption of medicines in order to maintain the blood glucose level and very little were observed having gestational Diabetes and majority of the individuals did not suffer from diabetes but were suffering from other medical condition and also seen that they do not consume the medicines for that specific condition thereby causing more complications in the upcoming days. Diabetes is a chronic disease which has less chance of reversing them to a normal condition by changing the lifestyle, eating habits and also reducing weight, therefore it is necessary for individuals to maintain the blood glucose level to prevent the cause of further complications and it is also seen that individuals suffering from diabetes are trying their best to maintain this condition by changing the eating habits which is very essential for our body to balance the glucose in the body and help to produce insulin.

CONCLUSION:

The survey was very beneficial and informative and it also helped to get more knowledge on people knowing about the diabetes and also it was seen that majority of the diabetes is caused to older adults and were on medication in order to help body produce insulin and help to maintain body in a healthy state. And was also seen that people must do dietary changes in order to maintain the body from causing obesity which may further cause other complicated diseases.

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