

Nikita G D Report

by Nikita Grover

Submission date: 01-Jun-2019 03:21PM (UTC+0530)

Submission ID: 1138691927

File name: report_for_plagirism_check-nikita.pdf (749.2K)

Word count: 1894

Character count: 17163

2.0 Executive Summary

Introduction: A study was carried out in Delhi to evaluate the knowledge, attitude and practice of diabetic patients diagnosed within one year and age more than 30 years attending Government Hospital OPD.

Method: In this cross sectional study 100 diabetic patients were selected by non probability convenient sampling from five government hospital in Delhi and interviewed. Using MS Excel, descriptive statistics were applied to summarize the data and the data regarding the patient's knowledge, attitude and practice towards diabetes.

Result: Out of 100 individuals, 97% of the whole population reported that they knew that sugar level rises in diabetes while 3% were unaware. 66% of the subjects knew that prevalence of diabetes was increasing, 30% thought there is no increase while 4% didn't know. Only 23% of population was able to tell correct level of random blood sugar level and 64% were not aware. Only 7% people told all the asked symptoms of diabetes, 35% knew increased frequency of urine, 19% knew slow healing of wounds and 35% knew increased thirst and hunger. Only 25% had knowledge of the role of obesity and 11% physical inactivity in producing diabetes while 69% knew consumption of more sugar is responsible. 53% subjects knew that diabetes can cause complications in other organs, 9% were unaware and 38% didn't know. 71% subjects knew role of diet in controlling diabetes but only 59% modified their diet. Though, 53% respondents knew the importance of keeping weight under control only 39% did regular exercises while rest 61% did not exercise.

Conclusion: Knowledge about diabetes is a powerful predictor of the perception of people with diabetes concerning and their illness and the quality of services they receive. Signif

ificant numbers of patients, particularly, are poorly informed about key elements of diabetes care and are not receiving appropriate or significant education about it. Type 2 diabetes is a serious disease and tight glucose control reduces morbidity and mortality associated with diabetes. However some patients have different health beliefs and perceptions of seriousness. The results of this study show that there is a need for a change in the attitudes of patients.

2.1 Introduction

India is currently experiencing an epidemic of Type 2 Diabetes mellitus & has the largest number of Diabetic patients. It is often referred to as the diabetes capital of the world. The International Diabetes Federation (IDF) projects that the number of Indians with diabetes will soar to 134 million by 2045 from 72 million in 2017.

Diabetes is a chronic disease, which occurs when the pancreas does not produce enough insulin, or when the body cannot effectively use the insulin it produces. This leads to an increased concentration of glucose in the blood (hyperglycemia).

Type 1 diabetes (previously known as insulin dependent or childhood onset diabetes) is characterized by a lack of insulin production.

Type 2 diabetes (formerly known as insulin dependent or adult onset diabetes) is caused by the body's ineffective use of insulin. It often results from excess body weight & physical inactivity.

Diabetes fact-

The number is expected to grow to 438 million by 2030, corresponding to 7.8% of the adult population.

- 70% of the current cases of diabetes occur in low & middle income countries. With an estimated 50.8 million people living with diabetes, India has the world's largest diabetes population, followed by China with 43.2 million.

- Diabetes is one of the major causes of premature illness & death worldwide. Non-communicable diseases including diabetes account for 60% of all deaths worldwide.
- In developing countries, less than half of people with diabetes are diagnosed. Without timely diagnoses & adequate treatment, complications & morbidity from diabetes rise exponentially.
- Type 2 diabetes can remain undetected for many years & the diagnosis is often made from associated complications or incidentally through an abnormal blood or urine glucose test.
- 80% of type 2 diabetes is preventable by changing diet, increasing physical activity & improving the living environment. Yet, without effective prevention & control programs, the incidence of diabetes is likely to continue rising globally.

At present over 170 million people are living with diabetes across the globe. Among them as much as 90% is living with diabetes type 2 while the remaining manages diabetes type 1 with insulin dosages daily. Recent research into the management of diabetes has found convincing evidence that diabetes type 2 can indeed be prevented & even delayed in high risk individuals through better diet, exercise & lifestyle care for persons with diabetes as well as for those at high risk has increasingly become an important concern for decision makers & health care planners.

A cross sectional study was conducted in CMC, Ludhiana for knowledge of Diabetes, its treatment & complication among diabetic patient in tertiary care hospitals. Patient's knowle

dge regarding the treatment & complications of diabetes showed serious deficiencies, more so among, even though most had been diabetic for years. In this study, the role of gender on knowledge regarding diabetes was evident with women scoring significantly lower than men even after regulating other confounders. This implies that an extremely targeted education program is required to empower diabetic women.

This study confirms that patient knowledge about the treatment & complications of diabetes is limited, especially with regard to preventive aspects. There is a definite need to empower patients with the knowledge required to help them obtain maximum benefit from their treatment for diabetes.

2.1.1 Rationale:

Studies have shown that increasing patient knowledge regarding diseases & its complications has significant benefits with regard to patient compliance to treatment & to decreasing complications associated with the disease. Considering this, we sought to quantify in a population of diabetes visiting government hospitals, the level of knowledge & perception.

These studies will assess the knowledge & perception of diabetes among diabetic patients. Finding of this study will help the policymakers in designing strategies to combat the increasing burden of diabetes.

2.1.2 Literature Review:

1. A cross sectional study was conducted in CMC Ludhiana for knowledge of Diabetes its treatment & complication among diabetic patient in tertiary care hospitals. Patient's knowledge regarding the treatment & complication of diabetes showed serious deficiencies, more so among women, even though most had been diabetic for years. In this, role of gender on knowledge regarding diabetes was evident with women scoring significantly lower than men even after regulating other confounders. This implies that an extremely targeted education program is required to empower diabetic women.

This study confirms that patient knowledge about the treatment & complications of diabetes is limited, especially with regard to prevent aspects. There is a definite need to empower patients with the knowledge required to help them obtain maximum benefit from their treatment for diabetes.

2. A study conducted by Suraj Eye Institute Nagpur to find prevalence of diabetes in the rural population of Central India, we found evidence of diabetes in 5.6%+0.5% of subjects aged 30+ years. These figures are markedly lower those reported from urban & semi-urban regions in India, suggesting that major improvements in medical infrastructure are needed to address this wide spread condition in India.
3. A study conducted in Manipal evaluated the impact of pharmacist-provided counseling in terms of diabetic patients' understanding of their disease, drug therapy, & lifestyle changes. We found that counseling by pharmacists was effective in improving patients' knowledge but not in improving their attitudes & practice

s. Because there was no correlation between attitude & practice, we cannot assume that improved patient knowledge would result in appropriate behavior.

4. A study conducted for Awareness & knowledge of Diabetes in Chennai- the Central Urban Rural Epidemiology Study (CURES-9) Awareness & knowledge regarding diabetes is still grossly inadequate in India. Massive diabetes education programmes are urgently needed both in urban & rural India.
5. Another study conducted by department of Family Medicine & Public Health, college of medicine & Health Sciences, Sultan Qaboos University, Oman. This study demonstrated that there is lack of awareness of major risk factors for diabetes mellitus. Level of education is the most significant predictor of knowledge regarding risk factors, complications & the prevention of diabetes. Given that the prevalence of diabetes has increased drastically in Oman over the last decade, health promotion seems essential, along with other means to prevent & control this emerging health problem.

2.1.3 Operational definition

Knowledge

In this study knowledge refers to the awareness of patients regarding diabetes and complications using structured questionnaire.

Attitude

Attitude in this study is defined as a complex mental state involving beliefs and feelings and values of patients to act.

Practice

Practice is the act or process of doing something or actions by the patients when they are suffering from diabetes

2.1.4 Research Question

What is current knowledge, attitude and practice of diabetic patients?

2.1.5 Objective

To assess the knowledge, attitude and practice of diabetic patients attending government hospital OPD in Delhi.

2.1.6 Inclusion Criteria

- The inclusion criteria for the cases included diagnosed cases of diabetes during last 1 year.
- Patient visiting government hospital in Delhi
- Patient above the age of 30 years

2.2 Methodology

This chapter discusses the methodology adopted for conducting the study. It includes the target respondents, sampling, study area etc. in detail.

2.2.1 Study design

A cross sectional study using a structured questionnaire.

2.2.2 Study area

Study was conducted in 5 Government hospitals of Delhi which included GTB Hospital, Dr. Hedgewar Arogya Sansthan, Bhagwan Mahavir Hospital, Mata Chanan Devi Hospital and Dada Dev Hospital.

2.2.3 Sampling Method

Non- probability convenience sampling

2.2.4 Sample Size

Assuming that 50% of the diabetics had reasonable knowledge about various factors associated with the disease and that we require a precision of 10%, the sample size is calculated as:

$$N=4pq/d^2= (4*0.5*0.5)/(0.1*0.1)=100$$

Where p is the proportion of the estimated population and q= (1-p), d representing the absolute precision.

2.2.5 Data collection tool

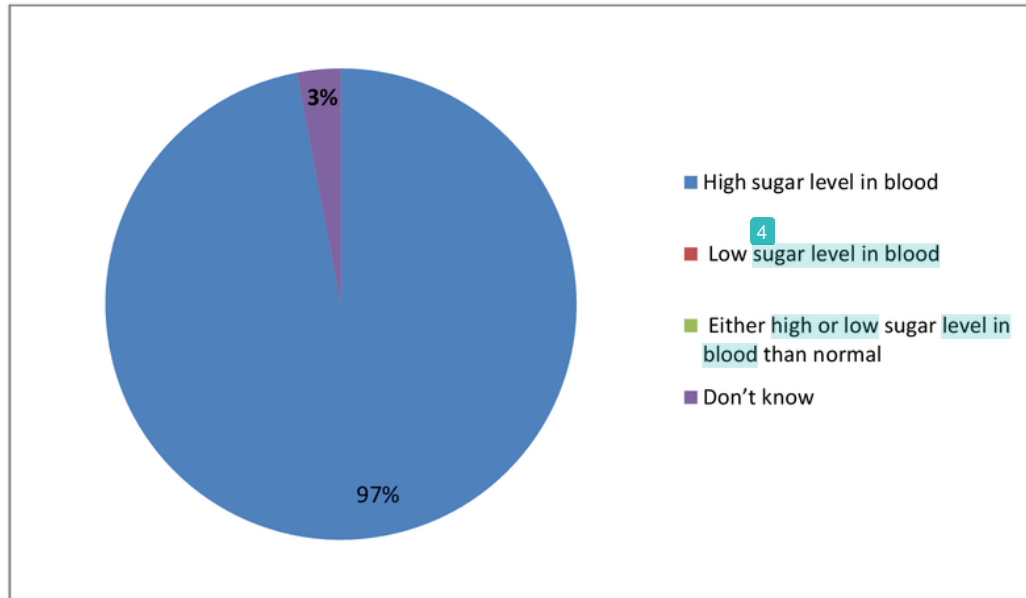
Structured questionnaire

2.2.6 Data analysis

Using MS Excel

2.3 Findings

Fig1: Knowledge about diabetes



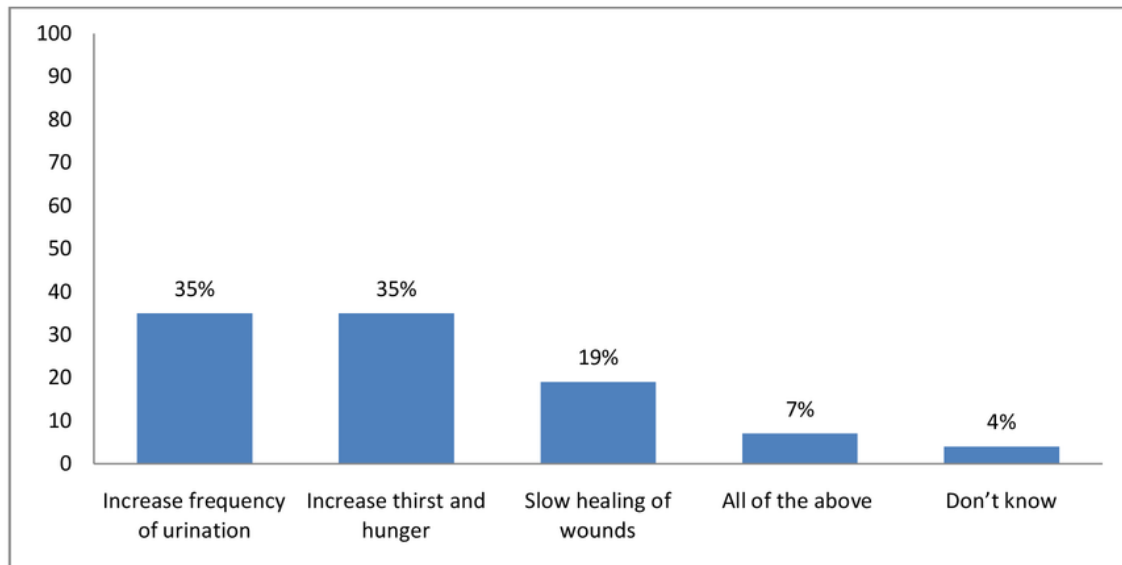
97% of the whole study population reported that they knew about a condition called diabetes and it is raise in sugar level while 3% were not aware of it.

Table1: Knowledge about normal level of sugar in blood

Particulars	Percentage of Respondents
120-200mg/dl	23%
More than 200mg/dl	13%
Don't know	64%

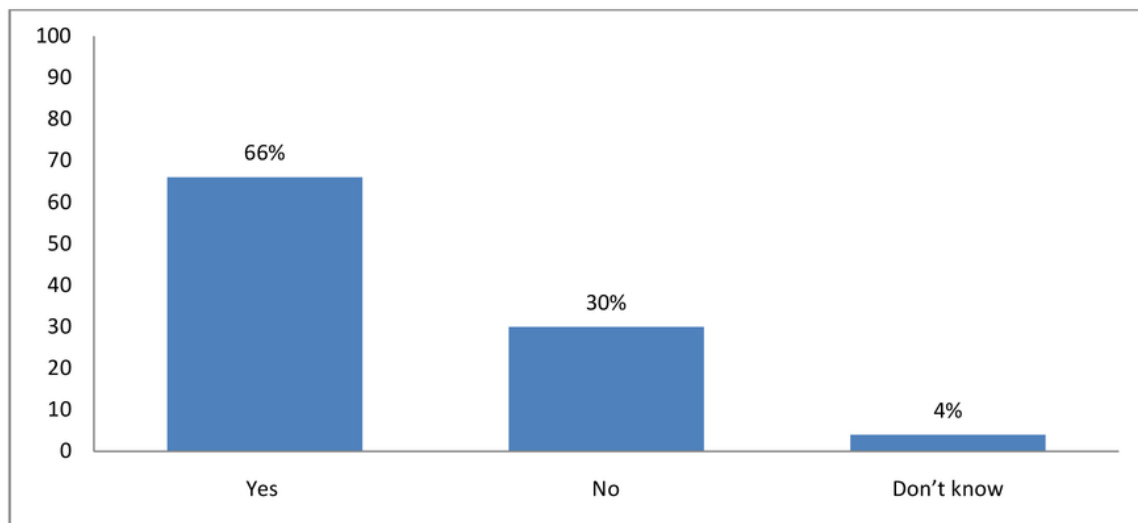
Only 23% respondents have given correct answer, 13% gave wrong answer while 64% said they didn't know normal level of sugar.

Fig 2: Knowledge of symptoms



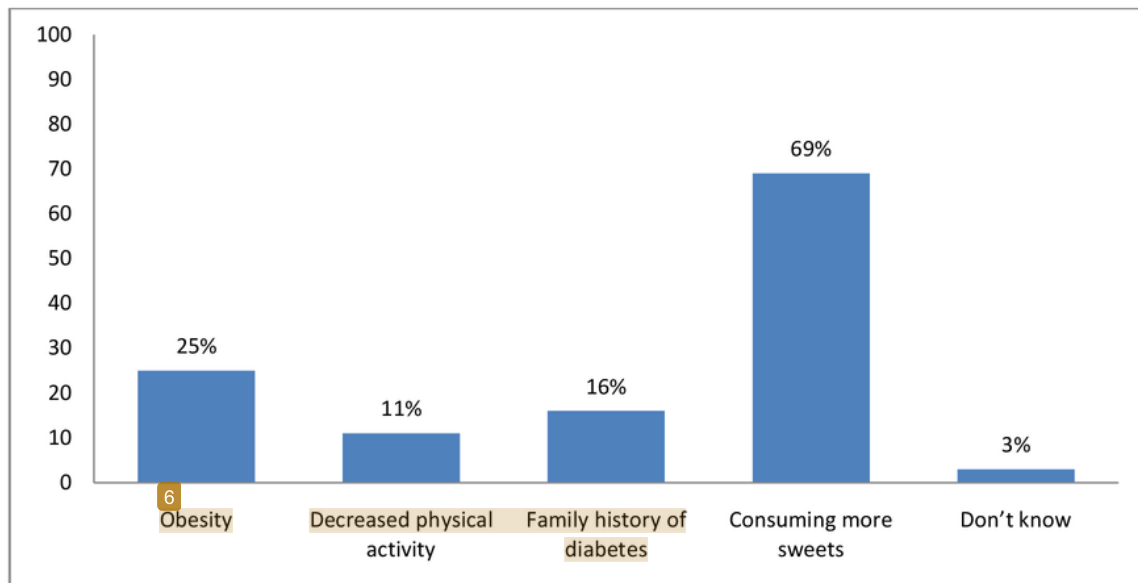
- Only 7% were fully aware of all the symptoms of Diabetes
- 35% were aware of increase frequency of urination
- 35% were aware of increase frequency of thirst and hunger
- 19% had knowledge of slow healing of wounds

Fig 3: Knowledge of prevalence of disease



66% of respondents were aware of the increasing prevalence of disease.

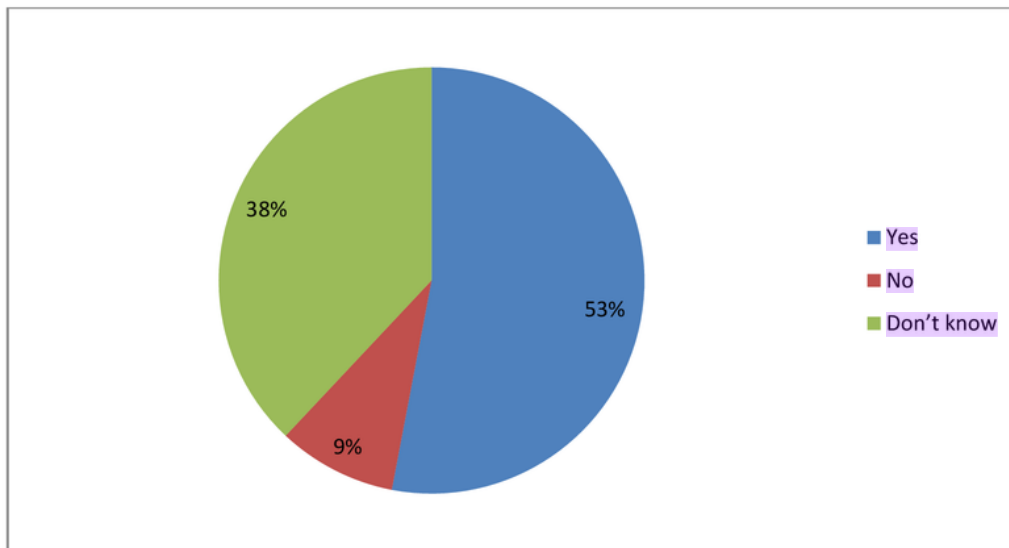
Fig 4: Knowledge of factors causing Diabetes



*This is a MCQ

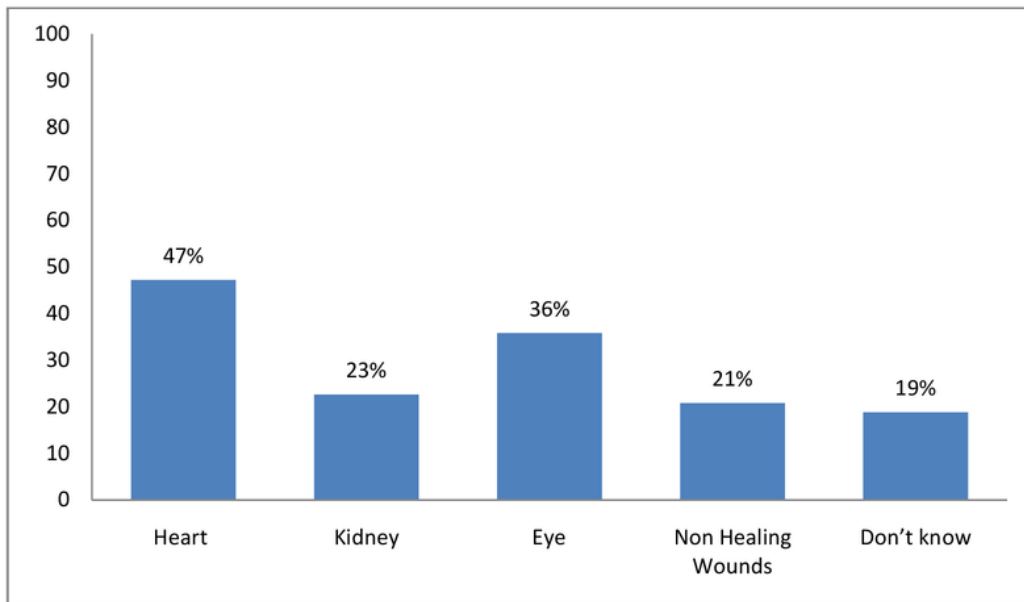
Only 16% ³ participants felt that family history of diabetes was one of the causes of diabetes and 69% listed consuming more sweets as the reason for diabetes. 25% responded as obesity while 11% mentioned decreased physical activity reason for causing diabetes.

Fig 5: Do you think ³ diabetes can cause complication to other organs



53% patients were aware of that diabetes was aware of ³ that diabetes can cause complications in other organs. 9% said that no complications are seen while 38% didn't ⁷ know that it can cause complications.

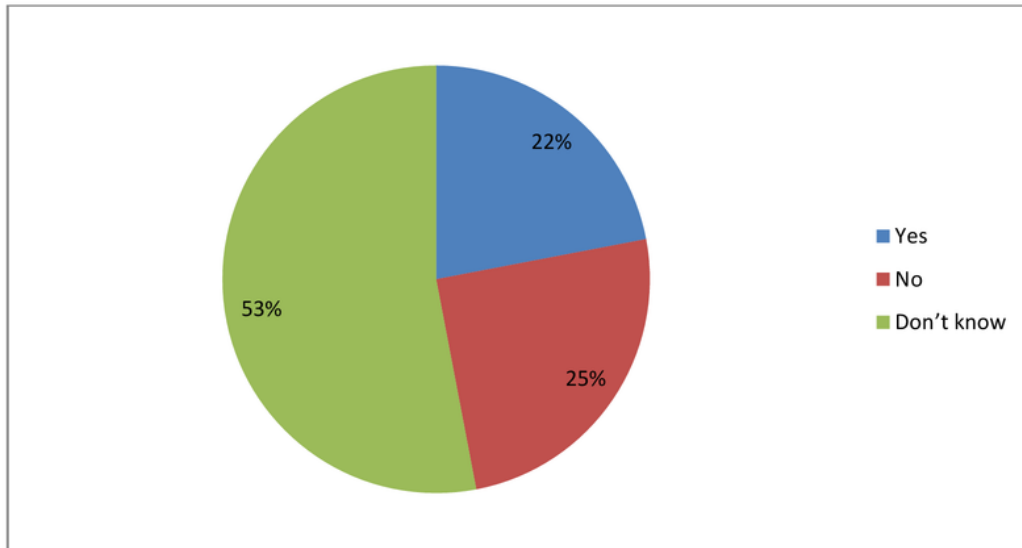
Fig 6: Organs affected in diabetes



*This is a MCQ

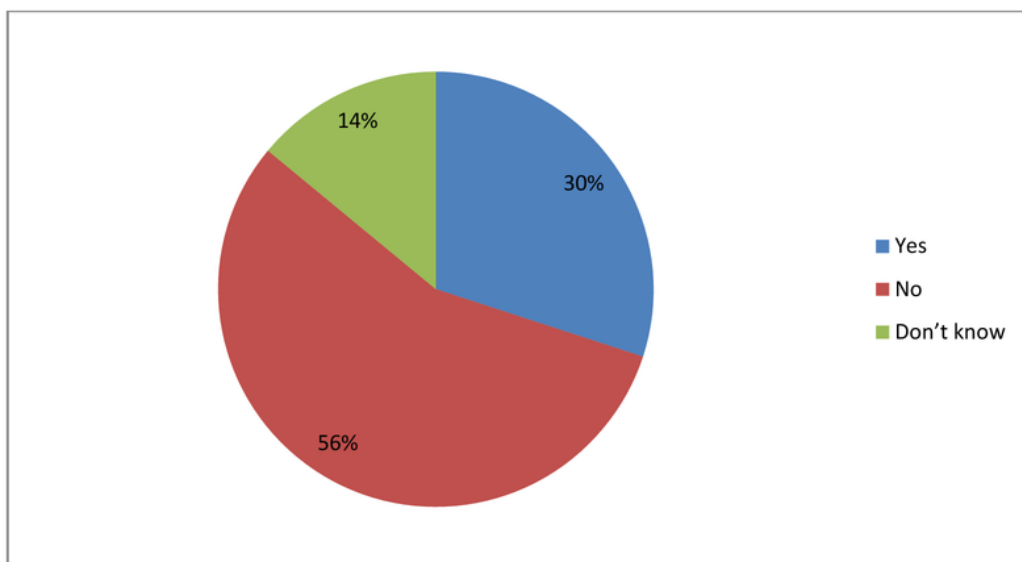
53% respondents who were aware of the effect of diabetes on other organs were asked for the organs that are affected. 47% said heart, 23% said kidney, 36% said eye while 21% said non healing wounds are affected by diabetes. 19% respondents didn't know in specific which organ gets affected.

Fig 7: Do you think complications of diabetes will happen anyways, how much you try to control blood sugar



22% of respondents felt that complications diabetes will happen anyways even trying hard to control blood sugar.

Fig 8: Curability of Diabetes



30% respondents said that they don't know and 14% said it is curable. Only 56% said that it is not curable.

Table 2: Do you think diet control is required along with medications?

Particulars	Percentage of Respondents
Yes	71%
No	5%
Don't know	24%

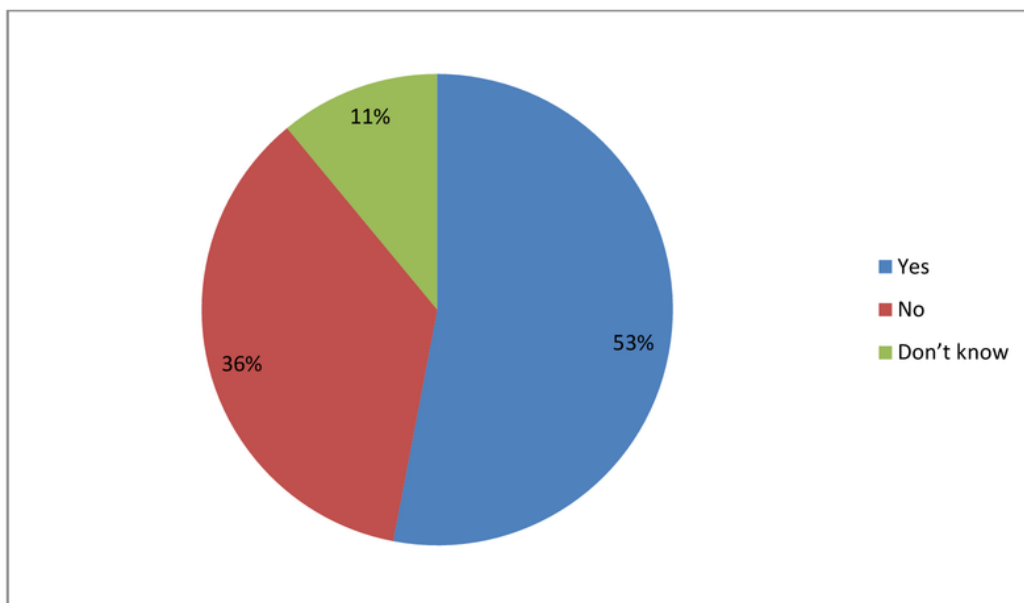
71% patients know that diet has a role to play in diabetes control, 5% thought diet modification is not required while 24% didn't know.

Table 3: Modification of diet

Particulars	Percentage of Respondents
Yes	59%
No	41%

Only 59% respondents have modified their while there is no diet modification in rest 41% of respondents.

Fig 9: Do you think weight management is required for DM patients?



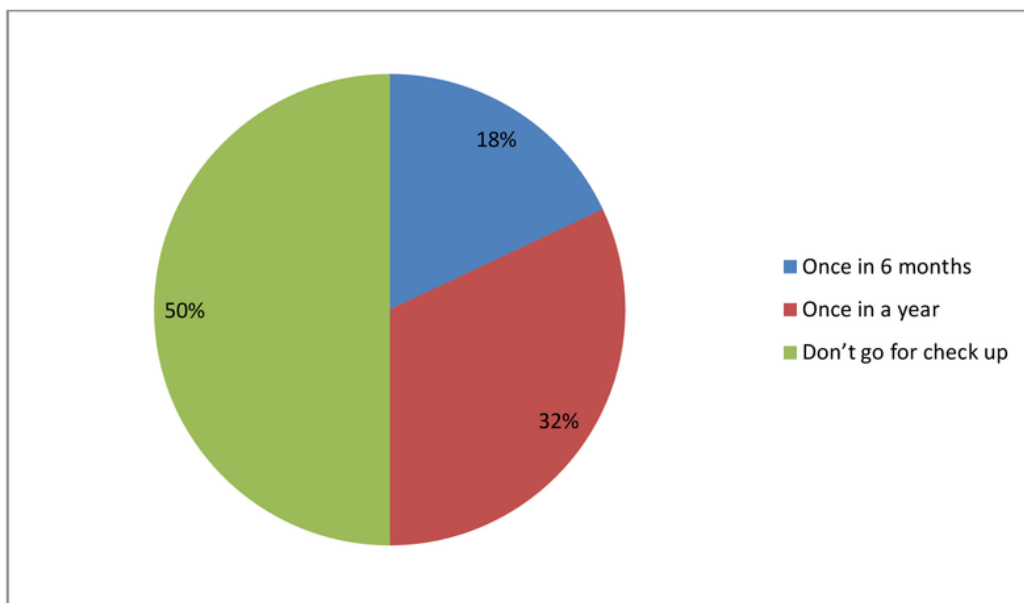
53% of respondents thought weight management as an important part of DM.

Table 4: Habit of Exercise

Particulars	Percentage of Respondents
Yes	39%
No	61%

Only 39% of diabetics had a habit of regular exercise while rest 61% didn't exercise.

Table 10: Regularity of Eye check up



Only 18% of diabetics went for eye check up once in 6 months while 32% went once in a year. It was seen that rest 50% were not at all going for these check ups.

2.4 Conclusion

¹ Knowledge about diabetes is a powerful predictor of the perception of people with diabetes concerning and their illness and the quality of services they receive. Significant number of patients, particularly, are poorly informed about key elements of diabetes care and are not receiving appropriate or significant education about it. Type 2 diabetes is a serious disease and tight glucose control reduces morbidity and mortality associated with diabetes. However some patients have different health beliefs and perceptions of seriousness. The results of this study show that there is a need for a change in the attitudes of patients.

2.5 Limitations of Study

First, the findings of this study cannot be generated as respondents were selected from only 5 hospitals.

There was great limitation of time for collecting data so non-probability convenient sampling was done.

2.6 Recommendations

- IEC TV sessions, mass media awareness by developing posters and hoardings.
- Organize open for all diabetes awareness workshops.
- Government hospitals have a huge OPD workload so physicians can't spare enough time on counseling each and every patient. Counseling plays very important role so we should plan to appoint a counselor for counseling the diabetic patients on topics like diet and regimen; importance of regular blood sugar monitoring etc.
- Multi- specialty camps may be organized for the diabetic patients to rule out any complications arising from diabetes.
- Blood sugar monitoring chart may be given to diabetic patients to thoroughly maintain it and to be followed up in each visit.

2.7 References

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2.8 Annexure

QUESTIONNAIRE FOR KAP STUDY OF DIABETES MELLITUS

Name.....

Age.....

Sex.....

Education.....

1. What is diabetes mellitus?
 - a) High sugar level in blood
 - b) Low sugar level in blood
 - c) Either high or low sugar level in blood than normal
 - d) Don't know
2. What are common symptoms of diabetes?
 - a) Increased frequency of urination
 - b) Increased thirst and hunger
 - c) Slow healing of wounds
 - d) All of the above
 - e) Don't know
3. Do you think, in general, more and more people are getting affected with diabetes now a days?
 - a) Yes
 - b) No
 - c) Don't know
4. What are the factors you think contribute to diabetes?
 - a) Obesity
 - b) Decreased physical activity
 - c) Family history of diabetes
 - d) Consuming more sweets
 - e) Others (name).....
5. What is the level of sugar in blood that is considered normal?
 - a) 120 to 200 (random blood sugar)
 - b) More than 200

- c) Don't know
6. Do you think diabetes can cause complications in other organs?
- a) Yes
 - b) No
 - c) Don't know
7. If yes, what are they?
- a) Heart
 - b) Kidney
 - c) Brain
 - d) Eyes
 - e) Non healing wounds
 - f) Don't know
8. Do you believe that there is not much use in trying to have good blood sugar control, because complications of diabetes will happen anyway?
- a) Yes
 - b) No
 - c) Don't know
9. Can diabetes be cured permanently?
- a) Yes
 - b) No
 - c) Don't know
10. Do you think DM treatment requires diet control as well with medications?
- a) Yes
 - b) No
 - c) Don't
11. Do you modify your diet?
- a) Yes
 - b) No
12. Do you think keeping weight under control is required for DM patients?
- a) Yes
 - b) No
 - c) Don't know

13. Do you exercise regularly to keep weight under control?

- a) Yes
- b) No

14. How often do you get your eyes checked:

- a) Once a year
- b) Once every six months
- c) Need not check at all

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