

Assessing the Knowledge, Attitude and Practice of Type 2 Diabetic Patients in Rajasthan

By

Shubhi Jain

*Dissertation submitted in partial fulfillment of the requirements of the degree
MBA Hospital and Health Management*

Academic year, 2017-2019



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TO WHOMSOEVER MAY CONCERN

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The Candidate has successfully carried out the study assigned to her during internship training and her approach to the study has been sincere, scientific and analytical.

The Internship is in fulfillment of the course requirements.

I wish her all the success in her future endeavors.



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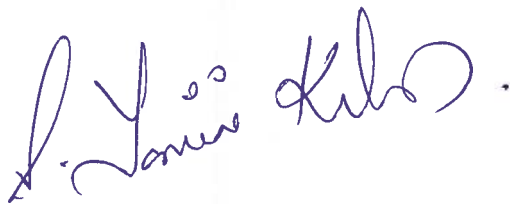
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This is to certify that **Shubhi Jain** is associated with **IQVIA Consulting and Information Services India Pvt. Ltd** as an **Intern** and the internship period is from **Feb 04, 2019** till **June 03, 2019**.

This certificate is issued in recognition of successful completion of his/her **Dissertation** in the department of **Public Health**.

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For IQVIA Consulting and Information Services India Pvt. Ltd



S. Yamini Krishnan

Director Human Resources, South Asia

THE IIMMR UNIVERSITY, JAIPUR

CERTIFICATE BY SCHOLAR

This is to certify that the dissertation titled **"Assessing The Knowledge, Attitude and Practice Of Type 2 Diabetic Patients In Rajasthan** and submitted by **Shubhi Jain** Enrollment No **IIMMR-U/01/2017-19/0674** under the supervision of **Dr. S.D. Gupta** for award of MBA in Hospital and Health Management of the University carried out during the period from **4th February2019 to 3rd May2019** embodies my original work and has not formed the basis for the award of any degree, diploma associate ship, fellowship, titles in this or any other institute or other similar institution of higher learning.


Signature

DECLARATION

I do hereby declare that, I am a student of 2nd year MBA Hospital and Health Management in IIHMR University, Jaipur, Rajasthan (2017-2019).

I would like to state that I have done my dissertation from 4th Feb 2019 to 3rd May 2019 at IQVIA Consulting Pvt.Ltd .I have done dissertation on the topic of Knowledge, Attitude and Practice of diabetes patients visiting the hospitals of Rajasthan under the guidance of Mr. Hemant Chaudhry. I have completed my project for the completion of my degree.

This project has done by myself and not be submitted to other Institute and University or the purpose of Award and Reward.

Shubhi Jain

IIHMR University,

Jaipur

ACKNOWLEDGMENT

My vision at the time of starting my dissertation is to explore about Public Health research and opportunities in this sector.

I am obliged to thank to Mr. Lokesh Sharma (Senior Principle) for proving me this opportunity to carry out my study as dissertation and for his continuous support and motivation.

I wish to express my special gratitude to Mr. Hemant Chaudhry (organization mentor) for his guidance and support regarding study. His step by step instructions help me a lot in doing a fruitful study. He has continuous source of new and innovation idea and a different kind of professionalism and work style. I am thankful to him for the faith he put on me which boost my confidence level.

I am also thankful to the Project Manager, Mr. Hemant Chaudhry.

I would like to express my thanks to **Dr. S.D. Gupta**, Director of IIHMR, University and **Col. Dr. Ashok Kaushik**, Dean-Academic and student affair, for guided me and giving me inspiration to complete my ventures and goals.

Finally I would like to express my gratitude to the staff of the IQVIA and the Mentor of IIHMR University, Jaipur **Dr.S.D. Gupta** (Chairman), for giving me their immense support and helped me to complete the project.

Sincerely,

Shubhi Jain

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Abstract

Title of study: Assessing the knowledge, attitudes and practice of type 2 diabetic patients in Rajasthan

Author name – Shubhi Jain

Background of study:

India is currently experiencing an epidemic of Type 2 Diabetes mellitus & has the largest number of Diabetic patients. India is referred to as the diabetes capital of the world. IDF 2013 report reveals that the total no. of diabetes patients in India are 381 million and the no. is projected to almost double in 2030. Diabetes currently affects more than 62 million Indians, which is more than 7.1% of the adult population. 70% of the current cases of diabetes occur in low- & middle-income countries. With an estimated 62 million people living with diabetes, India has the world's largest diabetes population. This study was carried out in the hospitals of Rajasthan and assess the knowledge, attitude and practice level of diabetic patients and have done comparison between the knowledge level of male and female and findings shows that the knowledge level is limited in women and attitude and practice level is limited in educated, So conclusions can be drawn from these findings is that knowledge, attitude and practice is limited in the population about diabetes.

Research Question:

What is current Knowledge, Attitude, and Practice of diabetic patients?

Objective:

To assess the knowledge, attitude and practice of diabetic patients visiting the hospitals of Rajasthan.

To compare the knowledge, attitude and practice of type 2 diabetic patients between male and female.

To compare the attitude and practice between educated and non-educated diabetic patients.

Methodology:

This study was conducted on diagnosed cases of diabetic patients visiting the OPD in the hospitals of Rajasthan and this study is a cross sectional study and 150 samples of the diabetic patients has been taken from the hospitals. In this study nonprobability convenient sampling was done and was conducted from Feb 2019 to May 2019 using a structured questionnaire.

Result

Knowledge of symptoms of diabetes in women is less as comparison to men. In addition to this knowledge of normal level of sugar in blood in women is also less as comparison to men. Only 65 % were aware about increasing prevalence of disease. Only 53 % people modified their diet

those who are educated and 86 % people who are 10th pass modified their diet; this shows that attitude and practice is limited in educated people. Consuming sweets is the major factor causing diabetes. Maximum people said that diabetes are responsible for the non-healing of wound and less number of people are aware about that diabetes can effect eyes, heart and kidney and cause complications. 54 % respondents said that diabetes is not curable whereas 36 % said it is curable and 10 % don't know about this. 75 % respondents don't do exercise only 25 % respondents do exercise. Only 50 % respondents said that stop smoking, weight reduction, stop alcohol intake are factors important to prevent diabetes. 74 % respondents don't go for eye check unless it is not required.

Conclusion:

Knowledge about diabetes is a powerful predictor of the perception of people with diabetes concerning their illness and quality of services they receive. Significant no. of patients is 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 light glucose control reduces morbidity and mortality associated with diabetes. However, some patients have different health beliefs and perceptions of seriousness. The result of this study shows that there is a need for a change in the attitudes of patients.

Key words:

Diabetes mellitus, Type 2, light glucose, Morbidity, Beliefs, Perceptions

Executive summary

Introduction:

A study was carried out in Rajasthan to evaluate the knowledge, attitude and Practice of Diabetic patient diagnosed within one year and age more than 30 years visiting the hospitals of Rajasthan and assess the knowledge level between male and female towards diabetes.

Methodology:

In the cross-sectional study 150 diabetic patient were selected by non-probability convenience sampling from the hospitals and interviewed. Using MS excel the data regarding the patient's knowledge, attitude and practice towards diabetes was analyzed.

Findings:

- Knowledge of symptoms of diabetes in women is less as comparison to men. In addition to this knowledge of normal level of sugar in blood in women is less as comparison to men.
- Only 65 % were aware about increasing prevalence of disease.
- Consuming sweets is the major factor causing diabetes.
- Women as comparison to men are less aware about diabetes can cause complications.
- Maximum people said that diabetes are responsible for the non healing of wound and less number of people are aware about that diabetes can effect eyes, heart and kidney and cause complications.
- 54 % respondents said that diabetes is not curable whereas 36 % said it is curable and 10 % don't know about this.
- 75 % respondents don't do exercise only 25 % respondents do exercise.
- Only 50 % respondents said that stop smoking, weightreduction, stop alcohol intake are factors important to prevent diabetes.
- 74 % respondents don't go for eye check unless it is not required.
- 51 % information patient get from health professional about diabetes.
- Only 53 % people modified their diet those who are educated enough and 86 % people modified their diet those who are below 10, this shows that attitude and practice is limited in educated people.

Conclusion:

Knowledge about diabetes is a powerful predictor of the perception of people with diabetes concerning their illness and quality of services they receive. Significant no. of patients 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 result of this study shows that there is a need for a change in the attitudes of patients.

Introduction

India is currently experiencing an epidemic of Type 2 Diabetes mellitus & has the largest number of Diabetic patients. India is referred to as the diabetes capital of the world.

IDF 2013 report reveals that the total no.of diabetes patients in India are 381 million and the no.is projected to almost double in 2030.

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-

- Diabetes currently affects more than 62 million Indians, which is more than 7.1% of the adult population.
- 70% of the current cases of diabetes occur in low- & middle-income countries. With an estimated 62 million people living with diabetes, India has the world's largest diabetes population.
- The WHO estimates that diabetes resulted in 1.5 million deaths in 2012, making it the 8th leading cause of death.
- 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.
- The increase in incidence of diabetes in developing countries is because of the increasing sedentary lifestyle, less physical demand work, increased intake of high calorie diets, and nutrition poor diet.

- 80% of type 2 diabetes is preventable by changing diet, increasing physical activity& improving the living environment. Yet, without effective prevention & control programmes, 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 planner.

This study was carried out in the hospitals of Rajasthan and assess the knowledge, attitude and practice level of diabetic patients and have done comparison between the knowledge level of male and female and findings shows that the knowledge level is limited in women and attitude and practice level is limited in educated, So conclusions can be drawn from these findings is that knowledge, attitude and practice is limited in the population about diabetes.

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, 2-6 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 & practices. 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.

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

Operational definition:

Knowledge: In this knowledge refers to the awareness of patients regarding diabetes and complication 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.

Research Questions:

What is current Knowledge, Attitude, and Practice of diabetic patients?

Objective:

- To assess the knowledge, attitude and practice of diabetic patients visiting the hospitals of Rajasthan.
- To compare the knowledge, attitude and practice of type 2 diabetic patients between male and female.
- To compare the attitude and practice between educated and non-educated diabetic patients.

Inclusion criteria:

- The inclusion criteria for the cases included diagnosed cases of diabetes during last one year.
- Patients visiting the hospitals of Rajasthan.
- Patient above the age of 30 years.

Exclusion Criteria:

- Patients below the age of 30 years
- Patients who have been diagnosed in less than one year
- Patients visiting other than medicine OPD

Methodology:

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

Study design:

A cross sectional study has been done by using a structured questionnaire.

Sampling method:

Non-probability convenience sampling has been done to collect the data of patients.

Sampling area:

Diabetic patients has been taken from the medicine OPD in tertiary care hospitals

Sample Size:

150 samples of patients have been taken by using a structured questionnaire.

Data collection tool:

Structured questionnaire

Data analysis:

Analysis of data has been done by using the MS excel.

Analysis and Interpretation:

Q 1.What is Diabetes mellitus?

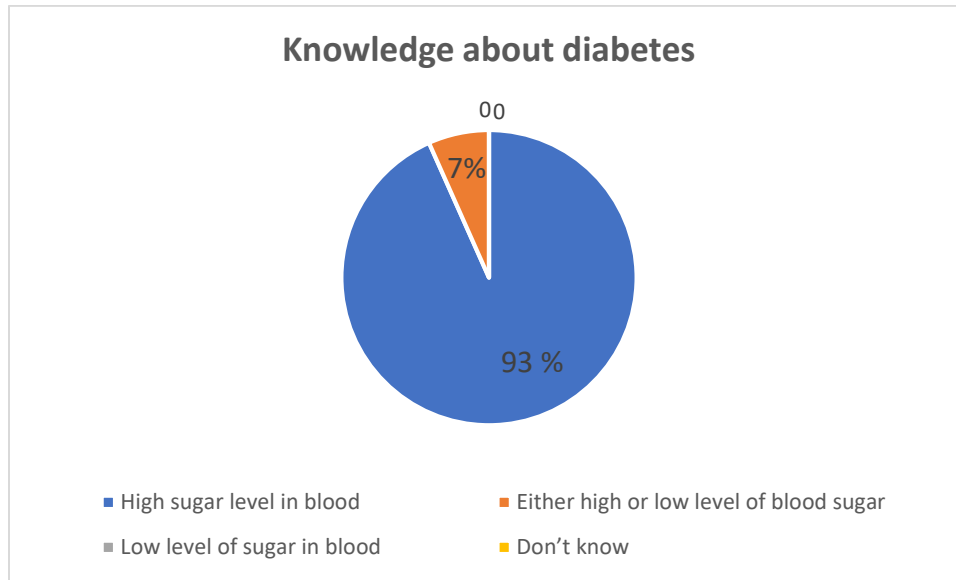


Fig 1

Interpretation:

- **93 % of the whole study population reported that they know about a condition called diabetes and it is raise in sugar level and 7 % were not aware about it.**

Q 2. What is the level of sugar in blood that is considered normal?

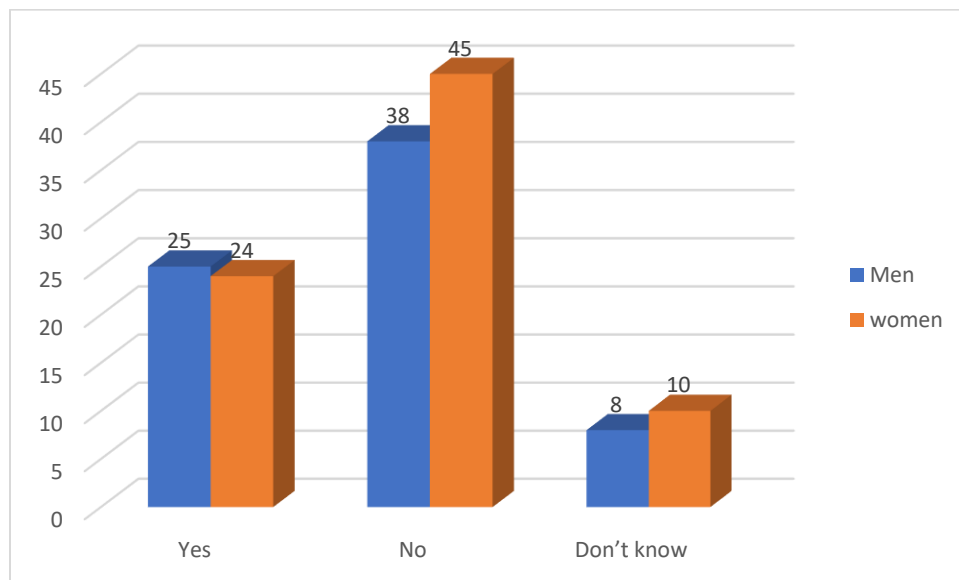


Fig 2.

Interpretation:

As we have seen from the graph 25 men give correct answer about the normal sugar level and 24 women give correct answer but 38 men give wrong answer about normal sugar level and 45 women also give wrong answer and 8 men don't know about sugar level and 10 women also don't know about sugar level.

Q 3. What are the common symptoms of Diabetes?

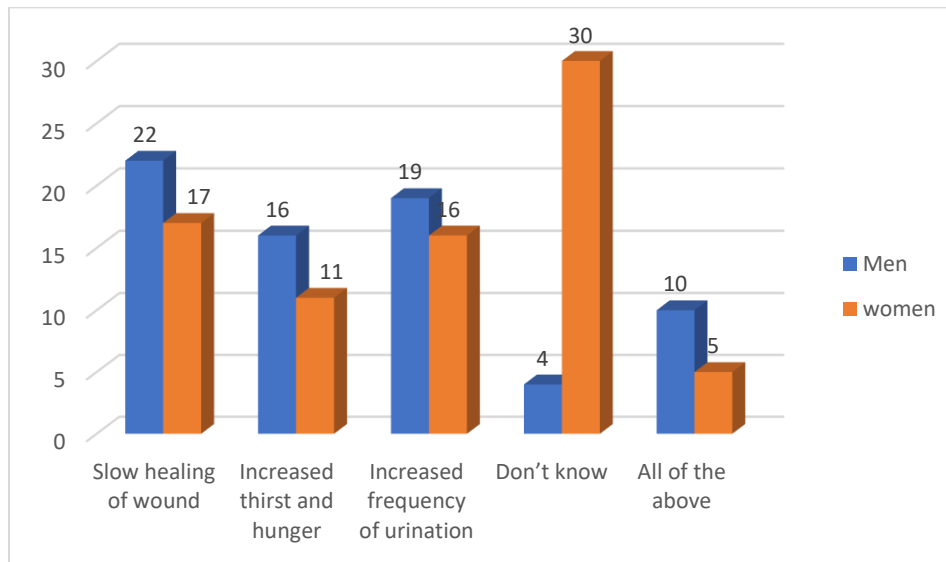


Fig 3

Interpretation:

Above figure shows that

- Only 10 men and 5 women are fully aware about the disease
- 22 men and only 17 women were aware of slow healing of wounds.
- 16 men and 11 women were aware about increased thirst and hunger.
- 19 men and 16 women were fully aware about increased frequency of urination
- 4 men and 30 women were not aware about anything.
- This result shows that the knowledge level of diabetes in women is limited.

Q.4. Do you think, in general, more and more people are getting affected with diabetes nowadays?

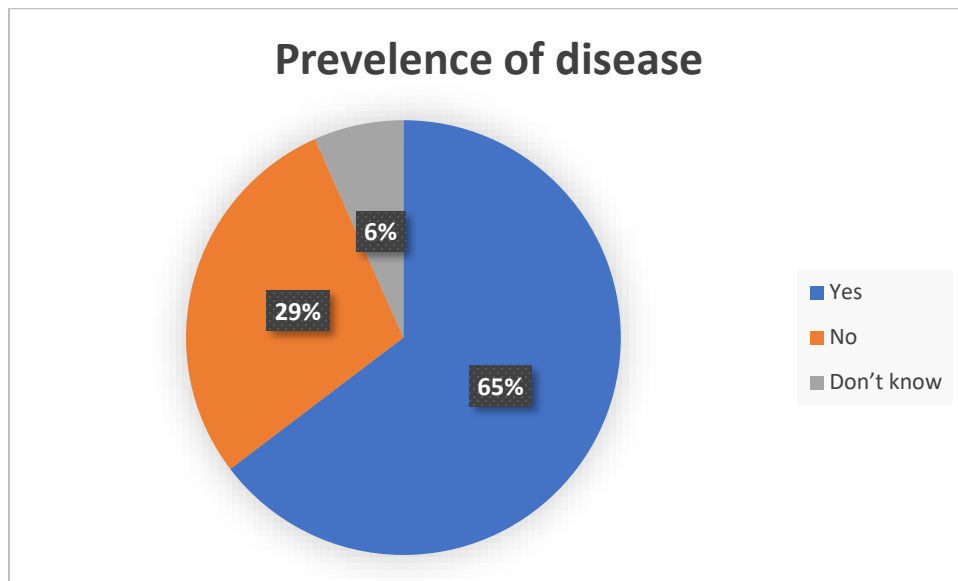


Fig 4

Interpretation:

Only 65 % were aware about increasing prevalence of disease.

Q5. What are the factors you think that contribute to diabetes?

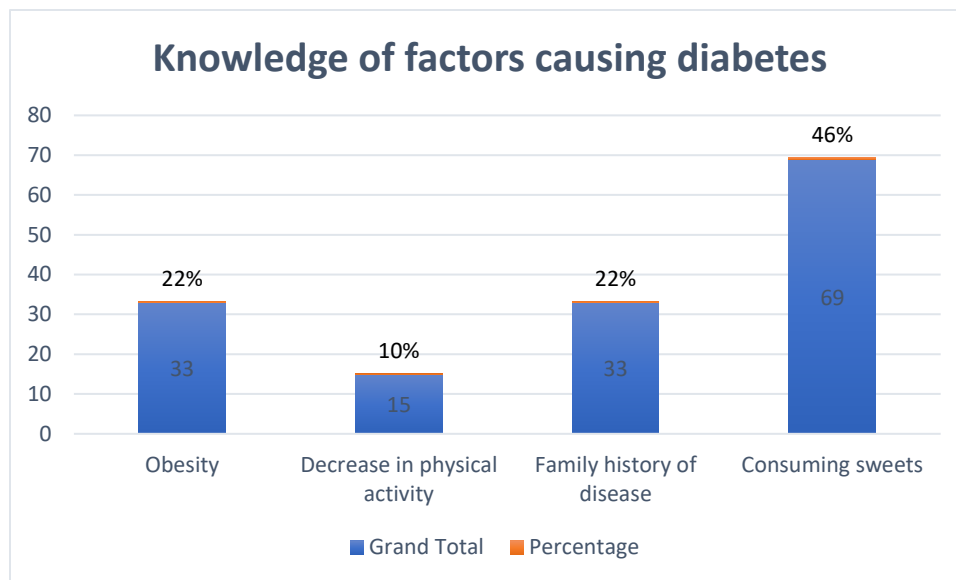


Fig 5:

Interpretation:

46 % respondents said that consuming more sweets is the main reason for diabetes and 22 % respondents said that family history of disease is one of the reason for diabetes whereas,15 % said decrease in physical activity is the reason for diabetes and 22 % said obesity is the reason for diabetes.

Q.6.Do you know that diabetes can cause complications in other organs?

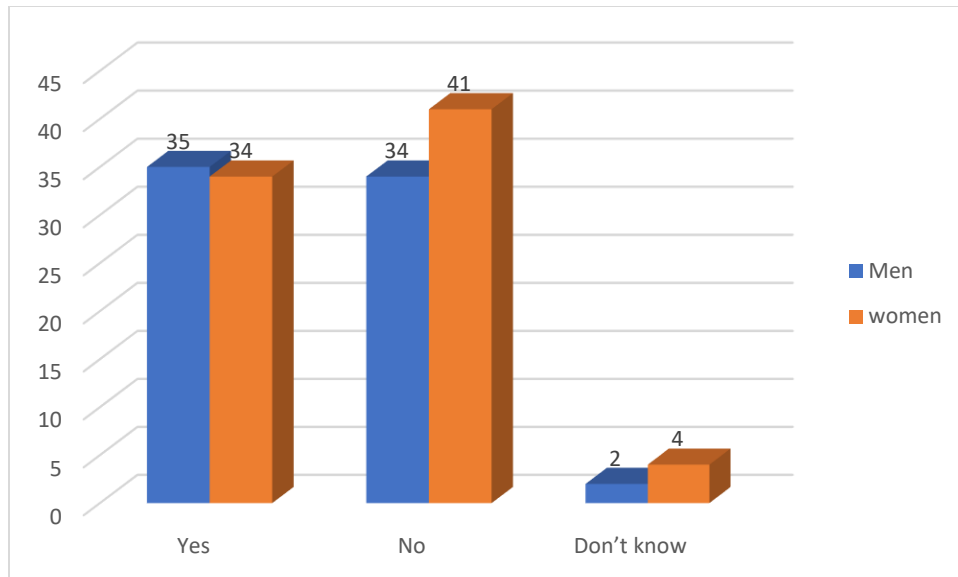


Fig 6

Interpretation:

41 women said that diabetes cannot cause complications while 34 men said that diabetes cannot cause complications whereas, 34 women and 35 men said that diabetes can cause complications. 2 men and 4 women don't know about this.

Q.6.a.If yes which organs are involved?

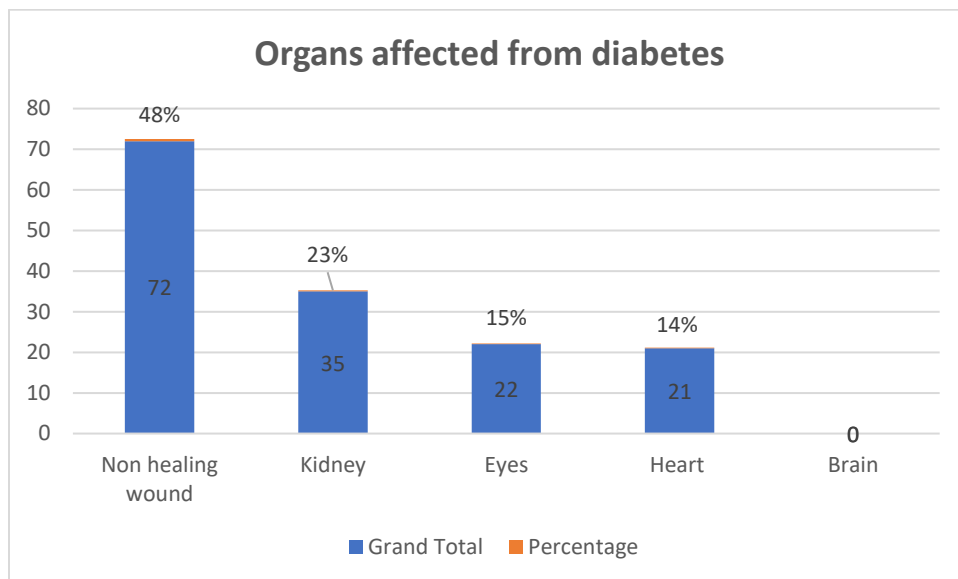


Fig 7

Interpretation:

72 % said that non-healing of wound occur in case of diabetes, 35 % said kidney is affected whereas 22 % said eyes is affected and 14 % said heart is affected from diabetes.

Q 7. Can diabetes be cured permanently?

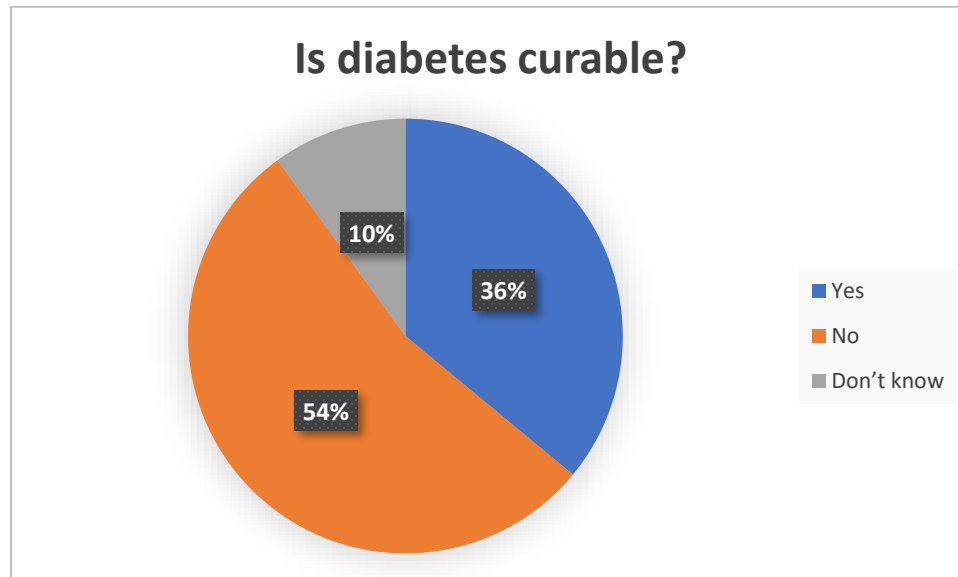


Fig 8

Interpretation:

54 % respondents said that diabetes is not curable whereas 36 % said it is curable and 10 % don't know about this.

Q 8. Whether you regularly checking blood sugars and checkup?

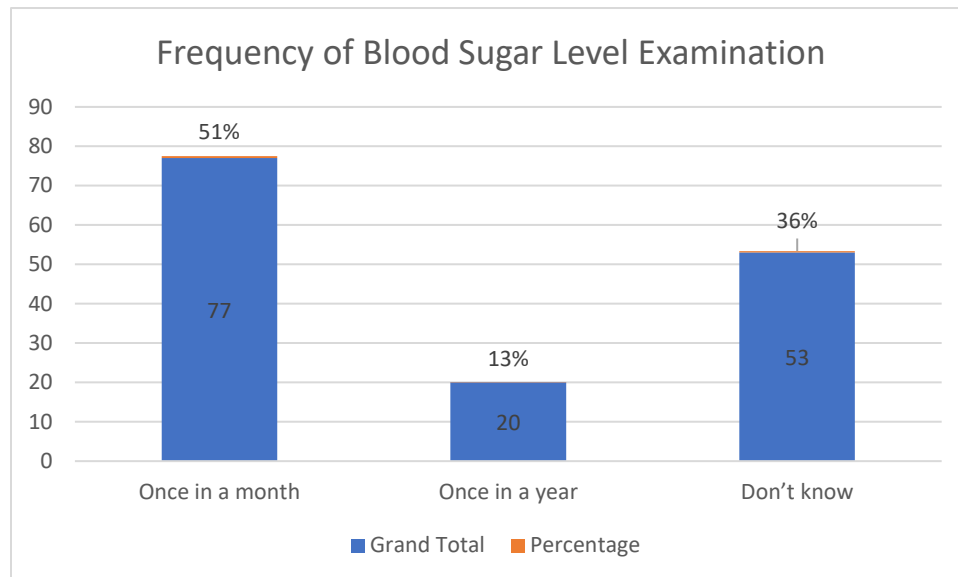


Fig 9.

Interpretation:

Only 51 % said they do blood sugar examination once in a month.13 % respondents go for examination once in a year.36 % don't know about the blood sugar examination.

Q 9. Whether DM treatment requires diet control?

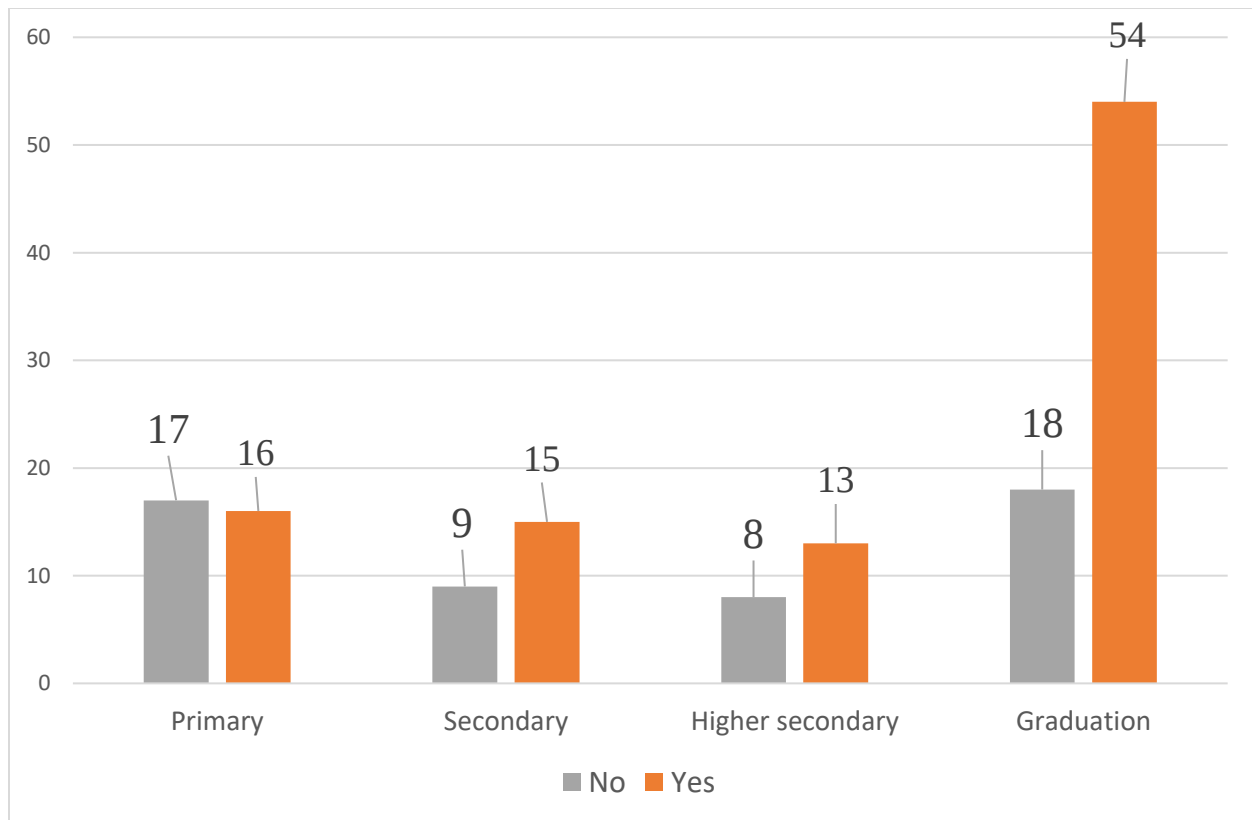


Fig 10

Interpretation:

From the above table we can conclude that

- Out of 150 respondents 33 are primary educated out of which 17 said diet modification is not important while 16 said that diet modification is important.
- Out of 150 respondents 24 respondents secondary in which 9 respondents said that diet modification is not important while 15 respondents said that diet modification is important.
- Out of 150 respondents 21 respondents are higher secondary in which 8 said diet modification is not important while 13 said that diet modification is important.
- Out of 150 respondents 72 are graduated in which 54 said diet modification is important and 18 said diet modification is not important.

Q.10.Do you modify your diet?

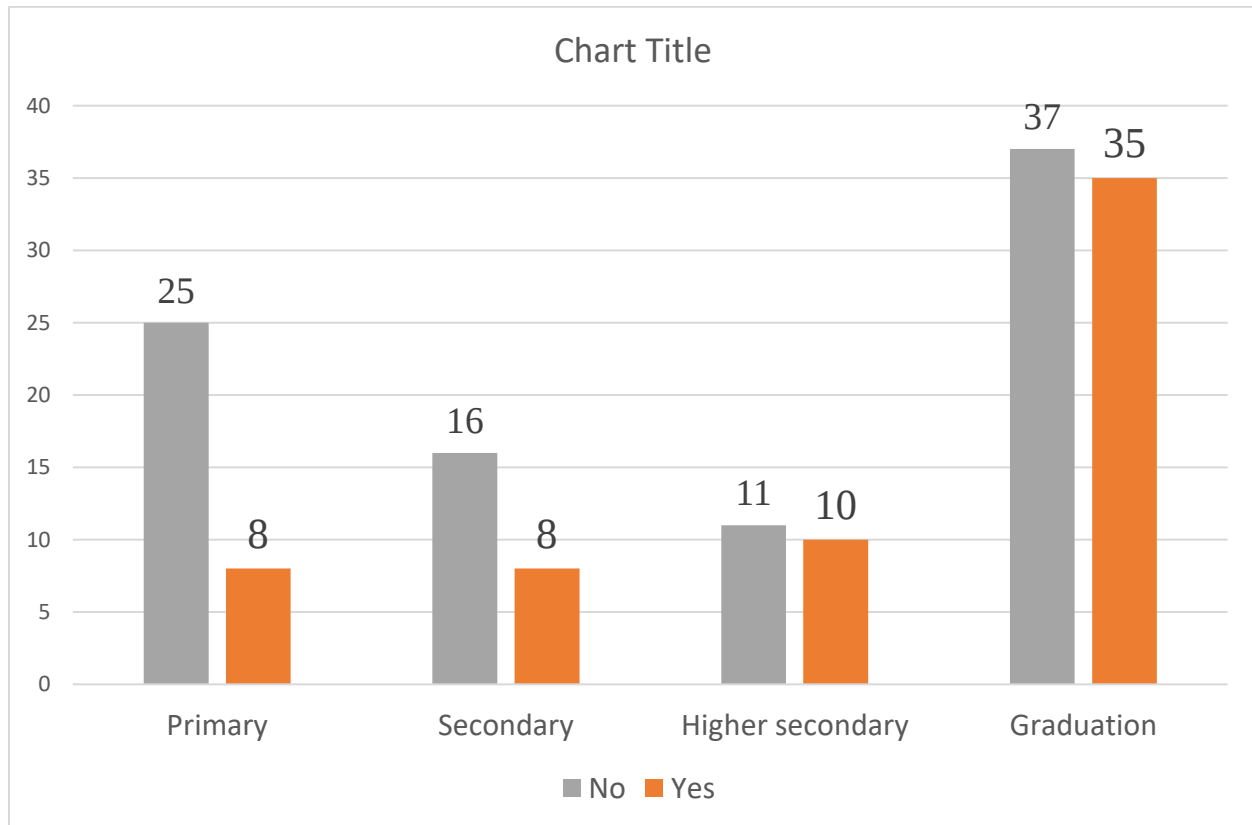


Fig 11

Interpretation:

From the above figure we can conclude that

- Out of 33 primary educated respondents who said diet modification is important only 8 respondents modify their diet and 25 didn't modify their diet.
- Out of 24 secondary educated respondents who said diet modification is important only 8 respondents modify their diet and 16 didn't modify their diet.
- Out of 21 higher secondary educated respondents who said diet modification is important only 10 respondents modify their diet and 11 didn't modify their diet.

- Out of 72 graduated respondents who said diet modification is important only 35 respondents modify their diet and 37 didn't modify their diet

Q 11. Do you exercise regularly to keep weight under control?



Fig 12

Interpretation:

From the above chart we can conclude that 75 % respondents don't do exercise only 25 % respondents do exercise.

Q 12. Which lifestyle modification is required for diabetic patients?

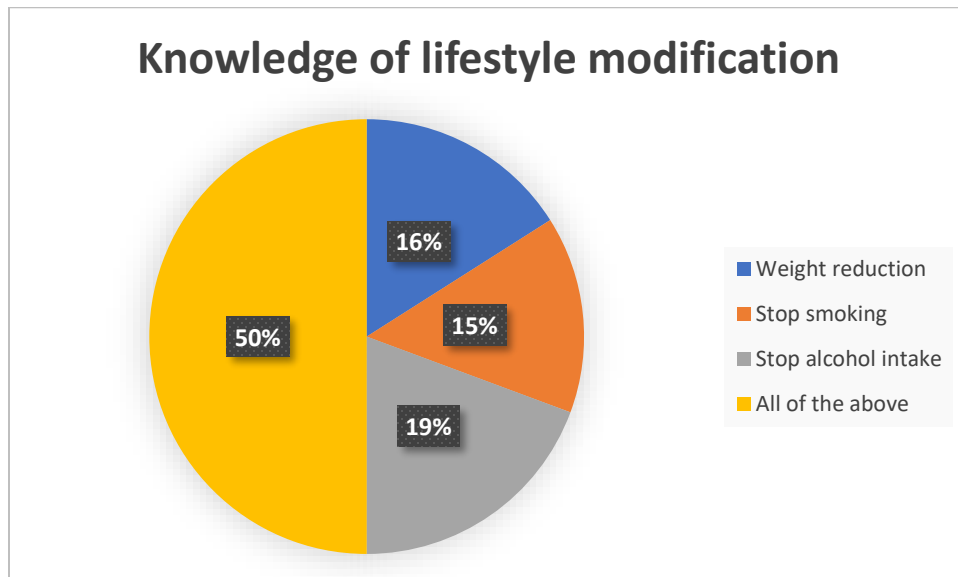


Fig 13

Interpretation:

From the above chart we can conclude that only 50 % respondents said that all of the factors is important to prevent diabetes while 16 % said that obesity is the factor to prevent diabetes and 15 % said stop smoking can prevent diabetes and 9 % said stop alcohol intake can prevent diabetes.

Q 13. In how many times diabetic patient should have his or her eye checked?

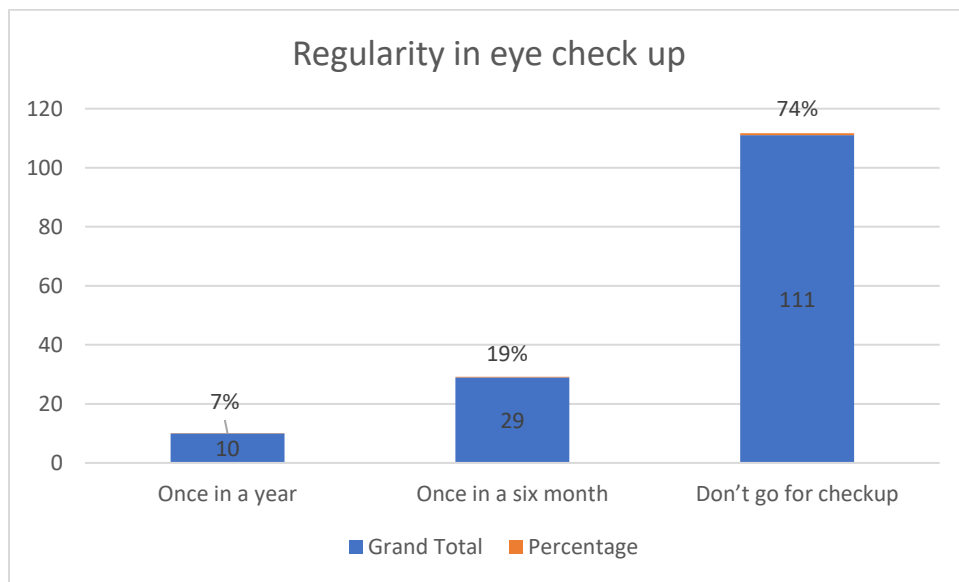


Fig 14

Interpretation:

From the above table shows that 74 % respondents don't go for checkup. While 19 % said that they go for check one in a six month and 7 % people go for check up once in a year.

Q.14.What is the source for information for diabetic patient?

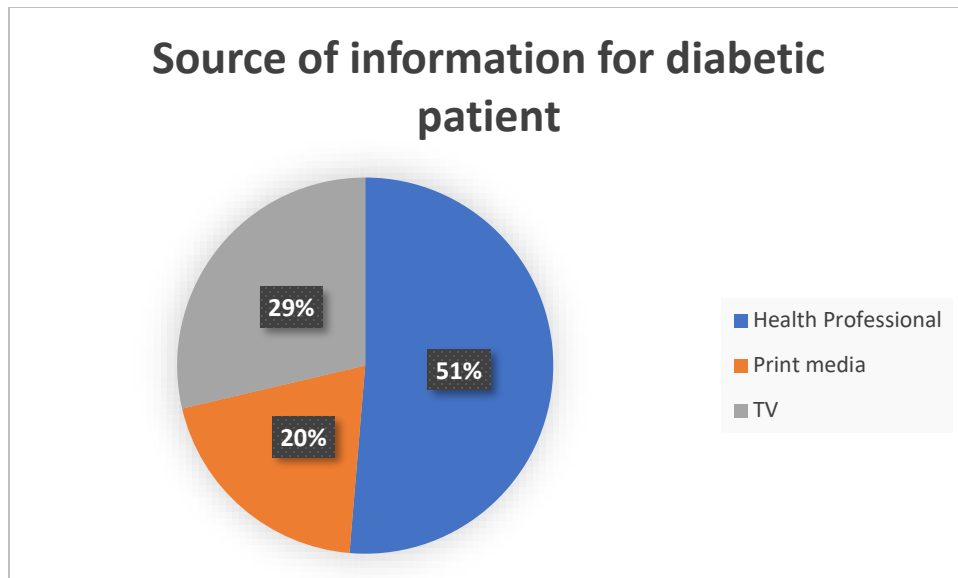


Fig 15

Interpretation:

From the above chart we can conclude that 51 % health professional are the source of information for diabetic patient, while 20 % print media and 29 % Tv are the source for information for diabetic patient.

Findings:

- Knowledge of symptoms of diabetes in women is less as comparison to men. In addition to this knowledge of normal level of sugar in blood in women is less as comparison to men.
- Only 65 % were aware about increasing prevalence of disease.
- Consuming sweets is the major factor causing diabetes.
- Women as comparison to men are less aware about diabetes can cause complications.
- Maximum people said that non healing of wound is involve and a smaller number of people are aware about that diabetes can effect eyes, heart and kidney and cause complications.

- 54 % respondents said that diabetes is not curable whereas 36 % said it is curable and 10 % don't know about this.
- 75 % respondents don't do exercise only 25 % respondents do exercise.
- Only 50 % respondents said that stop smoking, weight reduction, stop alcohol intake are factors important to prevent diabetes.
- 74 % respondents don't go for eye check unless it is not required.
- 51 % information patient get from health professional about diabetes.
- Only 53 % people modified their diet those who are educated enough and 86 % people modified their diet those who are below 10, this shows that attitude and practice is limited in educate people.

Recommendations:

- IEC, TV sessions, mass media awareness should be created by developing posters & hoardings.
- Organize open for all diabetes awareness workshops.
- As we have seen that most of the awareness of diabetes in diabetic patients is through Health professionals-but the doctors has a huge OPD workload especially in govt. hospitals ,so doctors can't have enough time on counselling each and every patient.
- Counselling plays an important role so we should plan to appoint a counselor for counselling the diabetic patients on topics like diet & regimen, importance of blood sugar monitoring etc.
- Multi-specialty camps may be organized for the diabetic patients to rule out any complication 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.
- More focus should be given on women to create awareness in camps.

Conclusions:

Knowledge about diabetes is a powerful predictor of the perception of people with diabetes concerning their illness and quality of services they receive. Significant no.of patients 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 result of this study shows that there is a need for a change in the attitudes of patients.

Annexure

Q 1. What is Diabetes mellitus?

- A. High sugar level of blood
- B. Low level of sugar in blood
- C. Either higher or low level of sugar in blood then normal
- D. Don't know

Q 2. What are the common symptoms of Diabetes?

- 1) Increased frequency of urination
- 2) Increased thirst and hunger
- 3) Slow healing of wounds
- 4) All of the above
- 5) Don't know

Q.3. Do you think, in general, more and more people are getting affected with diabetes nowadays?

- 1) Yes
- 2) No
- 3) Don't know

Q4. What are the factors you think that contribute to diabetes ?

- 1) Obesity
- 2) Decreased physical activity
- 3) Family history of diabetes
- 4) Consuming more sweets

5) Others(name).....

Q 5. Do you know that diabetes can cause complications in other organs?

- 1) Yes
- 2) No
- 3) Don't know

Q 5 a). If yes, What are they?

- 1) Heart
- 2) Kidney
- 3) Brain
- 4) Eyes
- 5) Non healing wounds

Q 6. Can diabetes be cured permanently?

- 1) Yes
- 2) No
- 3) Don't know

Q 7. Whether you regularly checking blood sugars and checkup ?

- 1) Once in a month
- 2) Once in a year
- 3) Don't know

Q 8. Whether DM treatment requires diet control?

- 1) Yes
- 2) No

Q 9. Do you modify your diet?

1. Yes
2. No

Q 10. Do you exercise regularly to keep weight under control?

1. Yes
2. No

Q 11. Which lifestyle modification is required for diabetic patients ?

- 1) Weight reduction

- 2) Stopping smoking
- 3) Stopping alcohol intake
- 4) All the above
- 5) Don't know

Q 12. A diabetic patient should have his or her eye checked

- 1) Once a year
- 2) Once every six months
- 3) Need not check at all

Q 13. What is the level of sugar in blood that is considered normal?

- 1) 120 to 200(Random blood sugar)
- 2) More than 200
- 3) Don't know

Q 14. What is the source of information for diabetic patient?

- 1) Health professional
- 2) Print media
- 3) TV

References:

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