SVB-GDC-KKL

YEAR

2022

Zoology Project

Diabetes Management Project: A Social Change Initiative in Amadala Village, Nandyala district.

B.Z.C. Students of Second year, Batch-1

Completed this project and submitted

to the Department of Zoology

www.svbgdckoilkuntla.ac.in

Participents

1. B.Maheswari

2. S.Hymavathi

3. Peram Mounika

4. Putakala Mounika

5. M.Madhu Vani

6. B.Shoba Rani

7. P.Radha

S.V.B GOVERNMENT DEGREE COLLEGE

(Affiliated to Rayalaseema University)

KOILAKUNTLA, Nandyala (Dt.)

CERTIFICATE

This is to certify that the Project Report titled "**DIABETES MANAGEMENT PROJECT: A SOCIAL CHANGE INITIATIVE IN AMADALA VILLAGE, NANDYALA DISTRICT.**" was carried out by

Student Name: P. Mounika ***Hall-ticket No:*** 203580410007. This is submitted in partial fulfillment for the award of the Degree of **Bachelor of Science (Botany, Zoology, Chemistry)** of Rayalaseema University, Kurnool, during the academic year **2021 – 2022.**

H. Rama Sita

Signature of the Mentor

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Introduction

The Amadala Village located in Koilkuntla Mandal, 1668 People are living in this Village, 846 are males and 822 are females as per 2011 census. Expected Amadala population 2021/2022 is between 1,635 and 1,868. Literate people are 936 out of 559 are male and 377 are female. People living in Amadala depend on multiple skills, total workers are 945 out of which men are 515 and women are 430. Total 119 Cultivators are depended on agriculture farming out of 93 are cultivated by men and 26 are women. 683 people works in agricultural land as a labour in Amadala, men are 326 and 357 are women.

Country	India
State	Andhra Pradesh
District	Kurnool
Mandal	Koilkuntla
Location	Amadala
Population(2021/2022) est.	1,635 - 1,868
Population(2011)	1668
Males	846
Females	822
Households	414
Pincode	518134
Area	9.11 Sq Km
Density	0/Sq Km
Lat	78.0372792
Lng	15.8281257

REVIEW OF LITERATURE

Diabetes and pre-diabetes are serious conditions in which people have high levels of sugar or glucose in their blood. The World Health Organization (WHO) reports that more than 420 million people worldwide live with diabetes. In the US, according to the US Centers for Disease Control and Prevention (CDC), over 30 million people have diabetes, and 88 million adults have pre-diabetes (blood sugar levels are higher than normal, but not high enough to be diagnosed with type 2 diabetes). Diabetes is a major cause of blindness, amputation, kidney failure, and cardiovascular disease.

Glucose is a type of sugar that is used as fuel by the body. When you eat, your body converts food into glucose. The glucose then goes into your bloodstream and is carried throughout the body to provide energy to all of your cells. In order for glucose to move from your bloodstream into your cells, you need insulin. Insulin carries the glucose, or sugar, in your bloodstream into your cells. Insulin is a hormone made by the pancreas, an organ in the upper part of your abdomen (belly).

If your body has a problem making or using insulin, the glucose in your bloodstream cannot get into your cells. As a result, glucose stays in the blood (high blood sugar) and the cells do not get enough glucose. A diagnosis of pre-diabetes or diabetes is made when glucose stays at higher-than-normal levels (also called hyperglycemia).

There are several types of diabetes:

Type 1 Diabetes (Insulin Dependent)

- The pancreas does not make any insulin
- You must take insulin every day to survive
- Usually begins in childhood or adolescence

Type 2 Diabetes (Non-insulin Dependent)

- Your pancreas makes some insulin (but usually not enough), and/or the body does not respond normally to the insulin your body does make (sometimes referred to as 'insulin resistance')
- Some people with type 2 diabetes are able to control it with diet and exercise; many others need diabetes medication, and some need insulin

- Most common form of diabetes

Gestational Diabetes

- Diabetes that starts during pregnancy due to hormones that prevent insulin from doing its job
- Most women with gestational diabetes are able to control their diabetes and prevent harm to themselves and their babies; women with gestational diabetes tend to have large babies
- Most often, blood sugar levels return to normal after delivery

Pre-diabetes

- Blood glucose levels are higher than normal but not high enough for a diagnosis of diabetes
- Having pre-diabetes puts you at increased risk for developing type 2 diabetes
- Type 2 diabetes can often be prevented or delayed by making changes to your diet, losing weight, and increasing physical exercise

Metabolic Syndrome

Metabolic syndrome is not a type of diabetes, but a cluster, or group, of conditions usually associated with being overweight or obese. Metabolic syndrome is also called Syndrome X, insulin resistance syndrome, and dysmetabolic syndrome. This group of characteristics, or traits, puts people at risk for heart disease and type 2 diabetes. A person has metabolic syndrome if they have three of the following five traits:

- High blood pressure (hypertension)
- High blood glucose (high blood sugar)
- High triglycerides (fats) in the blood
- High cholesterol
- Large waist (larger than 35 inches for women and larger than 40 inches for men)

Symptoms of Diabetes

Symptoms of diabetes include:

- Extreme thirst
- Need to urinate frequently

- Unexplained weight loss
- Hunger
- Blurry vision
- Irritability
- Tingling or numbness in the hands or feet
- Difficulty healing
- Extreme fatigue

Symptoms typically occur when glucose levels have gotten very high. If you are diagnosed while diabetes is in its early stages, you may not have any symptoms.

Glucose (Blood Sugar) Tests

Since diabetes does not always have obvious symptoms, it is important to have regular lab tests to check your blood sugar or glucose levels. The most common glucose tests are:

- Fasting glucose test: measures the glucose in a blood sample taken when you have not had anything to eat or drink (except water) for at least eight hours
- Hemoglobin A_{1C} test: measures your average blood sugar or blood glucose over the last two to three months. This test does not require fasting. It is used to monitor diabetes control as well as to help diagnose it.

To find out if you have diabetes or pre-diabetes, you will usually have a fasting glucose test. A glucose tolerance test may be ordered to help diagnose diabetes and as a follow-up to a high fasting glucose level. A glucose tolerance test looks for abnormalities in the way your body handles glucose after eating.

A diagnosis of diabetes can be made based on either of the following test results, confirmed by retesting on a different day:

- A fasting blood glucose level of 126 milligrams per deciliter (mg/dL) or higher
- An A_{1C} of 6.5 percent or more (an A_{1C} of 5.7 - 6.4 suggests pre-diabetes)

Who Is at Risk for Diabetes?

Anyone can get diabetes. However, certain factors may increase your risk:

- Being over 40 years old

- Being overweight or obese
- A family history of the disease
- A poor diet
- Not being physically active
- Smoking or using tobacco
- A lot of fat around the belly (sometimes called 'central obesity;' having an apple-shaped body)
- Hepatitis C or liver damage
- High cholesterol level
- High blood pressure
- Having had gestational diabetes while pregnant
- Taking certain HIV drugs (see below)

Precautions:

- Eat a healthy diet
- Get regular exercise
- Stop smoking
- Lose weight if you are overweight or obese
- Control your blood pressure and cholesterol levels – if necessary, with medications

What Problems Can Diabetes Cause?

Diabetes can lead to serious illness and even death. It is a major cause of heart disease and stroke, and the ninth leading cause of death in the US. Worldwide, the World Health Organization (WHO) estimates that diabetes was the seventh leading cause of death in 2019. Some of the serious complications of diabetes are:

- Blindness
- Kidney failure
- Blood vessel disease that requires an amputation
- Nerve damage (neuropathy)
- Cardiovascular disease (damage to your heart and/or blood vessels) which increases the risk of heart attacks and stroke

How Are Diabetes and Pre-Diabetes Treated?

Although diabetes can be a very serious disease, it can be treated. It is important to manage diabetes by checking your blood glucose regularly and keeping it under control. Many people control their glucose levels by maintaining a healthy weight, changing their diet, and increasing exercise.

A healthy diet for people with diabetes involves reducing sugar and starchy foods (carbohydrates), such as candy, pastries, chips, sugary drinks, bread, potatoes, rice, and corn. If possible, see a registered dietitian to help you plan your meals. Many AIDS service organizations have registered dietitians on staff who will see you free of charge.

Sometimes, despite eating well and being physically active, blood sugar levels cannot be controlled without the help of medications and/or insulin. There are a number of medications available that lower blood glucose levels. Because these medications act in different ways, they may often be used together.

Some of the diabetes medications may interact with HIV drugs. To reduce the chance of drug interactions, make sure your health care provider knows about all medications you take.

Pre-diabetes

People with pre-diabetes are likely to develop type 2 diabetes unless they take action. The good news is that if you have pre-diabetes, you can do a lot to prevent or delay diabetes.

Studies have shown that people can lower their risk of developing diabetes by losing weight through diet and increased physical activity. One study found that diet and exercise leading to five to seven percent weight loss (about ten to 14 pounds in a person who weighs 200 pounds) lowered the chances of getting type 2 diabetes by nearly 60 percent. Study participants lost weight by cutting fat and calories in their diet and by exercising (mostly walking) at least 30 minutes a day, five days a week.

Taking Care of Yourself

While diabetes is a serious condition, people living with HIV and diabetes can make lifestyle changes and work with their health care providers to control their diabetes and prevent many of its complications.

Steps to staying healthy:

- Regular medical check-ups and lab work that includes glucose tests
- Control blood pressure and fat levels in your blood to lower the risk for heart disease and stroke
- Eat a healthy diet (see our fact sheet on Nutrition)
- Get regular physical activity (see our fact sheet on Exercise)
- Stop smoking (see our fact sheet on Smoking)

Diabetes is a common disease. Many people with diabetes live full, active, healthy lives. There is also a lot of ongoing research about the best way to prevent diabetes. If you start by taking the steps above, you may be on your way to living well with diabetes.

METHODOLOGY

Methods adapted: Community survey and community awareness.

Timeline:

First week: Community survey. This includes the door-to-door survey along with the collection of data in the form of questionnaire. Different age groups are selected for the collection of data. A comparative study of prevalence of diabetes in young, adult, and old people is taken up for this purpose.

Second week: Community awareness. Under this programme, an attempt to create the awareness regarding the diabetes disease has been made by the team members individually. Different age groups are addressed separately for this purpose.

Third week: All the data collected has been compiled in the form of project report. This includes the analysis of data. Based on this, definite conclusions are drawn regarding the prevalence of the disease. This includes the graphical representation of the data.

Fourth week: It includes the presentation of our project work to the internal viva committee at the college level individually.

DATA COLLECTION

Students of the college visited Amadala village and reached every habitation to collect data. Although no specific clinical tools are used in this project, the formats listed below are used for collecting data and drawing conclusions.

1. Questionnaire
2. Tabular columns
3. Graphical representations.

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KOILKUNTLA

Questionnaire

Name of the student:
Name of the faculty mentor:
Name of the villager:

	Question	
1.	Are you aware of the disease diabetes mellitus?	
2.	Have you ever been assessed for diabetes?	
3.	What is your age?	
4.	Specify the gender?	
5.	At what age you are tested positive for diabetes?	
6.	At what time you wake up in the morning?	
7.	At what time you go to sleep at night?	

8.	How frequently you check your weight?	
9.	How much time do you spend in a day watching TV/Mobiles?	
10.	What is the nature of your work? Does it involve any Physical labor?	
11.	How frequently you take outside food?	
12.	Is there any family history of diabetes?	
13.	Do you take insulin? If yes specify the dose.	
14.	Are you a smoker? If yes how many cigars, you smoke in a day?	
15.	Do you take alcohol?	
16.	Do you know the number of diabetic patients in your village?	

Table-I

Diabetic Patients			
Age Groups	Female	Male	Total
20-30	2	4	6
30-40	3	6	9
40-50	4	10	14
50-60	10	14	24
60 & above	12	16	28

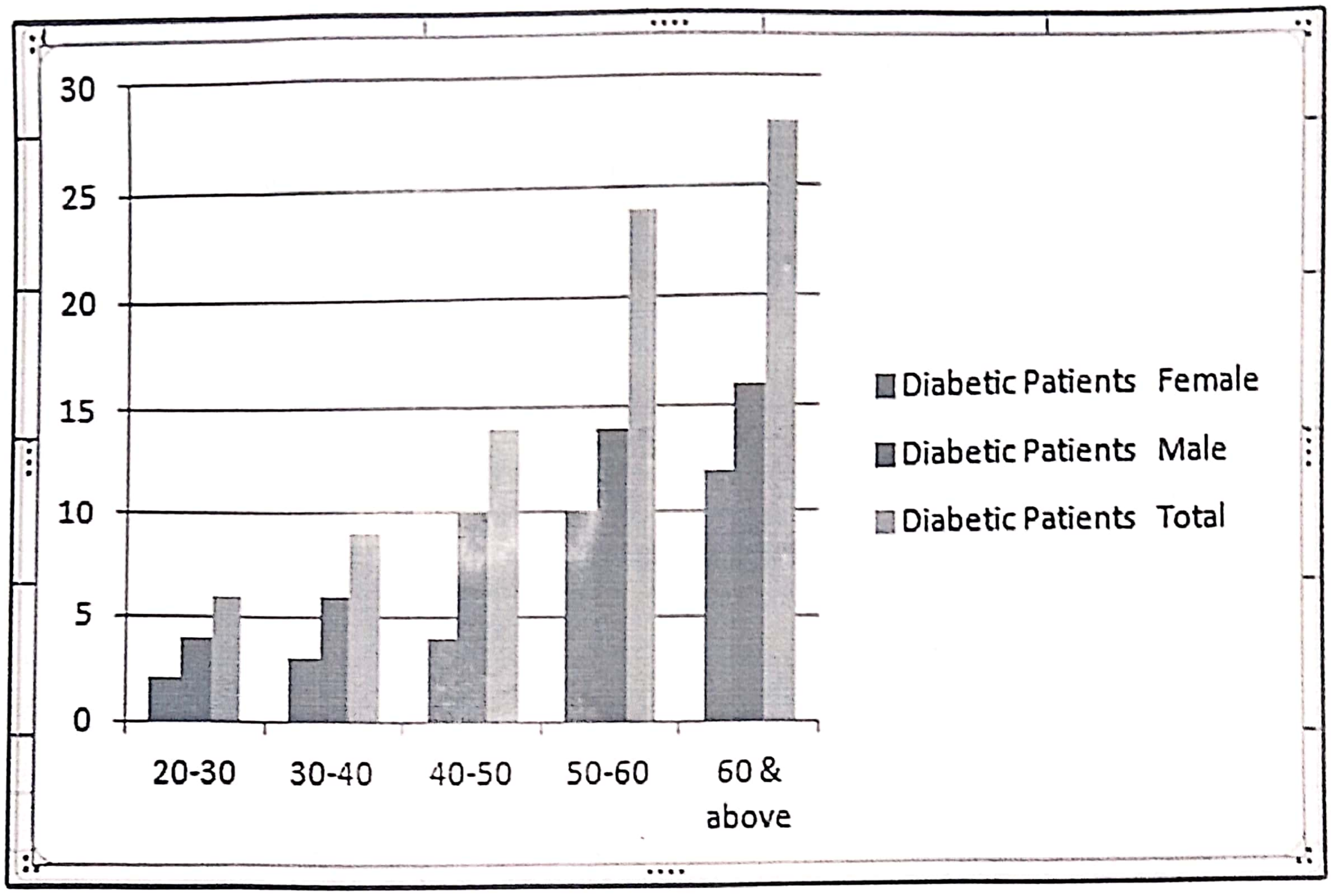
Diabetic patients in Amadala village in different age and sex groups

Table-II

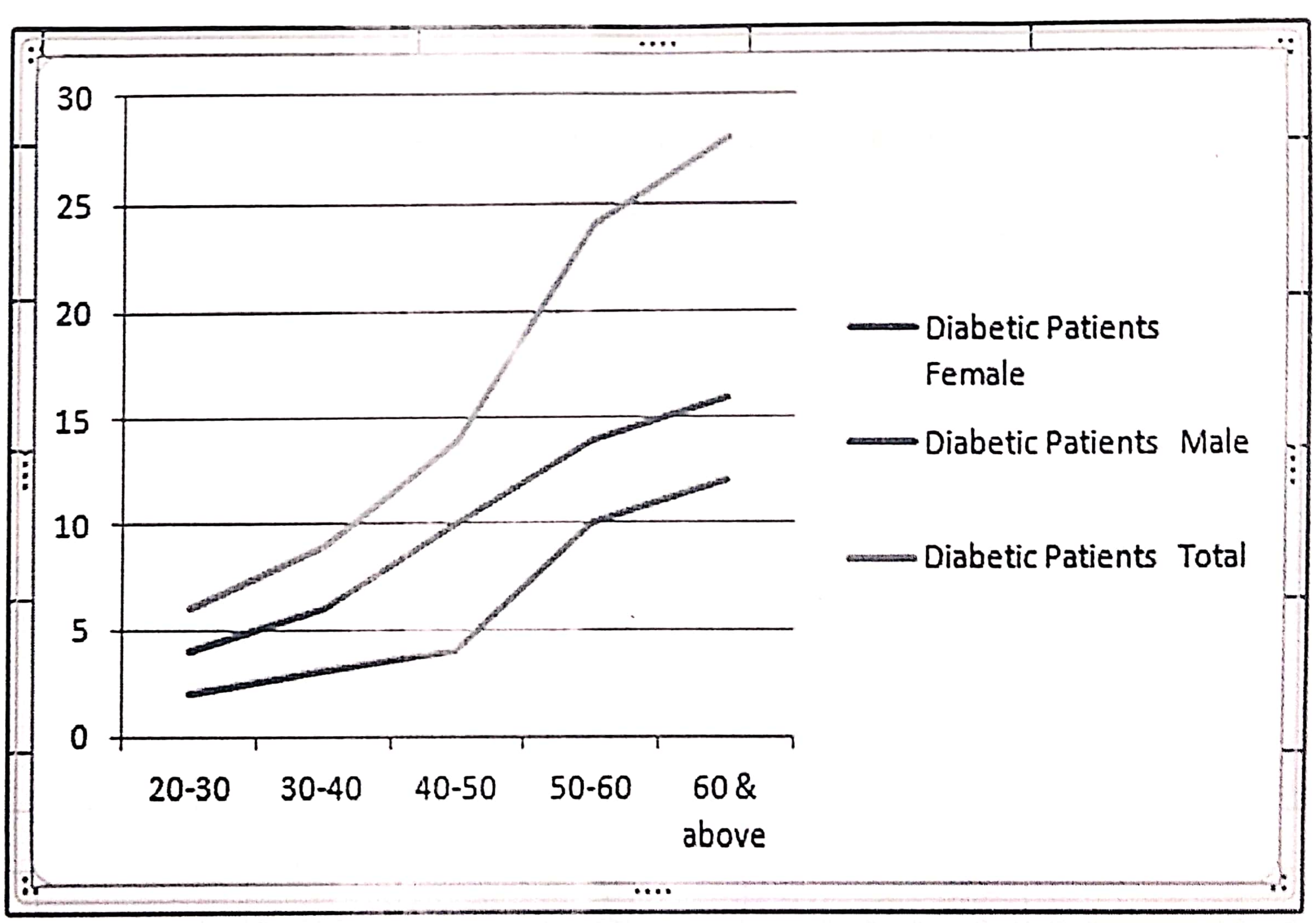
Persons with bad Lifestyle			
Age Groups	Female	Male	Total
20-30	1	2	3
30-40	2	4	6
40-50	3	8	11
50-60	4	14	18
60 & above	8	12	20

Bad lifestyle in diabetic patients of Amadala village

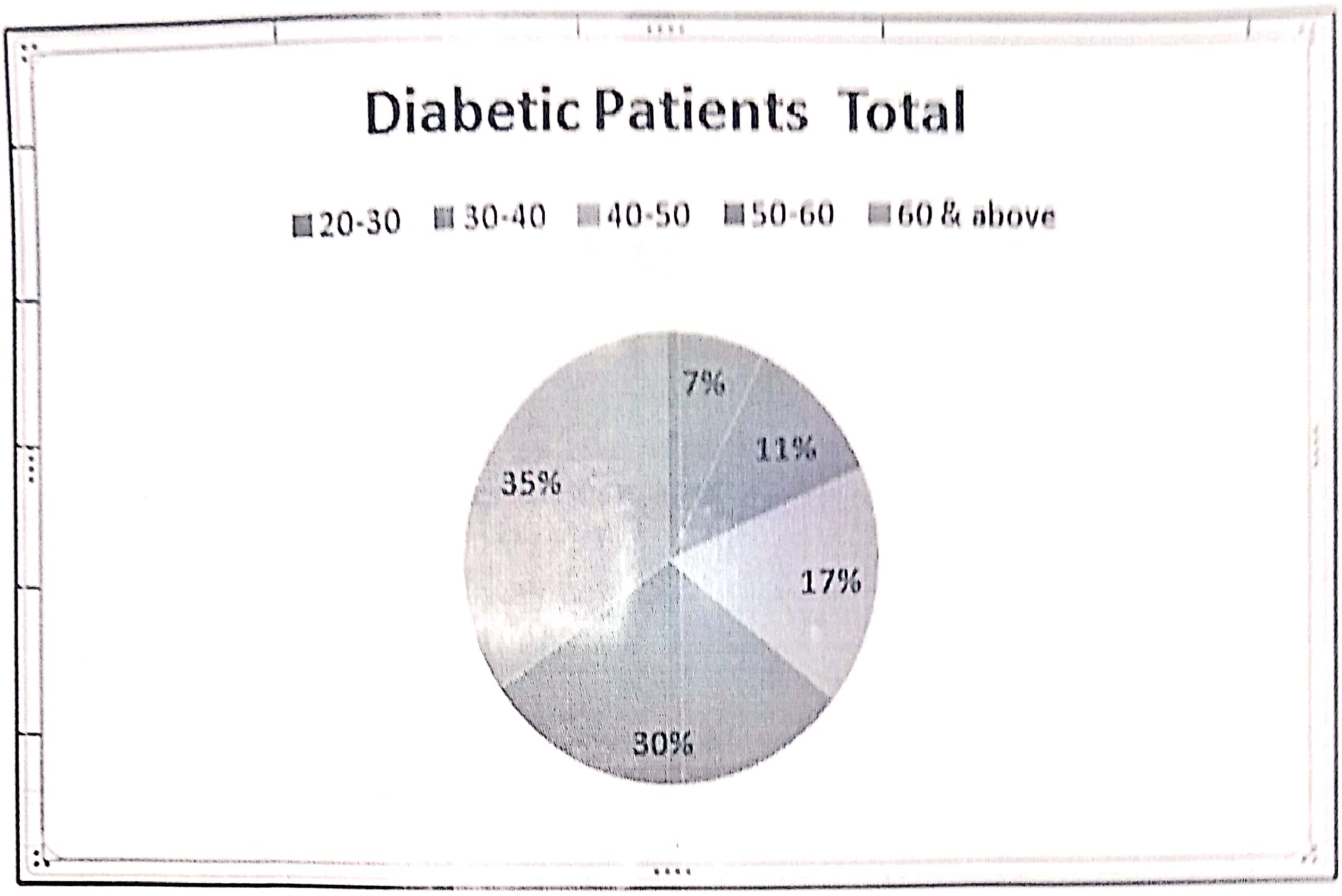
DIAGRAMATIC REPRASENTATION OF DATA



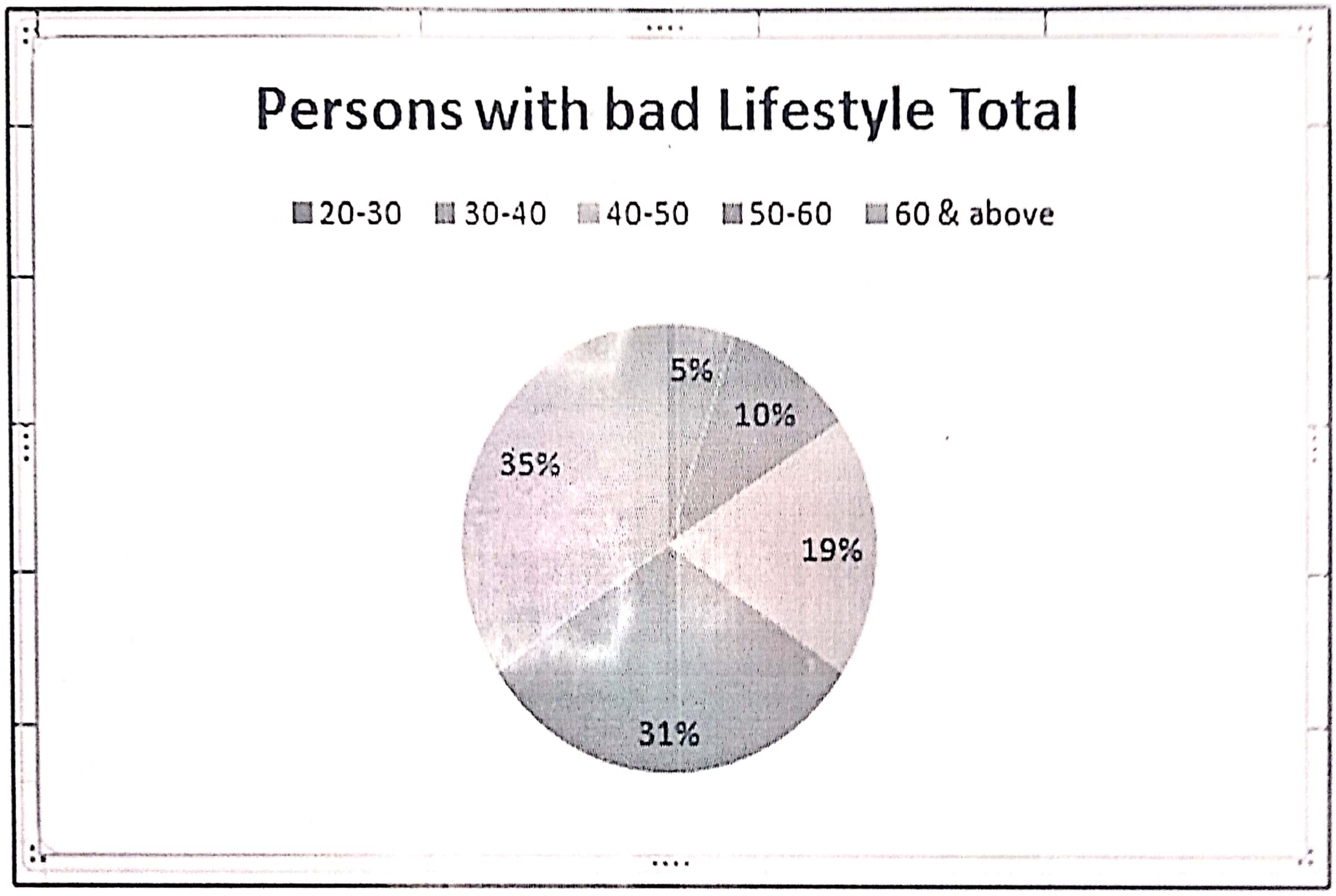
Bar diagram showing the distribution of diabetic disease in different age groups of people living in Amadala village



Line diagram showing the distribution of diabetic disease in different age groups of people living in Amadala village



Pie diagram showing the distribution of diabetic disease in different age groups of people living in Amadala village



Pie diagram representing the percentage of bad habits in different age groups of diabetic patients in Amadala village

DATA ANALYSIS

Data of diabetic patients are collected in different age groups of Amadala village. Primarily, diabetic patients data collected by me with a form of Socio-economic survey. According to this survey total 81 patients are identified, among these patients, 50 members are male and 31 members are females. After analyzing the data, I am concluded that, diabetes is more incidental in higher age groups.

In the age groups of 20-30 years, only 6 persons are there, among these 4 are males and two are females. there

In the age groups of 30-40 years, only 9 persons are, among these 6 are males and three are females.

In the age groups of 40-50 years, only 14 persons are there, among these 10 are males and four are females.

In the age groups of 50-60 years, only 24 persons are there, among these 14 are males and ten are females.

In the age groups of 60 years and above, only 28 persons are there, among these 16 are males and 12 are females.

According to this data, males are more vulnerable to the disease than females. Females are less susceptible to diabetes than males.

After analyzing the socio-economic survey data, we have observed that, there are more diabetic patients with bad habits and worse lifestyle. Hence again we have gone to the village with a questioner to know the habits of the people. We have met the diabetic people of Amadala village and asked some questions about their bad habits and lifestyle. Responses are recorded and tabulated.

Total 58 diabetic patients have bad habits and lifestyle, among these patients 40 are males and 18 are females. This data is also collected according to different age groups.

Persons having diabetes with bad habits and lifestyle in the age groups of 20-30 years, only 3 persons are there, among these 2 are males and one is females.

Persons having diabetes with bad habits and lifestyle in the age groups of 30-40 years, only 6 persons are there, among these 4 are males and two are females.

Persons having diabetes with bad habits and lifestyle in the age groups of 40-50 years, only 11 persons are there, among these 8 are males and three are females.

Persons having diabetes with bad habits and lifestyle in the age groups of 50-60 years, only 18 persons are there, among these 14 are males and four are females.

Persons having diabetes with bad habits and lifestyle in the age groups of 60 years and above, only 20 persons are there, among these 12 are males and eight are females.

Inference:

There is an increase in prevalence of insulin resistance among Indian population today. Lifestyle plays a crucial role here. Factors such as lack of physical activity, poor dietary habits, lack of sleep and stress increase the risk of diabetes. Also, more than the old age, it's obesity that is becoming the leading cause of type 2 diabetes.

Hence people of Amadala have follow the good habits such as physical exercises, consuming of fiber containing food, stress releasing activity like walking, yoga, meditation. Bad habits like Consuming liquor and smoking cigars must avoid for healthy living. Old age people must concentrate on their food habits. They must avoid rice items as well as junk foods.

If the people of Amadala follow the above rules, the diabetes cases gradually decreses and healthy people can make the wealth of the nation.

EVALUATION

Page No:

Student Self-Evaluation for the Community Service Project

Student Name: P. Mounika

Registration No: 203580 41007

Period of CSP: From: 13-4-2022 **To:** 12-6-2022

Date of Evaluation: 15-5-22

Please rate your performance in the following areas:

Rating Scale: Letter grade of CGPA calculation to be provided

1	Oral communication	1	2	3	4	5
2	Written communication	1	2	3	4	5
3	Proactiveness	1	2	3	4	5
4	Interaction ability with community	1	2	3	4	5
5	Positive Attitude	1	2	3	4	5
6	Self-confidence	1	2	3	4	5
7	Ability to learn	1	2	3	4	5
8	Work Plan and organization	1	2	3	4	5
9	Professionalism	1	2	3	4	5
10	Creativity	1	2	3	4	5
11	Quality of work done	1	2	3	4	5
12	Time Management	1	2	3	4	5
13	Understanding the Community	1	2	3	4	5
14	Achievement of Desired Outcomes	1	2	3	4	5
15	**OVERALL PERFORMANCE**	**1**	**2**	**3**	**4**	**5**

P. Mounika

Date: 15-5-22. **Signature of the Student**

Evaluation by the Person in-charge in the Community / Habitation

Student Name: P. Mounika

Registration No: 203580 41007

Period of CSP: From: To: 13-4-2021 to 12-6-2022

Date of Evaluation: 15-6-22.

Name of the Person in-charge: Dr. H Ramasubbareddy.

Address with mobile number: 9441985286

Please rate the student's performance in the following areas:

Please note that your evaluation shall be done independent of the Student's self-evaluation

Rating Scale: 1 is lowest and 5 is highest rank

1	Oral communication	1	2	3	4 ✓	5
2	Written communication	1	2	3	4	5 ✓
3	Proactiveness	1	2	3	4 ✓	5
4	Interaction ability with community	1	2	3	4 ✓	5
5	Positive Attitude	1	2	3	4	5 ✓
6	Self-confidence	1	2	3	4 ✓	5
7	Ability to learn	1	2	3	4 ✓	5
8	Work Plan and organization	1	2	3 ✓	4	5
9	Professionalism	1	2	3	4 ✓	5
10	Creativity	1	2	3	4	5 ✓
11	Quality of work done	1	2	3	4	5 ✓
12	Time Management	1	2	3	4 ✓	5
13	Understanding the Community	1	2	3	4	5 ✓
14	Achievement of Desired Outcomes	1	2	3	4	5 ✓
15	**OVERALL PERFORMANCE**	**1**	**2**	**3**	**4**	**5** ✓

Date: 15-6-22.

K B. Gurulingaiah

Signature of the Supervisor

Panchayat Secretary
Souderadinne Sachivalayam
Koilakuntla(M),Kurnool(Dt.)

INTERNAL ASSESSMENT STATEMENT

Name Of the Student: P. Mounika
Programme of Study: Diabetes Management
Year of Study: 2021 - 2022
Group: Bsc[BZC]
Register No/H.T. No: 203320410007
Name of the College: SVB Govt Degree College Koilakuntla.
University: Rayalaseema university

Sl.No	*Evaluation Criterion*	*Maximum Marks*	*Marks Awarded*
1.	Activity Log	20	16
2.	Community Service Project Implementation	30	26
3.	Mini Project Work	25	18
4.	Oral Presentation	25	18
	GRAND TOTAL	100	78

Date: 22/12/2022

H. Rama Subba Reddy
Signature of the Faculty Guide

Certified by

Date:
Seal:

S.V.B. GOVERNMENT DEGREE COLLEGE ★ KOILKUNTLA (DT.) 518134

Signature of the Head of the Department/Principal

PRINCIPAL
S.V.B. GOVT. DEGREE COLLEGE
KOILKUNTLA, NANDYAL (DT.)