Original Research Article

Sele-Care Practices and Its Barriers among Diabetes Patients Attending Diabetic OPD in Selected Hospitals of Howrah, West Bengal

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Abstract: *A descriptive study was undertaken to assess the self-care practices and barriers among diabetes patients attending the diabetic OPD in a selected hospital in Howrah, West Bengal. The conceptual framework of the study was based on "The Health Belief Model". A non-experimental survey approach and Descriptive survey design were adopted to conduct the study among 124 diabetic patients. The tools selected were a semi-structured interview schedule to collect demographic information and a structured interview schedule to obtain information on the history of diabetes, a record analysis proforma to collect data about FBS, PPBS, HbAlc, a bio-physical measurement proforma to collect data about BMI and waist circumference, structured interview schedule to obtain information about self-care practices by Modified SDSCA Measure and barriers to self-care practices. There was a total of six areas-diet, physical activities and exercises, medication, blood glucose monitoring, foot care, and follow-up. The study findings revealed that 67% of patients were above the target level of PPBS.54% of patients were above the target level of FBS.57% of patients were obese (BMI-> 25). Self-care practice was highest in adherence to medication (77.85%%), and lowest in taking foot care (23.95%).40% of patients had good dietary practices. Only 7% of patients had good practice in performing physical activities and exercises.80% of patients faced dietary barriers in extent of always.76% of patients always faced barriers to physical activities and exercise, and 86% of patients always faced barriers to foot care. The result of computed chi-square indicated that there was statistically significant association between self-care practices and educational status (Chi' df (1)-9.90*, P>0.05), monthly family income (Chi df (1) =5.37*, P>0.05), glycaemic level (PPBS) (Chi? df () =4.97*, P>0.05), BMI (Body Mass Index) (Chi' df (|) =4.20*, P>0.05). The findings of the study have implications for nursing practice, nursing education, nursing administration, and nursing research. A similar study on a large sample and with a qualitative approach can be done.*

Keywords: self-care practices, barriers, diabetes, diabetes patients, diabetic OPD

1. Introduction

Noncommunicable diseases, especially Diabetes, have emerged as major public health problems in India as well as the rest of the world. Diabetes is a group of metabolic diseases characterized by an increased level of glucose in the blood (hyperglycemia) resulting from defects in insulin secretion, insulin action, or both. The pancreas produces a hormone called insulin, which controls the glucose level in the blood by regulating glucose production and storage. In diabetes, the cells may stop responding to insulin or the pancreas may stop producing insulin entirely. [1]

During the year 2013, India was ranked second in the list of diabetes among people aged 20-79 years after China. In India, there were an estimated 65.1 million diabetic people aged 20-79 years. [2]

Diabetes was once regarded as a single disease entity, diabetes is now seen as a heterogeneous group of diseases, characterized by a state of chronic hyperglycemia, resulting from a diversity of aetiologias, environmental and genetic, acting jointly. Diabetes is an iceberg" disease. Although increases in both the prevalence and incidence of type 2 diabetes have occurred globally, they have been especially dramatic in societies in economic transition, in newly industrialized countries, and in developing countries. [3]

Effective self-management of diabetes is crucial to reduce the risk of diabetes-specific complications. Self-management practices include adherence to diet, physical activity, taking medicine, regular blood glucose monitoring, foot care, and regular health check-ups.

Diabetes mellitus was first described in India in the ancient books of Charaka and Sushruta (1500 BCE). Then, this disease has gradually become a major public health problem. This inflationary development has been prominent since the 1990s. It is related to lifestyle changes caused by economic transition, industrialization, and globalization. The epidemic of diabetes creates an enormous burden on individuals, families, and health resources that threaten to the productivity, growth, and development of the nation. [4]

2. Background

Diabetes is a chronic metabolic disorder that occurs when the pancreas does not produce enough insulin or the body cannot effectively use the insulin. Insulin is a hormone that regulates blood sugar. Hyperglycemia, or raised blood sugar, is a common effect of uncontrolled diabetes and over time leads to serious damage to the Can body and failure of various organs and tissues. Gradually, with time, hyperglycemia seriously affects every major organ system in the body, causing heart attacks, strokes, nerve damage, kidney failure, blindness, lower limb amputation, and a higher risk of developing infections. [5]

According to 'India Spend', India currently represents 49 percent of the world's diabetes burden, there were an

estimated 72 million cases recorded in 2017, and this figure is Expected to almost double to 134 million by 2025. Inactivity and excessive consumption of high-calorie food both exacerbate diabetes risk factors. [6]

According to World Health Organization, (In 2008), an estimated 347 million people in the world have diabetes and the prevalence is growing, particularly in low-and middle-income countries. India had 69.2 million diabetic people (8.7%) as per the 2015 data. Of these, it remained undiagnosed in more than 36 million people. [7]

WHO reported in 2014, 8.5% of adults had diabetes, in 2015, diabetes was the direct cause of 1.6 million deaths and in 2012 high blood glucose was the cause of another 2.2 million deaths. [8]

The most recent assessment done by ICMR (Indian Council of Medical Research) estimated that there are 66.58 million cases and 2.26 million DALYs (Disability Adjusted Life Year) loss due to diabetes. Indian Studies showed that the prevalence of diabetes mellitus ranges from 2.1% in New Delhi to 12.4% in Kerala while rural areas showed a lower rate. In most of the metros and cities of India presently 10-15% of the population is suffering from diabetes. The percentage of death is significantly higher among diabetic patients (11.9%) than non-diabetic patients (3.3%.) [9]

International Diabetes Federation South East Asian Region' reported 425 million diabetes patients in the world and 82 million people in the SEA Region and that estimation would rise to 15l million by the year 2045. Over 72 million cases of diabetes patients were present in India in 2017. There was a total adult population of 829, 491, in the total cases of diabetes in adults 72, 946.4, and the prevalence of diabetes in adults was 8.8 in India [10]

Data given by GVS Murthy, Director of IPH (Indian Institute of Public Health), Hyderabad', there was the second largest number (70 million) of people with diabetes, next only to China (1 10 million). This number of diabetes patients in India is expected to increase by 120 million in the next two decades, due to a variety of reasons.

Diabetes has caused 50 percent of adult deaths and it is estimated that globally at least 673 billion dollars cost in health care expenditure for adults and in India, per person annual expenditure for diabetes is Rs 25, 000 approximately. [11]

Arogya World' is a global health organization stated, that two out of three deaths in the world were due to 'NCD' (Non-Communicable Disease). The prevalence of diabetes increased tenfold, from 1.29% to 12.1%, between the years 1971l and 2000. In 2012, I million people died from diabetes in India. Diabetes affected both rural and urban people though urban people were the worst sufferance. The people of India get diabetes on average 10 years earlier than other countries and it could be prevented by eating healthy food, increasing physical activity, and avoiding tobacco. [12]

The number of people with diabetes increased from 108 million in 1980 to 422 million in 2014. The global prevalence of diabetes among adults over 18 years of age increased from 4.7% in 1980 to 8.5% in 2014. The prevalence of diabetes has increased enormously in middle- and low-income countries. Blindness, kidney failure, heart attacks, stroke, and lower limb amputation are caused by diabetes.

Almost half of all deaths were attributed to high blood glucose occurring before the age of 70 years. WHO stated that diabetes will be the seventh leading cause of death in 2030. A healthy diet, regular physical activity, medication, maintaining a normal body weight, avoiding tobacco use, and regular screening were the ways to prevent diabetes. [7]

According to Richard E, the global prevalence of diabetes is increasing to epidemic proportions due to the effects of population growth, aging, urbanization, and increased prevalence of obesity and sedentary lifestyles. In 2012, worldwide more than 371 million adults were affected by diabetes (prevalence of 8.3%), this estimation would go up by approximately 552 million by the year 2030 (prevalence of 9.9%). There was increasing premature mortality mainly due) to cardiovascular disease which was estimated at 4.8 million deaths worldwide in 2012, [13]

In West Bengal, diabetes is a major health problem. Aung u to West Bengal Health Statistics 2011' (National Family Filth 'Survey was untrue 211) by The Ministry of Health and Family Welfare, Government India, 6 1% of males and 71% of females were obese in West Bengal, about 30%, women and 18% men were obese in Kolkata and 11.7% people were diabetic in Kolkata. [14]

IIT Kharagpur projected the prevalence of diabetes in rural West Yale: between 3.5%-5.7%. Prevalence of diabetes was high in mainly three dirk Howrah (I13.2%), Kolkata (129%), and Burdwan (8.7%), Prevalence was low in Purulia (2.7%), Bankura (3.0%%), Dinajpur East (3.6%) and West (3.5%), [14]

According to Raith Atha SJ, Shankar SU, and Dinesh K global prevalence of diabetes was 8.3%, affecting about 371 million people in the world leading to around 4. % million deaths every year. In the world, around 80% diabetic population is from developing countries.

Around 63 million people with diabetes in India ranked second in the list of diabetes-affected countries next to China, there are an estimated 92.3 million diabetes, patients, [18]

3. Need of the study

Control of blood sugar at the desired level is the primary goal of any diabetes treatment. The options for diabetes treatment are multiple and span of lifetime. Apart from regular medication, other beneficial activities can help in the improvement of quality of life among patients with diabetes. Such activities include a healthy diet, physical activities, and exercises, regular blood glucose monitoring. adherence to medication, foot care, and regular follow-up.

Srinath KM, Besieged M, and Tharani NS reported that. 'Diabetes and its complications are the major causes of morbidity and mortality of the world'. Self-care practices as a crucial element in the management of diabetes and one of the major factors associated with the quality of diabetic care. Self-care practices are in terms of diet. exercise, blood glucose monitoring, medication, and foot care. [15]

According to the World Health Organization", globally over 14 million people die each year from non-communicable diseases such as diabetes Mellitus between the ages of 3 () and 70. of which 85 percent are in developing countries. Adults with diabetes have an increased risk of heart attacks. strokes, neuropathy. retinopathy. foot ulcer, kidney failure, and infection.

Simple lifestyle measures should prevent complications of diabetes. The prevention measures are a healthy diet. avoiding sugar and saturated fat intake. physical activity, and avoid tobacco intake. maintain healthy body weight. control blood glucose and foot care. [7]

Tawhida D and Berhane Y reported that effective management of diabetes had strong and consistent cooperation of the patient. Often. the complications related to diabetes management that are highly attributable to the failure to comply with self-care recommendations. The poor self-discipline, and lack of support from family members and or physicians. poverty and lack of access to health facilities were some major factors for failure to comply. So. well-recognized and specific self-care components to prevent complications and reduce the possibility of early death associated with diabetes. The components were self-monitoring of blood glucose levels. diet control. optimum physical exercise, adherence to medications, and proper foot care. Various strategies have been adopted in different countries to help people with diabetes to improve their self-care practices. [16]

Chuang LM, Tsai ST, Huang BY, and Tai TY stated that a proper diet and exercise are the foundation of diabetic care with better results from a greater amount of exercise. Aerobic exercise leads to a decrease in HbA le and improved insulin sensitivity. [17]

According to Raithatha SJ, Shankar SU, and Dinesh K, diabetes care requires a multi-pronged approach, where the patient has an important role to play. Self-care practices were measured by some domains such as physical activity, dietary practices, medication, monitoring of blood glucose, and foot care. Self-care practices. Identifying the deficiencies in the self-care practices among diabetic patients suggests the need to develop and integrate diabetes self-care education programs in routine clinical practices. [18]

Kugbey N, Asante KO, and Adulai K stated that self-care practices are very crucial in the management of diabetes because poor self-care practices result in complications. Effective self-care practices reduce the risk of diabetes-specific complications such as hypertension, lower limb amputation, neuropathy, retinopathy, nephropathy, cardiovascular disease, impotence, and skin lesions. Self-management activities include adherence to diet, physical activity, compliance with medication, weight, and stress management. Knowledge of diabetes and self-care practices both are involved in glycemic control. [19]

According to 'The American Diabetes Association' 30.3 million people have diabetes, which comprises 9.4% of the total population.1.5 million people are diagnosed every year.84. I million people had pre-diabetes. In 2015, diabetes was listed as the underlying cause on 79, 535 death certificates, and diabetes was mentioned as a cause of death in a total of 252.806 certificates. [20]

Data regarding risk factors for diabetes complications, and diabetes cost provided in National Diabetes Statistics Report 2017', were 87.5% of adults had overweight or obese, 40.8% of adults were physically inactive, and 73.6% of adults had a systolic blood pressure of 140 mm Hg or higher and diastolic blood pressure of 90 mm Hg or higher, 58.2% of adults were eligible for statin therapy or received lipid-lowering medication and 15.7% of adults had HbAlc value higher than 9%. [20]

In 2014, a total of 7.2 million hospital-discharged patients were diagnosed with diabetes in the United States, among these patients 1.5 million had major cardiovascular disease (400, 000 for ischemic disease and 251, 000 for stroke), 108, 000 for lower-extremity amputation, 168, 000 for diabetic ketoacidosis and total 52, I 59 people developed the end-stage renal disease. The total direct and indirect cost of diagnosed diabetes in the United States in 2012 was 245 billion. [20]

According to the World Health Organization diabetes is the seventh leading cause of death.

1.6 million deaths occurred by the year 2016 due to diabetes and 2.2 million deaths occurred due to high blood glucose (in 2012). Heart, blood vessels. eyes, kidneys, and nerves could be damaged in overtime diabetes. Adults with diabetes had a two to-threefold risk of heart attacks and strokes. Foot ulcers, infection, and lower limb amputation were caused by a combination of reduced blood flow and neuropathy. Diabetic retinopathy was the leading cause of blindness.2.6% of global blindness can be caused by diabetes. [8]

World Health Organization" is active in stimulating and supporting the adoption of effective measures for surveillance. Build awareness of the global epidemic of diabetes. The WHO's "Global Strategy on diet, Physical Activity, and Health" complements work by focusing on population-wide approaches to promote healthy diet and regular physical activity that reduce the growing global problem of overweight and obesity. [8]

Phillips Q stated that diabetic patients face certain barriers in areas like blood glucose control, exercise, healthy diet, and affordable access to health care. The responsibility of diabetes patients is to identify and try to overcome many of these barriers with the help of health information resources like health care providers. dietician, personal trainer. If healthcare providers took a leading part in identifying and

working to overcome the barriers, it would be better to control diabetes. [21]

Self-management is a crucial event of good diabetes care. Convincing evidence shows that when patients carry out self-care with repeated reinforcement of health education, they can improve blood sugar control and improving metabolic control of diabetes, reducing complications of diabetes.

From various study findings and clinical experience, the researcher felt the need to assess the self-care practices among diabetes patients and also identify the barriers to self-care practices among diabetes patients which might help in the formulation of need-based strategies for control of diabetes at the community level.

Purpose of the study

The purpose of this study was to assess the day-to-day self-care practices of patients with diabetes and identify the barriers to self-care practices faced by diabetes patients.

The study provides a unique opportunity to hypothesize an association between demographic variables and self-care practices.

Problem statement

Self-care practices and its barriers among Diabetes patients attending the diabetic OPD in selected hospitals of Howrah, West Bengal.

Objectives of the study

1. To assess the self-care practices among diabetic patients
2. To identify the barriers to self-care practices faced by diabetic patients.
3. To find out the association between self-care practices and demographic variables.

4.Review of Literature

Literature related to health problems due to diabetes.

Diabetes mellites is a group of metabolic diseases in which the person has a high level of blood glucose (blood sugar), either because of inadequate insulin production, due to not responding to the body's cells properly to insulin, or both. The common experience of patients with high blood sugar is polyuria (frequent urination), thrust at very short intervals, and becoming increasingly hungry (polyphagia). [1]

The body does not produce adequate insulin in Type 1 diabetes which may be referred to as insulin-dependent diabetes, juvenile diabetes, or early-onset diabetes. People usually develop type 1 diabetes before their 40s, often in early adulthood or teenage years, whereas in Type 2 diabetes, either the body does not produce enough insulin for proper function, or the cells in the body do not react to insulin (insulin resistance). [1]

In diabetes patient their blood glucose, or blood sugar, levels are too high. Glucose comes from the consuming foods. Insulin is a hormone that helps glucose get into cells to give them energy. With type 1 diabetes, the body does not produce insulin. With type 2 diabetes, the body does not make or use insulin properly. Without enough insulin, glucose is added to the blood and hyperglycemia occurs. Some people also have pre-diabetes which means their blood sugar level is higher than normal but not too high to be called diabetes.

Having pre-diabetes puts at a higher risk of getting type 2 diabetes.

Over time, having too much hyperglycemia can cause serious problems. It can damage the eyes, kidneys, and nerves. Diabetes can also cause heart disease, stroke, and lower limb amputation. Pregnant women can also get diabetes, called diabetes [27]

Diabetes is a chronic disease that occurs when the pancreas is no longer able to make insulin, or when the body cannot make good use of the insulin that the pancreas produces.

Insulin is a hormone produced by the pancreas (beta cell) and it activities are controlling blood sugar. All carbohydrate foods are broken down into glucose in the blood. Insulin allows cells to absorb glucose from the blood and pass it into the cells to produce energy.

Hyperglycemia is the raised blood sugar level in the blood due to a lack of production of insulin.

Over the long-term high glucose levels are associated with damage to the body and failure of various organs and tissues. [28]

Sing N. [29] conducted a study in 2017 to find out the prevalence of diabetes in rural women of Ghaziabad. This study showed diabetes in rural women is increasing highly. Their prevalence of diabetes was found 16.34% and a family history of diabetes was found 10.36% in the study group. Overall, 23.55% had higher BMI. This study provides a high burden of prevalence of diabetes. The age group with the highest prevalence of BMI also has the highest diabetes and hypertension cases. This age group was found with doing mild physical activity.

Yadav NK, Sethian B, Kalai RS [30] conducted a study in 2012 on the prevalence of diabetes mellitus in urban and rural areas of India and Nepal. This study result showed that Diabetes Mellitus in urban Indians is increasing and the prevalence of diabetes mellitus in Asian Indians ranges from 2.7% in rural India to 14% in urban India. The report showed that the total percentage of new and old cases of diabetes mellitus was 19.78%, with males having l6.06% and females having 22.04% of Karnataka, India. Diabetes Mellitus prevalence was 25.9% and a higher proportion of diabetes was demonstrated in males (27.1%) than in females (24.8%) in the Kathmandu Valley of Nepal.

Anjana MR, Deepa M, Pradeepa R, Mahanta J, Narain K, Das HK, et al.! conducted a study on Prevalence of diabetes and pre-diabetes in 15 states of India. This study showed that the overall prevalence of diabetes in all 15 states of

India was 7.3%. The prevalence of diabetes was highest in Chandigarh (13.6%), Bihar 4.3% and Punjab 10.0%. The prevalence of diabetes was higher in urban areas (11.2%) than in rural areas (5.2%). In rural areas diabetes prevalence was more in people with higher SES (socioeconomic status) and in urban areas diabetes prevalence was more in people with lower SES. Overall pre-diabetes prevalence in all 15 states was 10.3%.

Pradhan R, Kumar BD, and Mitra A [32] conducted a study on Type 2 Diabetes prevalence in Rural Bengal. Results showed that the prevalence of diabetes in rural Bengal was between 3.5%-5.7%. Religion-wise prevalence in rural Bengal showed Muslims had the lowest prevalence (4.8%) and it was highest in Hindus (5.4%) while Christians (5.1%) in between. Analysis of food intake patterns showed the prevalence of diabetes was more in meat eaters (7.2%). It was most common in pork eaters (7.6%), intermediate in chicken caters (6.4%), and lowest in those who take goat/sheep (6.1%). In vegetarians it B. was 5.8% and in fish eaters, it was 5.2%.

Literature related to self-care practices

In many countries, the diabetes epidemic is rapidly growing, with the documented increase most dramatic in low-and middle-income countries. A large proportion of diabetes cases are preventable. Controlled and healthy lifestyle to be effective in preventing or delaying the onset of type 2 diabetes. The risk of diabetes can be reduced by maintaining normal body weight, regular physical activities and exercise, and a healthy diet.

Diabetes is treatable. The complications of diabetes should be under control and manageable. Increasing health care resources, awareness, and less expensive treatment are vital components of the response. Diabetes and its complications are the leading cause of morbidity and mortality in the world. Self-care has emerged as a crucial element in the management of diabetes and a key factor associated with the quality of diabetic care.

Srinath KM, Basavegowda M, Tharuni NS. [15] conducted a community-based cross-sectional descriptive study on Diabetic self-care practices in rural Mysuru, Southern Karnataka, India. This study showed that most of the diabetic patients had good compliance with medication (92.5%), followed by 72% for a diabetic diet. Only 27.75% of the total diabetic patients participated in walking, and 24.25% of the patients practiced foot care, and blood glucose monitoring by 24.75%. The rural diabetic patients were more adherent and compliant to medication and diabetic diet and less compliant with physical activity, foot care, and self-glucose monitoring.

Johani KA, Kendall GE, Snider PD.3 conducted a study of self-management practices among type 2 diabetes patients attending primary healthcare centers in Medina, Saudi Arabia. This study found that only 15% of participants had a blood glucose level indicative of good glycemic control (glycosylated hemoglobin <7 mmol/L). Most of the patients took their medication as prescribed, but many of the patients demonstrated low levels of compliance with other self-management practices (overall mean 3.7 days per week). Males and those with Lower Incomes were less likely to practice self-care activities.

Rajasekharan D, Kulkarni V, Unnikrishnan B, Kumar N, Holla R, Thapar R 35 carried out a study on 'Self-care activities among patients with diabetes attending a tertiary care hospital in Mangalore Karnataka', India which indicates that a healthy eating plan daily wan followed by 45 9"% of the participant, daily exercises for 30 minutes were followed by 434%, 70.6% patient has done regular blood sugar monitoring. Regarding the adherence to oral hypoglaucin agents and insulin, daily adherence to medication was practiced by 00.5%, and 60, 9"% was found to be adherent to Insulin injections o a daily basis, So they found self-care practices were unsatisfactory in almost all aspects except lor blood sugar monitoring and treatment adherence. As these self-care practices are essential for the prevention of complications and a better quality of life, more efforts should be given to educate people with diabetes.

A cross-sectional study was conducted by Raithatha SJ, Shankar SU, and Dinesh K. "on 'Self Care Practices among Diabetic Patients in Anand District of Gujarat'. The study result showed that the mean age was 6), 9 (SD-12.2) years and 57% were males. Among 92"% of Hindus, 71% of patients were consulting private medical practitioners. Medication adherence was the best performance (88, 1") and problem-solving was the worst (|L.0%), The "psychosocial adjustment" of the participants was satisfactory (82.5%). The overall mean performance percentage score was 54.41"%. ln areas of physical activity and dietary practices, males had better performance scores than female housewives. In treatment to specialists and general practitioners, both the patients' total mean performance scores were the same.

Kushwaha AS, Kumari S, Kushwaha N37. carried out a study on 'Self-care in diabetes: a study amongst diabetics in an urban community', This study found that the mean age of the participants was 50.07 years (SD T0.67), the mean weight 3.02 (SD 9 74 km), mean BMI was 25, 55 kg/m' (SD 4.2 kg/m'). Among the co-morbidities 62 3", of the patients had hypertension, and 30.2" heart problems. Most of the patients 65.2% have rarely done their blood glucose monitoring, 88.4% of patients have never done an ECG test, and 29°% diabetes patients did not engage in any exercise even once a day.82.2 did go to a doctor for routine check-ups, and 76.8% of patients took their recommended medication every day.

66.6% of patients took their feet for three to five weeks in a week This study found that they did some practices were good but lacking in some other lifestyle modification. They need an awareness program for better self-care in Practice.

Shrivastava PS. Shrivastava SR. Ramasamy J.38 conducted An Epidemiological Study to Assess the Knowledge and Self-Care Practices among Type 2 Diabetes Mellitus Patients Residing in Rural Areas of Tamil Nadu. This study result found that 79 of the subjects had correct knowledge about the hereditary nature of diabetes. "0. also knew

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consuming an excess of sugar causes diabetes. Majority of the subjects.76.2° o, 67.1%.

87.4°%. had correct knowledge regarding the role of diet, and exercise. smoking and alcohol. respectively. in diabetes.54.5%. were given the opinion that anti-diabetic drugs can be stopped once the sugar levels are controlled. Only 29.3% of subjects practiced a physical exercise schedule. The majority of the subjects, 76.2% got their blood glucose monitored regularly.72% of subjects had strict drug compliance. agreed to be regularly wearing footwear, only 17.5% of subjects took extra care of their fee 13.3°% subjects observed good self-care practices 31.1% and 49.6% of subjects observed average and below average self-care practices respectively.

Kugbey N Asante K0. Adulai K39. carried out a cross-sectional study on Illness perception, diabetes knowledge, and self-care practices among type-2 diabetes patients. This study revealed that illness perception and diabetes knowledge significantly predicted overall diabetes self-care practices. Due to a lack of diabetes knowledge. the Diabetic patient can predict the proper diet for their illness. Exercise Was significantly predicted by only illness perception, blood sugar testing, and diabetes foot care were significantly predicted by diabetes knowledge. Appropriate Psychosocial interventions were developed to help patients adhere to recommended self-care practices.

A study was carried out by Jeeva S, Rabu. M" On knowledge of Diabetic (hents Regarding Self-care Practices in Management of type ll Diabetes Mellitus at selected Rural Community of Bangalore' Karnataka' among that study, it was identified that 47.1% of the diabetic clients had inadequate knowledge, 35.72 with average knowledge level, only 14.28°among the diabetic clients had adequate knowledge and only 02.8S diabetic patients had excellent knowledge regarding diabetes mellitus and its management through self-care and there was no significant association between knowledge of diabetic clients and their sample characteristics. Most of the diabetic clients have inadequate knowledge regarding self-care practices for the management of diabetes mellitus. There was a need for health education on all aspects of diabetes like risk factors, complications, care, and treatment for diabetic clients by medical practitioners at the hospital as well as at the community level.

Dinesh PV., Kulkarni AG, Gangadhar NK. conducted a study on 'Knowledge and self-care practices regarding diabetes among patients with Type 2 diabetes in Rural Sullia, Karnataka". This study showed that only 24°% of the participants had good knowledge about the disease, 59º, of them had an average knowledge, and 17% had poor knowledge.49., 5°% had comorbidity, among them 32% had hypertension, and 2878", had dyslipidemia. The majority of patients 99., 5°% were not taking toot care daily.73°o of the patients were checked for blood sugar as advised by the doctor. Only 48% of the patients were regularly taking drugs and 20.5% of the patients practiced exercise at least 5 days a week.

Literature related to barriers to self-care practices

Sina M, Gally}, Simmons D41 carried out a study on the association between barriers to self-care and diabetes complications among patients with type 2 diabetes. This study identified different types of barriers among diabetes patients. The barriers were financial difficulties, physical health barriers, absence of health care services. Psychological barriers lack of readiness lo Exercise and this barrier associated with diabetes complicitous. Those who faced more barriers they were suffered more diabetes complications.

Shahnawaz 1. V, Farzana A, Fahmida F, , Farzana D, Das SK, Ahmed T, et al42 conducted a study on Self-care practice and barriers to compliance among patients with diabetes in a community in rural Bangladesh. This study showed that almost half of the participants (49 "»») had taken Oral Hypoglycemia Agents (OHA), and 47 % had taken a combination of OHA and insulin; however, 30 % of patients using insulin were not so confident in their ability to self-administer the medication. The majority of participants (86 %) had comorbidity that was vision impairments, poor wound healing and dizziness, Common barriers to treatment were the high cost of medication, access and proximity to services, and feeling unwell as a result of prescribed treatments. Although the vast majority of participants managed their diabetes using OHA and insulin, there were common barriers that prevented patients with diabetes from complying with doctor's recommendations for diabetes management.

Munshi MN, Segal AR, Suhl B, Ryan C, Sternthal A, Giusti J, et. al43 conducted a study on 'Assessment of Barriers to improving Diabetes Management in Older Adults', This study identified several self-care barriers among older adults with poorly controlled diabetes. The most common barrier was inadequate doses of medications, mainly due to older patients' reluctance to make insulin doses between clinic visits or during illness. The medical providers for most patients had suggested insulin dose self-adjustment during a clinic visit, but the patients were uncomfortable with maintaining the advice. This study denoted the complex challenge of older patients with multiple medical co-morbidities. Lack of knowledge regarding the effect of diet on maintaining blood glucose levels. Though phone contact with an educator between clinic visits in elderly patients with diabetes has an important role practically it was not seen.

Seid A., and Tsige Y. * carried out a study on 'Knowledge, Practice, and Barriers of Foot Care among Diabetic Patients Attending Felege Hiwot Referral Hospital, Bahir Dar, Northwest Ethiopia". This study's results revealed that 54.6% of patients had good foot care practice and 45.4% of patients had poor foot care practice. The majority of the patients (41.2%) inspect their feet daily and (38.7%) have never checked their shoes before they put them on. Again, the majority of the respondents (45.79%) have never checked their shoes when they take them off. In this study revealed that 52% had faced barriers to proper foot care and 48% had no such barrier. As to the barriers to proper foot self-care practices, from the total patients who had faced

barriers, 56.8% suffered from poor communication between patients and healthcare providers, 50.6% had inadequate knowledge about foot care, and 44.4% had no time for foot care practices.

Elizabeth A. Melanie F, Autumn B, Kayla E, Nedyalko N. *> conducted a study on 'Patient-Physician Communication and Diabetes Self-Care'. This study found that various barriers exist that undermine effective physician-patient self-care communication. Physician-level barriers to self-care communication include shortage of time, less collaboration among the team members of health care providers, non-availability of resources, and insufficient psycho-social support for diabetes patients. Among patients, psychosocial barriers and health literacy may affect willingness to discuss with health care providers regarding self-care practices.
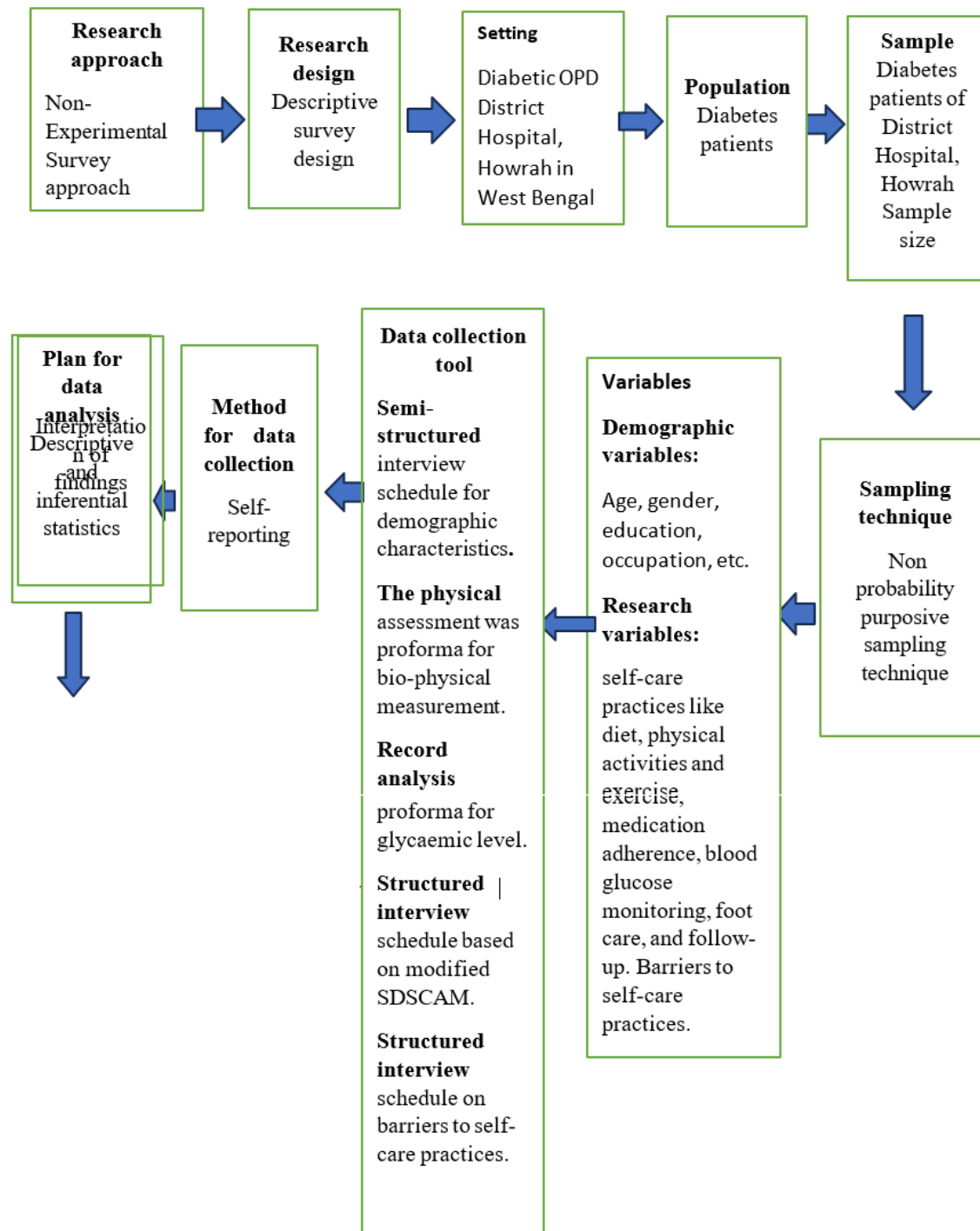
5.Research Methodology

Figure 1: Schematic presentation of research methodology

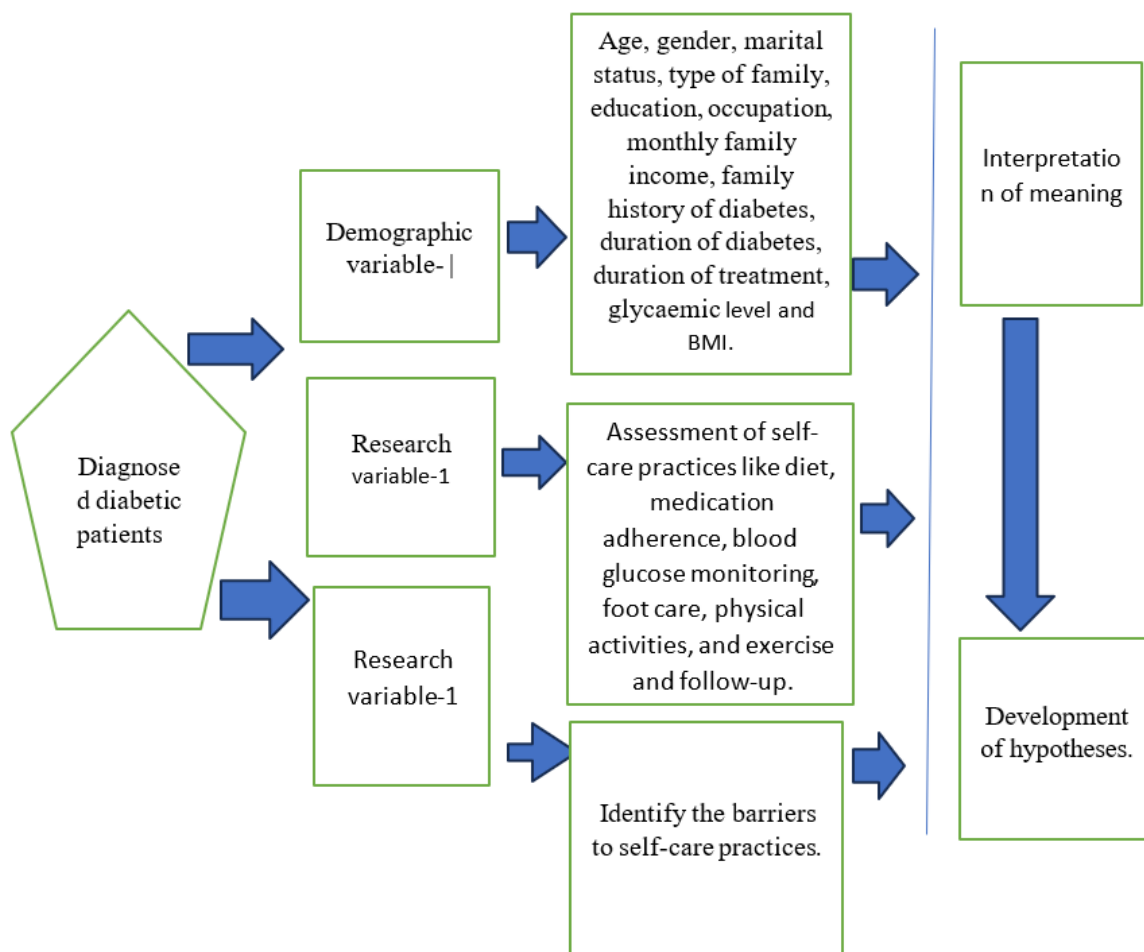**Group Variable Demographic Variable-Analysis**

Figure 2: Descriptive study research design

Variables under study

Variables are qualities, properties or characteristics of a person, thing, or situation that Change or vary. In this study major variables are: Research variable

Research variable

Self-care practices
Barriers to self-care practices

Sample criteria

Inclusion criteria

Those who were having blood glucose reports. Those who were willing to participate in the study. Those who can understand Bengali/English

Exclusion criteria

● Patients with complicated diabetes cases.
● Patients with mental illness.

Table 1: Schematic presentation of data collection Tool and Technique

SI. No.	Variable	Data collection tool	Technique
Tool-I	**Socio-demographic variables.**	**Semi-structured interview schedule**	**Interviewing.**
Tool-II	History of diabetes. Glycaemic level Physical characteristics**.**	Physical assessment proforma Part-A: Structured interview Schedule. Part-B: Record analysis proforma. Part-C: Biophysical measurement proforma	Interviewing. Record analysis from a laboratory report. Physical assessment (measurement of height, weight, and waist circumference by stadiometer, weighing machine, and tape measure).
Tool-II|	Self-care practices.	Modified SDSCA* Measure	Interviewing.
Tool-IV	Barriers to self-care practices.	Structured interview schedule.	Interviewing.

"SDSCA-Summary of Diabetes Self-Care Activities.

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Ethical consideration

- Ethical clearance was obtained from the Chairman, Institutional Ethical Committee, Medical College and Hospital, Kolkata
- Permission was taken from the Principal, College of Nursing, Govt. College of Nursing, District Hospital, Howrah.
- Formal administrative permission was taken from DME (Director of Medical Education, DHS (Director of Health Service) and joint DHS (Nursing) of West Bengal
- Formal permission was taken from the Superintendent, The Nursing Superintendent, and the Head of the Department of Endocrinology, the District Hospital, Howrah
- Informed consent was taken from each participant.

Plan for data analysis

Data were planned to be analyzed in the following way by using both descriptive and inferential statistical methods:

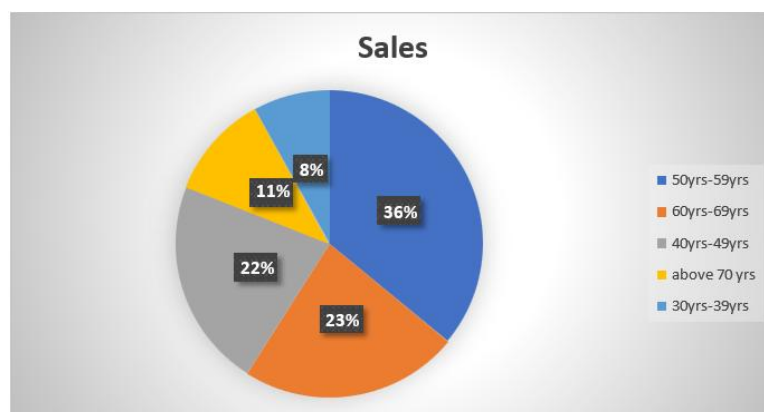- Frequency and percentage distribution were computed for

describing sample characteristics.
- Computation of frequency and percentage distribution of level self-care practices.
- Computation of frequency and percentage distribution of barriers to self-care practices.
- Computation of chi-square for determining the association of self-care practices with selected demographic variables.

Analysis and interpretation of data

Section I:

This section describes the findings related to socio-demographic characteristics.

This section deals with a frequency percentage distribution of diabetic patients, according to socio-demographic characteristics. Age, gender, marital status, type of family, education, 0ccupation, monthly family income, family history of diabetes, duration of diabetes, duration of treatment, treatment for diabetes, glycaemic level, and physical characteristics (BMI and Waist Circumference).
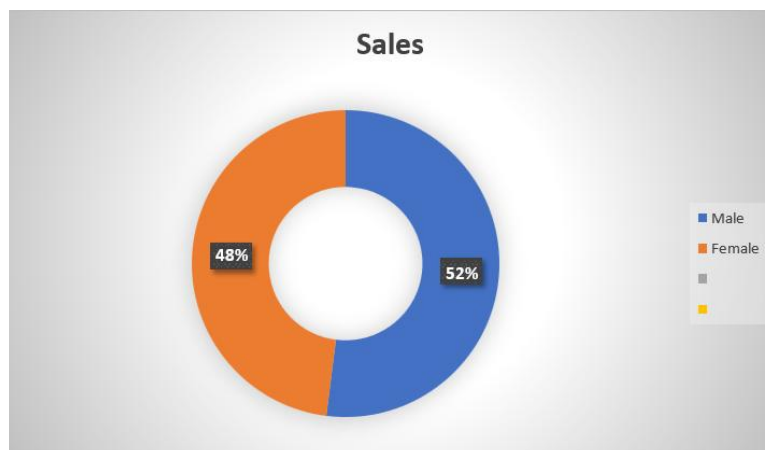
N=124

Figure 3: Pie diagram showing frequency percentage distribution of diabetes patients according to age.

Data presented in Fig.3 shows that most of the diabetic patients (36%) are within the age group of 50-59 years, 23% are within 60-69 years, 22% are within 40-49 years, I 1% are above 70 years and only 8% within 30-39 years.
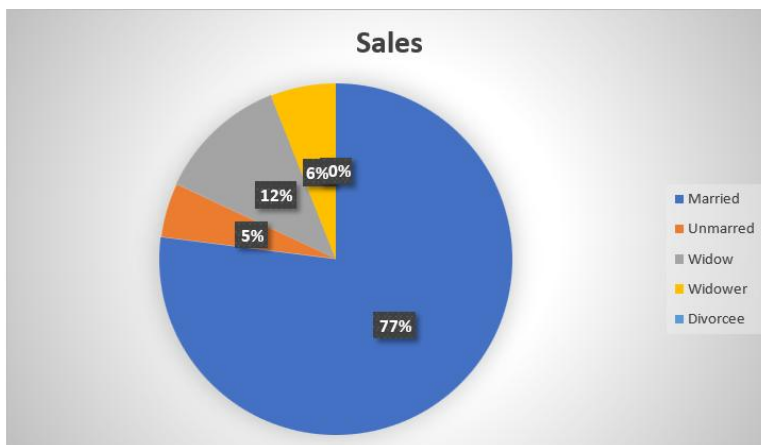
N=124

Figure 4: Male 52% Female Pe diagram showing the distribution of diabetes patients according to gender.

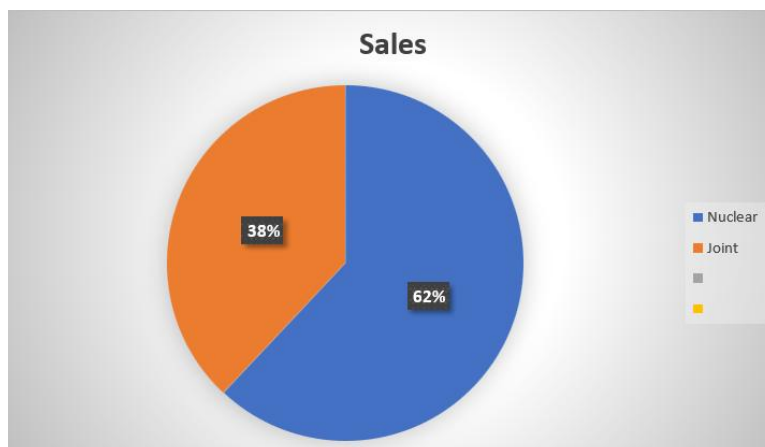Data presented in Figure 4 shows that males are 52" and females are 48"in diabetic patients.

N=124

Figure 5: Pie diagram showing the distribution of diabetes patients according to marital status.

Data presented in Figure 5 shows that married persons are more in number (77%) than unmarried (5%), widows (12%), widowers (6%), and no single patient is a divorcee among the diabetic patients.
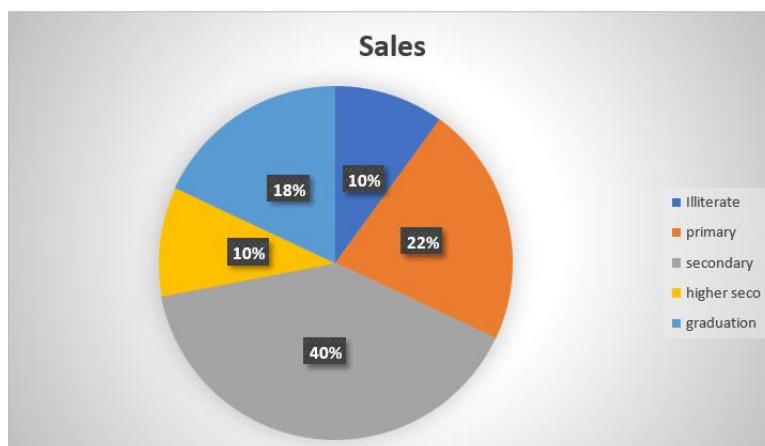
N=124

Figure 6: Nuclear 62% Nuclear Joint Pie diagram showing the distribution of diabetes patients according to type of family.

Data presented in Figure 6 shows that 62% are nuclear families and 38% are joint families among diabetic patients.
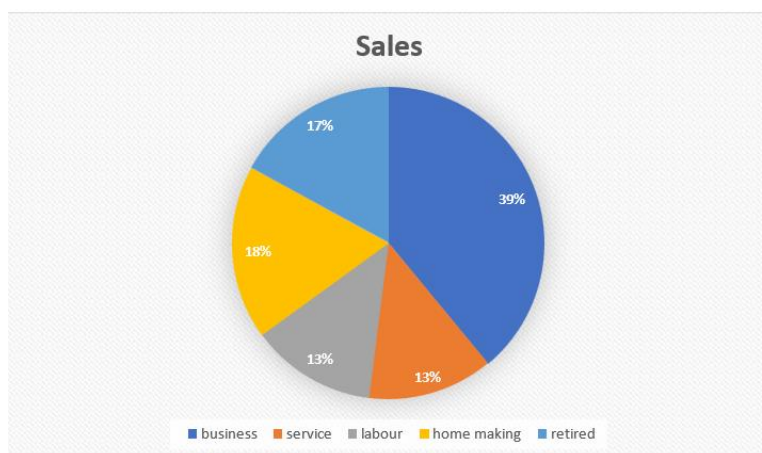
N=124

Figure 7: Pie diagram showing the distribution of diabetes patients according to educational status.

Data presented in Figure 7 shows that most (40%) of the patients have a secondary level of education.22% have a primary level of education, 18% have completed graduation and above the level of education, 10% completed higher secondary education and 10% are illiterate among diabetic patients.

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N=124

Figure 8: Pie diagram showing the distribution of diabetes patients according to occupation.

Data presented in figure 8 shows that most (39%) of the patients are businessmen, 13% are in service for both public and private sectors, 13% are engaged in labor works, 18% are homemakers and 17% are retired from their services among the diabetic patients.

N=124
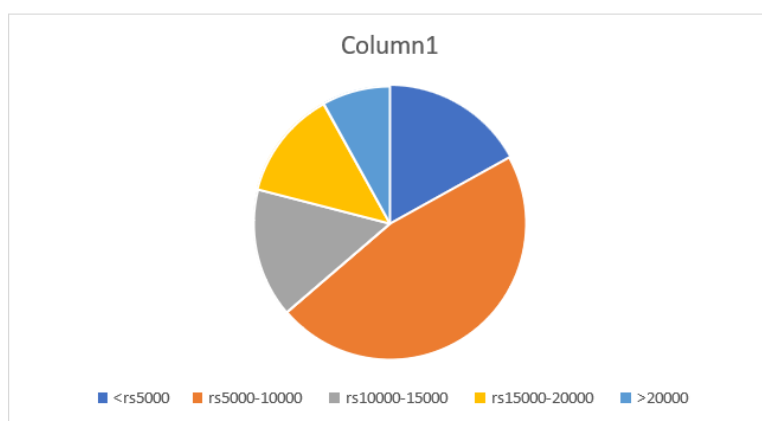
Figure 9: pie diagram showing the distribution of diabetes patients according to monthly family income.

Data presented in Figure 9 shows that most (46.77%) patients have a monthly family income of Rs 5000-10000, 16.94% have a family income of <Rs 5000, I5.32% have a family income of Rs 10000-15000, 12.90% have a family income of Rs 15000-20000 and 8.06% having family income of >Rs 20000 among the diabetic patients.

Table 2: Frequency and percentage distribution of diabetes patients in terms of family history of diabetes, duration of diabetes, and duration of treatment.

S. No.	Variables	Frequency	Percentage
1.	Family history of diabetes		
	Yes	74	60
	No	50	40
2.	Duration of diabetes (in years)		
	1-5	51	41
	5-10	29	23
	>10	44	36
3.	Duration of treatments (in years)		
	1-5	57	46
	5-10	28	23
	>10	39	41

Data presented in Table 2 shows that most of the patients (60%) have a family history of diabetes and 40% of patients have no family history of diabetes.

The table shows that most of the patients (41%) are suffering from diabetes for 1-5 years, 36% of patients suffering from diabetes for more than 10 years, and 239% are suffering for 5-10 years.

The table shows that patients being treated for diabetes for

1-5 years are 46%, S1% of the patient are being treated for >10 years and the rest 23% treated for 5-10 year.

Table 3 Frequency and percentage distribution of diabetes patients in terms of mode of treatment and glycaemic level.

S. No.	Variables	Frequency	Percentage %
1.	Mode of treatment		
	Oral anti-diabetes drug	85	69
	Insulin Injection	13	10
	Both oral anti-diabetic drug and Insulin injection	26	21
2.	Glycaemic level fasting blood sugar (mg/dl)		
	At and above target (30)	67	54
	Below target (< 130)	57	46
	PPBS (Post Prandial Blood Sugar) (mg/dl)		
	Al and above target (I80)	83	67
	Below target (I80)	41	33

Data presented in Table 3 shows that most of the patients (69°%) have taken oral anti-diabetic dugs tor their treatment, 10°% patients have taken Insulin injections, and 21% patients have taken both oral anti-diabetic drugs as well as Insulin injections.

The table shows that S4% of patients have tasting blood sugar at and above the target level (-30 ng/dl) and 46% have the desirable fasting blood sugar level.67% of patients have PPBS at and above the target level (eI80 mg/dl) and 33°% have the desirable PPBS (Post Prandial Blood Sugar) level.

Table 4: Frequency and percentage distribution of diabetes patients in terms of BMI (Body Mass Index) and waist circumference.

S. No.	Variables	Frequency	Percentage %
1.	BMI (Body Mass Index) (Kg/m²)		
	Underweight (< 18.5)	4	3
	Normal weight (18.5-22.9)	27	22
	Over weight (23-24.9)	22	18
	Obese I (25-29.9)	57	46
	Obese II ((230)	14	11
2.	Waist circumference Female		
	< 80	13	11
	>80	44	55
	Male		
	<90	26	21
	> 90	41	33

Data presented in table 4 shows that most of the diabetic patients are Obese I (46%), Obese II 11%, Over weight 18%, only 22% patient are with normal body weight and 3% are underweight.

The table shows that 55% of female patients are at or above cut of point of recommended waist circumference whereas males are 33%. i, e central obesity is more among females.

Table 5: Frequency and percentage distribution of diabetes patients in terms of glycaemic level (Haemoglobin Al c).

S. No.	Variables	Frequency	Percentage %
1.	Glycaemic level HB Al c (%)		
	AI and above target (27%)	35	60
	Below target (<7%)	23	40

Data presented in table 5 shows that 60% patient have at and above target level (>7%) of HbA1C and 40% patient have below target (< 7%) of HBAI C.
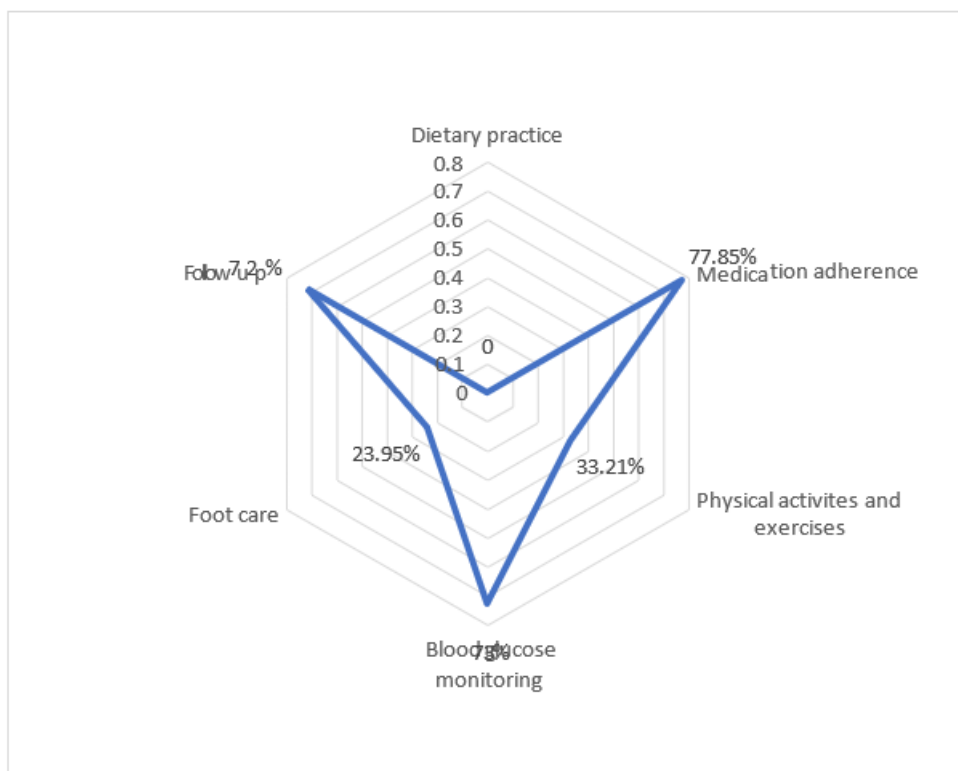
Section II

This section describes the findings related to the level of self-care practice of diabetes patients.

Self-care practices-Dietary practices, physical activities medication, blood glucose monitoring, foot care and follow up

N= 124

Figure 10: Radar diagram showing area-wise mean percentage of the self-care practices among diabetes patients.

Figure 10 shows that self-care practices are comparatively much higher in the area of medication adherence (77.85%), Blood Glucose Monitoring 73%, Follow up 72%. Dietary Practice 66.25%. self-care practices are lower in the area of Physical activity and exercise 33.21% and Lowest in foot care 23.95%.

N=124
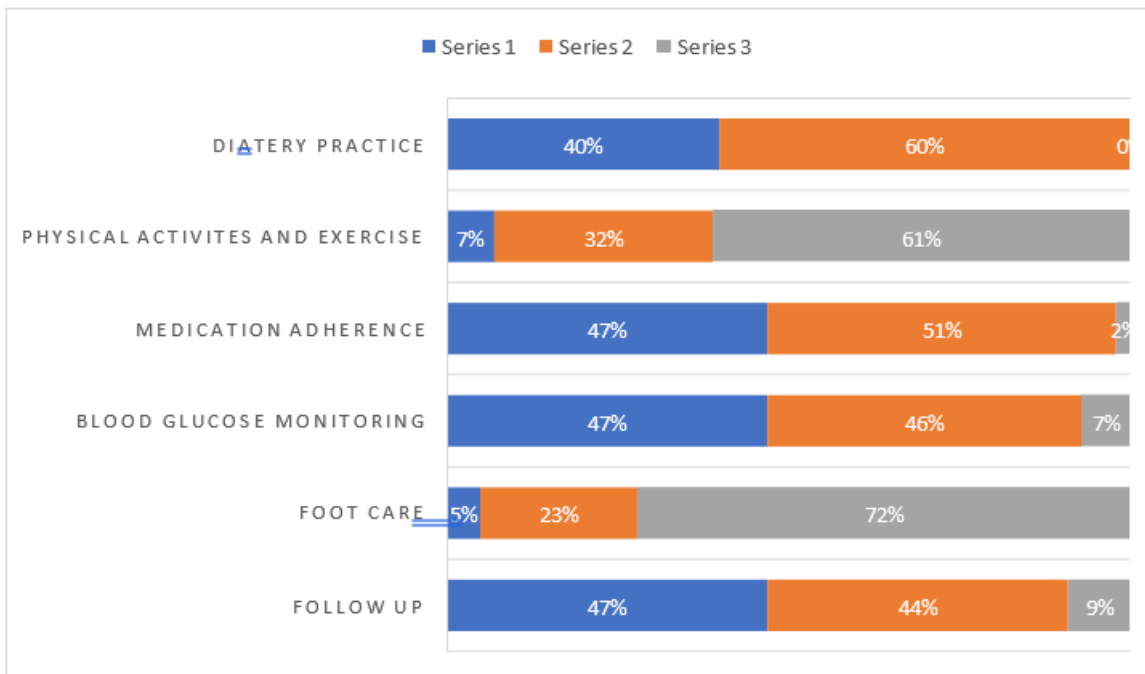
Figure 11: Bar diagram showing the frequency percentage distribution of diabetes patients according to their self-care practices.

Figure 11 shows that in dietary practices 40% of patients have good practice and 60% of patients have average practice.

In physical activities and exercises, 7% of patients have good, 32% have average and 61% have poor practice.

In medication adherence 47% of patients have good practice, 51% have average and only 2% have poor practice. In blood glucose monitoring 47% of patients have good practice, 46%o have average, and only 7% have poor practices.

In foot care only 5% of patients have good practice, 23% have average and 72% have poor practices.

Related to follow-up care 47% of patients have good practice, 44% have average and only 9% have poor practice.

Table 6: Frequency percentage of distribution of the diabetic patients according to dietary practices.

N= 124

Dietary practices (>4 days /wk.) Frequency		Percentage (%) T
Take the recommended amount of rice and chapatti	79	64
Take at least two-medium bowls of vegetables	91	73
Take at least one medium size (100 gm.) fruit	34	27
Avoid sweets or sugar > 1 *Tbsp.	90	73
Avoid fatty foods	120	97
Avoid fast foods	94	76
Avoid soft drinks	117	94
Take light food in between heavy food	98	79

*tbsp. -Tablespoon

Data presented in Table 6 shows that 64% of patients take rice and chapatti as recommended by the health care provider.73% of patients take at least two medium bowls of vegetables.

Fruit intake is quite less only 27% of patients take at least one medium-sized fruit. The majority of patients 97% avoid fatty food 94% avoid soft drinks, 73% avoid sweets and sugar> I Tbs.76% avoid fast food and 79% of patients take light food between heavy foods.

Section III

Description of findings related to the level of barriers to self-care practices faced by diabetic patients.

This section describes the frequency and percentage distribution of the subjects according to their level of barriers to self-care practices faced by diabetic patients.
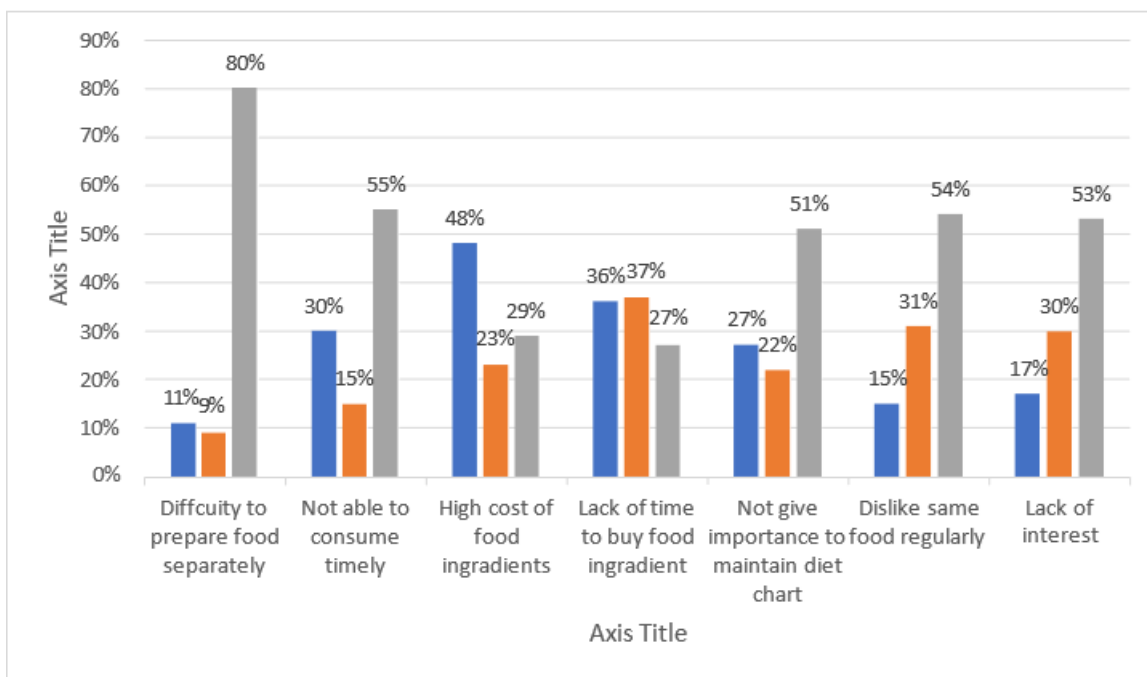
N= 124
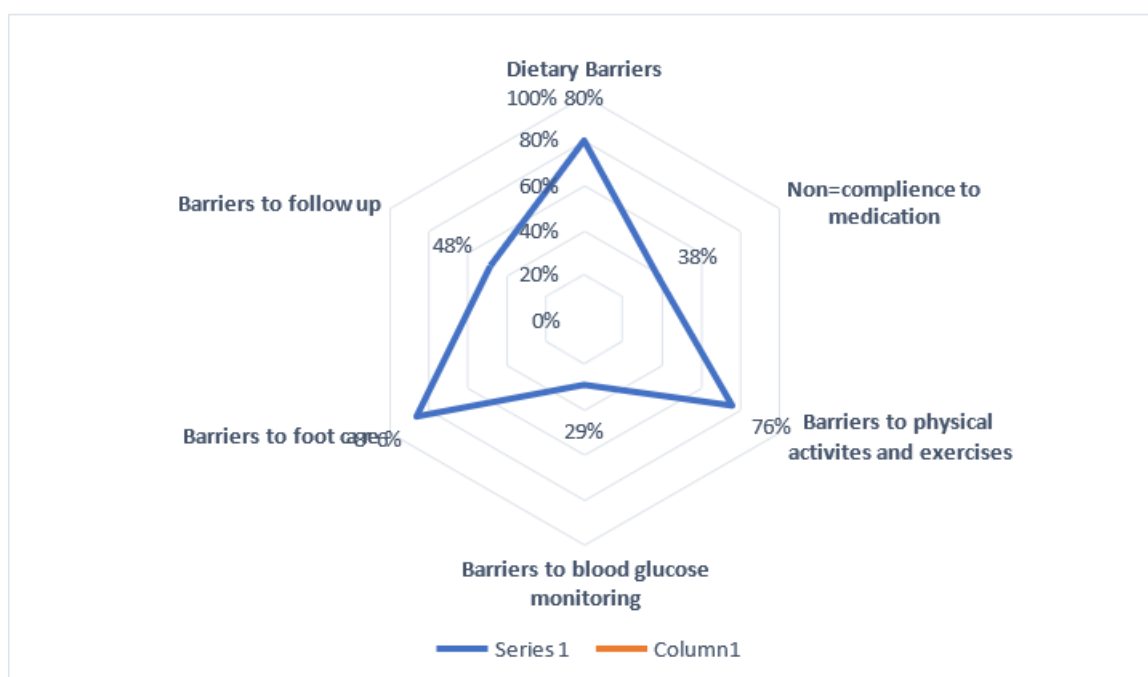
Figure 12: Radar diagram showing the frequency percentage distribution of diabetes patients according to their barriers to self-care practices.

Data presented in Figure 12 shows that most of the patient's 86%faced barriers w foot care, 80% of patients faced barriers to dietary practices, 76% of patients faced barriers to physical activities and exercise, 48%, of patients, faced barriers to follow-up and the lowest 38% patients faced barriers to medication adherence and 29% patients faced barriers to glucose monitoring.

N=124

Figure 13: Bar diagram showing the frequency percentage distribution of diabetes patients according to area-wise barriers on dietary practices.

Figure 13 Shows that regarding barriers to dietary practices area of difficulty to prepare food separately 11% of patients don't have any barriers, 9% of patients faced sometimes barriers, and 80% of patients faced always have barriers.

Area of not able to timely food consuming.30% of patients have no harrier.15%, of patients faced sometimes barriers, and 55°% patients faced always barriers.

Area of high cost of food ingredients, 48% of patients don't have any barriers.23% of patients faced sometimes barriers and 29% of patients always barriers.

Area of lack of time to buy food ingredients 36% of patients don't have any barriers, 37% of patients faced sometimes

barriers and 27% of patients faced always barriers.

Area of not giving importance to maintaining diet charts, 27% of patients have no barrier, 22% of patients faced sometimes barriers, and 51% of patients faced always harriers.

Area of dislike same food regularly.15°% patients don't have any harrier, 31% of patients faced sometimes barriers and 54% of patients faced always harrier.

Area of lack of interest to intake proper diet, I7% patients have no barrier, 30% Patients faced sometimes barrier and $3% patients faced always harrier.

N= 124
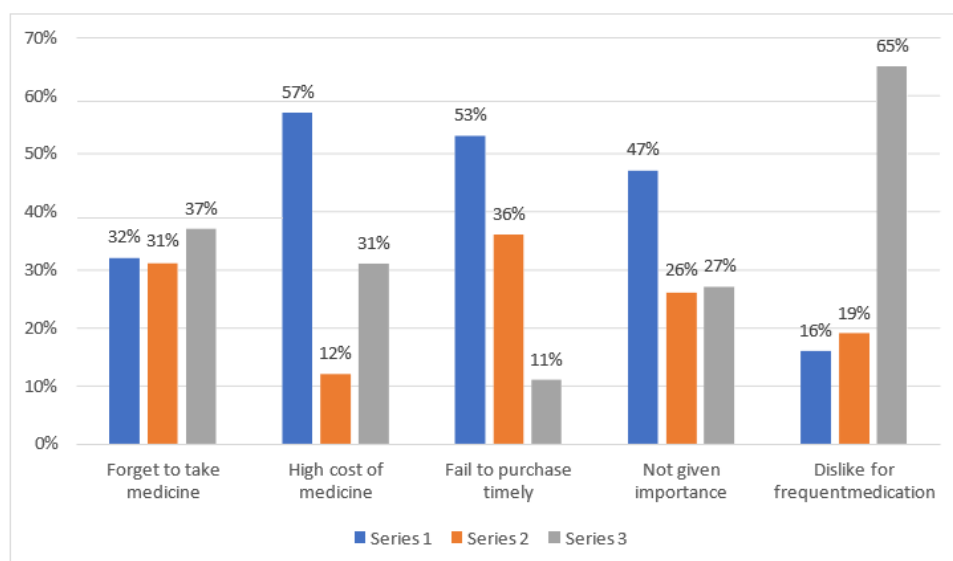
Figure 14: Column diagram showing the frequency percentage distribution of diabetes patients according to arca wise barriers on medication adherence

Figure I4 shows that regarding barriers to medication adherence, arca of forgetting to take medicine, 32% of patients don't forget to take medicine, 31% of patients sometimes forget to take medicine and 37% of patients always forget to take medicine.

Area of the high cost of medicine, 57% of patients have no barrier, 12% of patients faced sometimes barrier, and 31% of patients face always a barrier.

Arca of fail to purchase medicine timely, 53% of patients

docsn'1 have any barrier, 36% of patients faced sometimes a barrier, and 11% of patients faced always a barrier.

Area of not giving importance to taking medicine, 47% of patients don't have any barriers, 26% of patients faced sometimes barriers, and 27% of patients faced always barriers.

Area of disliking for frequent medication, l6% of patients have no barrier, 19%, of patients laced sometimes barrier and 65% of patients faced always barrier.

N=124
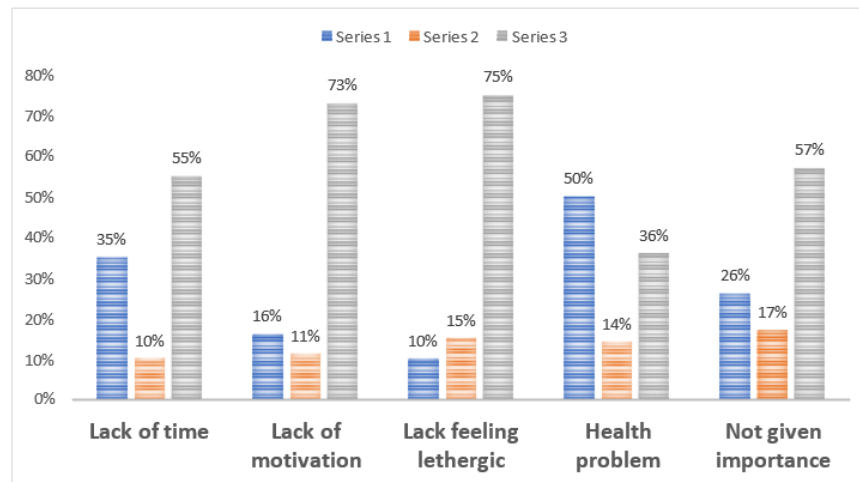
Figure l5: Column diagram showing the frequency percentage distribution of diabetes patients according to area-wise barriers on physical activities and exercises.

Figure 15 shows that regarding the barrier to physical activities and exercises, area of lack of time 35% of patients didn't have any barrier, 10% of patients faced sometimes a barrier, and 55% of patients always faced a barrier.

Area of lack of motivation, 16% of patients have no barrier, 11% of patients faced sometimes a barrier, and 73% of patients face always barrier.

Area of feeling lethargic, 10% of patients don't have any

barrier, 15% of patients sometimes barrier, and 75% of patients have a barrier.

Area of health problems, 50% of patients don't have any barriers, 14% of patients faced sometimes barriers, and 36% of patients faced always barriers.

Area of not given importance, 26% of patients had no barrier, 17% of patients faced a Sometimes barrier, and 57% of patients faced always a barrier.

N= 124
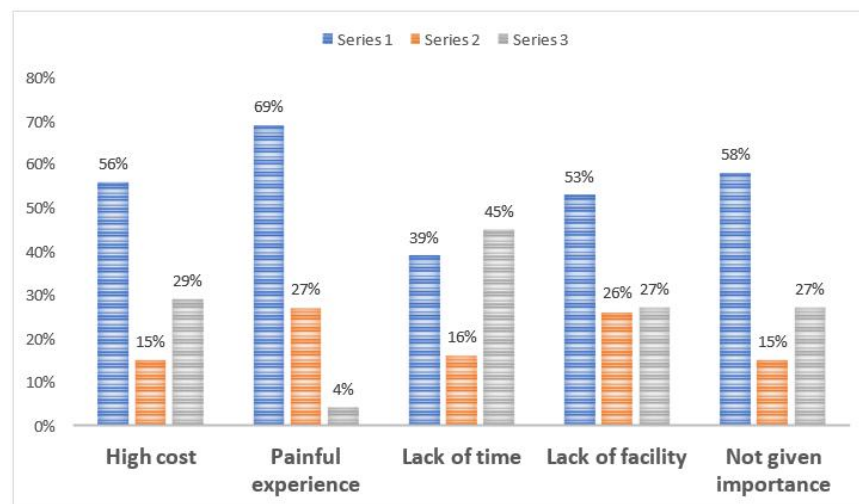
Figure 16: Column diagram showing frequency percentage distribution of diabetes patients according to area-wise barriers on blood glucose monitoring.

Figure 16 shows that regarding blood glucose monitoring, due to the high cost for 56% of patients cost is not a barrier, 15% of patients sometimes suffer from high cost of testing, 29% of patients always suffer from bare high cost for monitoring of blood glucose.

Area of painful experience in testing blood sugar, a maximum (69%) patients have no barrier, 27% of patients faced sometimes a barrier, and only 4% of patients faced always barrier.

Area of lack of time for testing, 39% of patients have no barrier, 16% of patients faced sometimes barrier and 45% patients face always barrier.
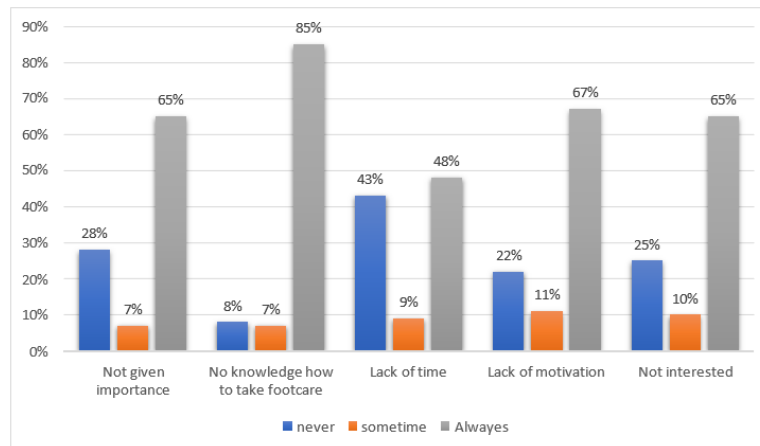
Area of lack of facility, a maximum 53 % of patients doesn't have any barrier, 26% of patients faced sometimes barrier and 27% of patients faced always barrier.

Area of not given importance, 58% of patients doesn't have any barrier, 1 5% of patients faced sometimes barrier and 2 7% of patients faced always barrier.

N=124

Figure l7: Column diagram showing the frequency percentage distribution of diabetes patients according to area-wise harriers on foot care.

Figure 17 Shows that regarding taking foot care, due to not giving importance 28% of patients have no barrier, 7% of patients sometimes barrier and. most of 65% of patients have always barrier for taking foot care.

Area of no knowledge of how to take care. For 8% of patients have no barrier.7% of patients sometimes barriers, most of 85% of patients have always barriers to taking foot care.

Area of lack of time regarding taking foot care.43% of patients have no barrier, 9%, of patients sometimes harrier

and. most of 48% of patients have always a barrier for taking foot care due to lack of time.

Area of lack of motivation regarding taking foot car.22% of patients have no barriers., 11% of patients sometimes have barriers, most of 67% of patients have always had barriers for taking foot care for lack of motivation.

Area of lacking interest regarding taking of care. for 25% of patients don't have any barrier.10°% patients sometimes have barriers, most 65% of patients have always barriers to taking foot care due to no interest.

N=124
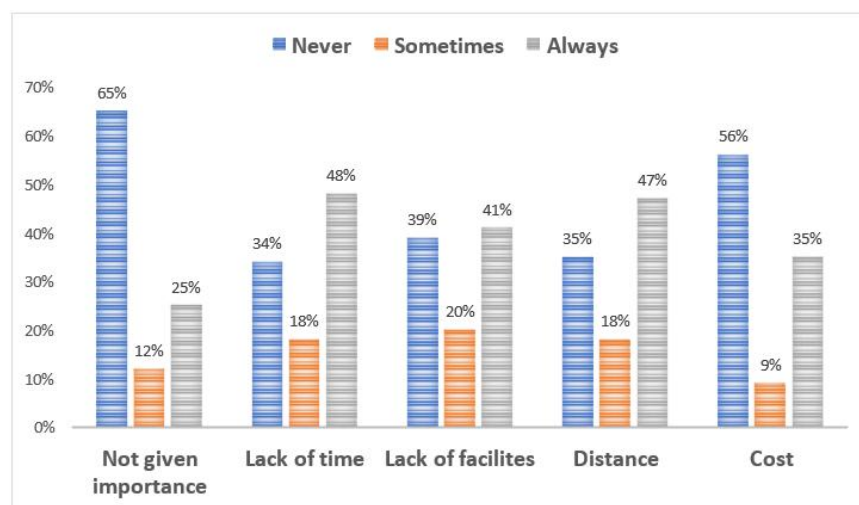
Figure 18: Column diagram showing the frequency percentage distribution of diabetes patients according to area-wise barriers on follow-up care.

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Figure 18 Shows that regarding follow-up, due to not being given importance to most of the patients (63%) patients have no barrier, 12% of patients sometimes barrier and, most 25% patients have always barrier for follow-up care.

Area of lack of time for follow-up care, 34% of patients have no barrier, 18% of patients sometimes barrier, most of 48% of patients have always barrier to follow-up care.

Area of lack of facilities for follow-up care, 39% of patients have no barrier, 20% of patients sometimes barrier, and, more than 4 1% of patients have always barrier for follow-up care.

Arca of distance for follow-up care, 35% of patients have no barrier, 18% of patients sometimes barrier, and, more than 47% of patients have always a barrier for follow-up care.

Area of cost for follow-up care, most patients (56%) patients have no barrier, very patients (9%) patients sometimes barrier and, 35% of patients have always barrier follow-up care due to cost.

Section IV

This section deals with the association between self-care practices and selected socio demographic characteristics.

Table 7: Association between self-care practices and demographic variables (age and gender) of the diabetic patients. N=124

	Self-care practice score <Median >Median		df		X2
Age					
<50 Years	14	23			
> 30 Years	46	41	1		2.35
Gender					
Female	32	27			
Male	28	37	1		1.54

X2 df (l) = 3.84 p>0.05 (not significant)

Data presented in Table 7 shows that among the diabetic patients with age less than 50 years, 14 patients are below the median level of self-care practice score and 23 patients are at and above the median level of self-care practice score. Among the patients aged 50 years and above, 46 patients are below the median level of self-care practice Score, and 4l patients are at and above the median level of self-care practice score. Chi-Square association is computed and the value is statistically not significant at 0.05 level 0f significance y df (1)-2.35. It represents that there is no significant association between self-care practice and the age of diabetic patients.

The table no.7 shows that among the females; 32 patients are below the median level self-care practice score and 27 patients are at and above the median level of self-care practice Score. Chi-square Among the male, 28 patients are below the median level of self-care practice score and 37 patients are at and above the median level of self-care practice score. the association is computed and the value is statistically not significant at 0, 05 level of significance x df (l) =1.54}. It represents that there is no significant association between self-care practice and the gender of diabetic patients.

Table 8: Association between self-care practices with the type of family and occupation among diabetic patients.

N=124

	Self-care practice score <Median >Median		df		X2
Type of family					
Nuclear	35	42			
Joint	25	22	1		0.70
Occupation					
Homemaker	28	20			
0hers	32	44	1		1.54

X2 df (l) = 3.84 p >0.05 (not significant)

Data presented in table 8 shows that among the diabetic patients with nuclear family, 35 patients are below median level of self-care practice score and 42 patients arc at and above median level of self-care practice score. Among the patients with joint family, 25 patients are below median level of self-care practice score and 22 patients are at and above median level of self-care practice score. Chi-square association is Computed and the value is statistically not significant at 0.05 level of significance {x* l) 0.70. I represent that there is no significant association between self-care practice and type of family of diabetic patients.

Table no.8 also shows that, among the patients with homemaker, 28 patients are below median level of self-care practice score and 20 patients are at and above median level of self-care practice score. On the other hand, among the patients with occupation, 32 patients are below median level of self-care practice score and 44 are association is Significance at and above median level of self-care practice score. computed and the value between self-care % df (|)-3.10). It Chi-square is statistically not significant at 0.0S level of represent that there is no significant association practice and occupation of diabetic patients.

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Table 9. Association between self-care practices with educational status and monthly family income of the diabetic patients. **N=124**

	Self-care practice score <Median >Median		df	X2
educational status				
< Secondary	27	12		
> Secondary	33	52	1	9.90
Family income				
< Rs $, 000	15	6		
> R ss, 000	45	58	1	5.37

X2 df (1) =3.84 p>0.05 (significant*)

Data presented in table 9 shows that among the diabetic patients having below secondary level of education, 27 patients are below median level of self-care practice score and 12 patients have at and above median level of self-care practice score. Among the patients having at and above secondary level of education, 33 patients are below median level of self-care practice score and 52 patients have at and above median level of self-care practice score. Chi-square association is computed and the value is statistically significant at 0.05 level of significance (x df () =9.90. It represents that there is statistically significant association between self-care practice and educational status of diabetic patients.

The table no.9 also shows that, among the diabetic patients having monthly family income below Rs5, 000, 15 patients are below median level of self-care practice Score and6 patients are at and above median level of self-care practice score. Among the patients having monthly family income at and above Rs 5, 000, 45 patients are below median level of self-care practice score and 58 patients are at and above median level of self-care practice score. Chi-square association is computed and the value is statistically significant at 0.05 level of significance {df (1) =5.37}. It represents that there is statistically significant association between self-care practice and monthly family income of diabetic patients.

Table 10: Association between self-care practices with marital status and family history of diabetes among diabetic patients. **N=124**

Self-care practice score <Median >Median			df		X2
Marital Status					
Married	45	50			
Others	15	14	1		0.17
Family history of diabetes					
Yes	36	38			
No	24	26	1		0.005

X2 df (l) = 3.84 p>0.05 (not significant)

Data presented in table 10 shows that among the diabetic patients with married, 45 patients are below median level of self-care practice score and 50 patients are at and above median level of self-care practice score. Among the others patients, 15 patients are below median level of self-care practice score and 14 patients are at and above value is statistically not significant at 0.05 level of significance median level of self-care practice score. Chi-square association is computed and the z df (l) 0.17}. It represents that there is no significant association between self-care practice and marital status of diabetic patients.

Data presented in table 10 shows that among the patients having family history diabetes, 36 patients are below median level of self-care practice score and 38 Patients are at and above median level of self-care practice score. Whereas among the Patients having no family history. 24 patients are below median level of self-care practice score and 26 patients are at and above median level of. self-care practice score. Chi-square association is computed and the value is statistically not significant at 0.05 level y' df (l)-0.005. It represents that there is no significant 2590C1ation Significance between self-care practice and family history of diabetes among diabetic patients.

Table 11: Association between self-care practices and duration of diabetes, duration of treatment among diabetic patients. **N=124**

	Self-care practice score <Median >Median		df	X2
Duration of diabetes				
< 5 years	24	27		
>5 years	36	37	1	0.06
Duration of trcat1mcnt				
<5 years	28	29		
>5 years	32	35	1	0.02

X2 df (1) = 3.84 p>0.05 (not significant)

Data presented in table 11 shows that among the patients with diabetes for <5 years.24 patients are below median level of self-care practice score and 27 patients are at and above median level of self-care practice score. Whereas among the patients with diabetes for > 5 years, 36 patients arc below median level of self-care practice score and 37 patients are at and above median level of self-care practice score. Chi-square association is computed and the value is statistically not significant at 0.05 level of Significance {y df (1) =0.06. It represents that there is no significant association between self-care practice and duration of diabetes among diabetic patients.

Data presented in table || shows that among the diabetes patients under treatment for <5 years, 28 patients are below median level of self-care practice score and 29 patients are at and above median level of self-care practice score. Whereas among the diabetes patients under treatment for>5 years, 32 patients are below median C Of sell-care practice score and 35 patients are at and above median level of self. e practice score. Chi-square association is computed and the value is statistically o Significant at 0.05 level of significance {x' df (1)-0.02}. It represents that there is Significant association between self-care practice and duration of diabetes treatment among diabetic patients.

Table 12: Association between self-care practices and glycaemic level, BMI (Body Mass index) of the diabetic patients. N=124

	Self-care practice score <Median >Median			df	X2
Glycaemic level (PPBS)					
<ISO mg dl	14	27			
>1S0 mg dl	46	37		1	4. .97*
Body Mass Index					
<25 Kg m	20	33			
>25 Kg m	40	31		1	4.20*

x' df (l) = 384 p0.05 (significant)

Data presented in table 12 shows that among the diabetic patients with below glycaemic level (PPBS <180 mg dl), 14 patients are below median level of self-care practice score and 27 patients are at and above median level of self-care practice score. Among the patients with at and above glycaemic level (PPBS >180mgdl), 46 patients are below median level of self-care practice score and 37 patients are at and above median level of self-care practice score. Chi-square association is computed and the value is statistically significant at 0.0$ level of significance {x2 df (1) =4.97}. It represents there is statistically significant association between self-care practice and glycaemic level of diabetic patients.

The table no.12 shows that, among the diabetic patients with BM1 (Body Mass Index) below 25 Kg/m, 20 patients are below median level of self-care practice score and 33 patients are at and above median level of self-care practice score. Among the Patients with BMI at and above 25 Kg/m, 40 patients are below median level of self-Care practice score and 31 patients are at and above median level of self-care practice Score. Chi-square association is computed and the value is statistically significant at 0.05 level of significance [x° df (1)-4.20]. It represents there is statistically significant association between self-care practice and BMI of diabetic patients.

6.Discussion

In this present discussion, the major findings of the study have been discussed concerning the results obtained l by the other researchers.

Finding related to Self-care practice

The present Is study, has revealed that the mean percentage of self-care practice scores highest in medication adherence (77.85%} followed by dietary practice (66.25°%). Self-care practice score is lowest in foot care (23.95% and physical activities and exercise is 33.21°%. These findings are supported by findings of the study conducted by Raithatha SJ, Shankar SU, and Dincsh K36 on self-care practice in the Auand district, Gujarat. Where they found that the biggest mean performance of practice score was in adherence to medication (88, 10%). followed by dietary practices (70.42%), loot care score is 48.28"%, and physical activities score 24.33% good practice for medication compliance is also observed in another study conducted by Shrivastava PS. Shrivastava SR, Ramaswami J where practice score of medication compliance is 72"%. Which supports the findings of the present study on adherence to medication.

The present study, shows that 27"% of participants consumed one medium-sized fruit at least four days a week. These findings are supported by findings of the study conducted by Rajasekharan D, Kulkami V, Unnikristhnan B, Kumar N, Lola R. Thapar R*, where they showed that 26.2% of participants consumed fruits/vegetables on all days of the week.

The findings of the present study revealed that only 47"% of participants are doing well practice of regular blood glucose monitoring. These findings of the present study are not supported by findings of the study conducted by Uma Maheshwari R Sowmiya K. R., Kavin S, 33 where 84.1% of participants monitor their blood sugar levels regularly.

Finding related to Barriers of Self-care practice

In the present study, the findings show that 92" patients do not know how to take foot care and 57°% participants have no time for foot care due to pressure of work These findings of the present study are supported by the findings of the study, carried out by Seid A, Tsige Y.4, in their study, they showed that 52% participants faced the barriers to proper foot care, 50.6% had inadequate knowledge about foot care

and 44.4% participants had no time for foot care practices.

7. Conclusion

From the findings of the present study, it is found that the self-care practice score is highest in adherence to medication followed by blood glucose monitoring, follow-up, and dietary practice, and, lowest in foot care and physical activities and exercises. Majority of the diabetic patients faced barriers to foot care, physical activities and exercises. Certain demographic characteristics like education, monthly family income, glycaemic level (PPBS), and BMI are associated with self-care practices.

Reference

[1] Smeltzer SC, Bare B G, Hinkle J L, and Cheever K H. Brunner & Suddarth's Textbook of Medical-Surgical Nursing, 1|h edition, Walters Kluwer (India) Pvt. td: New Delhi (20l6): page 1376-1377

[2] Dinesh Py, Kulkarni AG, Gangadhar NK. Knowledge and self-care practices regarding diabetes among patients with Type 2 diabetes in Rural Sullia. Karnataka: A community-based, cross-sectional study. Journal of Family Medicine and Primary Care. 2016 Oct-Dec; S (4): 847-85S2

[3] Park K. Park's Text Book of Preventive and Social Medicine, 24th edition, Bhanot Publishers; Jabalpur (2017): page 410-414

[4] The Indian Council of Medical Research-India Diabetes (ICMR-INDIAB). Journal of Diabetes Science and Technology. 2011 July; S (4): 906 – 14

[5] International diabetes federation 8h edition available at https://www.idf.org/diabetes atlas. Accessed on 30.04.18

[6] India Spend Apr 17, 2018 16:10:11 IST available at https//www.firstpost.com/india/diabetes-is-indias-fastest. Accessed on 30.04.18

[7] World Health Organization, World Health Day 2016: Diabetes available at www.Searo.who.int/India./mediacentre/events/2016/en/. Accessed on 01.05.1

[8] Diabetes - World Health Organization available at https://www.who.int/newsroom/fact-sheets/detail/diabetes. Accessed on 31.10.18

[9] Kishore J. National Health Programs of India, 12th edition. Century publication; New Delhi (2017): page S75-578

[10] Member International Diabetes Federation available at https:/lwww.idf.org/our network/regions-members/south-east Asia /members/94-india.html. Accessed on01.05.18

[11] Indians with diabetes: Indian Institute of Public Health available at http//www. newindianexpress.com/nation/20 177apr/06/. Accessed on 30. 04 18.

[12] FACT SHEET: Diabetes in India available at http://www.arogyaworld.org/wpcontentuploads/2010/10. Accessed on 03.05.18

[13] Richard E. Diabetes- A Growing Epidemic. The American Journal of Medicine. September 2013; 126 (9A): 52-57

[14] West Bengal Health Statistics Public Health Care Status Report available at https://www.indushealthplus.com/west-bengal-health-statistics.html. on 31.10.18 Accessed.

[15] Srinath KM, Basavegowda M, Tharuni NS. Diabetic self-care practices in rural Mysuru, Southern Karnataka, India - A need for Diabetes Self-Management Educational (DSME) program. 2017 Nov; ll (1): S181-sl86

[16] Tewahido D and Berhane Y. Self-Care Practices among Diabetes Patients in Addis Ababa: A Qualitative Study. 2017 Jan; 12 (1): e0169062.

[17] Chuang LM, Tsai ST, Huang BY, Tai TY. The status of diabetes control in Asia cross- sectional survey. Diabet Med 2002; 19 (12): 978- 985

[18] Raithatha SJ. Shankar SU, Dinesh K. Self-Care Practices among Diabetic Patients in Anand District of Gujarat. 2014 Jan; PMC4041263 DOI: 10.1155/2014/743791

[19] Kugbey N, Asante KO. Adulai. K. Illness perception, diabetes knowledge and selfCarc practices among type-2 diabetes patients. 2017 Dec: 10: 381

[20] National Diabetes Statistics Report, 2017: Estimates of Diabetes and Its Burden in the United States available at https: www.cdc.gov/diabetes. Accessed on 31.10.18

[21] Phillips Q. Overcoming Barriers to Diabetes Control. 2016 August; available at https://www.cdiabetesselfmanagement.com. Accessed on 05.11.18

[22] WHO Asian-BMI classification. Available at https://www.researchgate. net. Accessed on 01.0S. 18

[23] Waist measurement fact sheet. Available at http://www.measurup.gov. Accessed on 01.05. 18

[24] What are the Blood Sugar Target Ranges? https://www.thediabetescouncil.com. Accessed on 01.05.18

[25] Toobert DJ, Glasgow RE. Assessing diabetes self-management. The Summary of Diabetes Self- Care Activities Questionnaire. In Hand book of Psychology and Diabetes. Bradley C, Ed. Chur, Switzerland, Harwood Academic. 1994;351 -375

[26] Toobert DJ, Hampson SE, Glasgow RE. The Summary of Diabetes Self-Care Activities Measure: results from 7 studies and a revised Scale. Diabetes Care. 2000, 23:943 -950

[27] Diabetes. National Institute of Health. Available at https://medlineplus.ggov/diabetes.html. Accessed on 03.05.18

[28] What is Diabetes? /NIDDK. Available at https:lwww.niddk.nih.gov/. Accessed on 03.05.18

[29] Sing N. Prevalence of hypertension, diabetes mellitus and their few risk factors among rural women in Ghaziabad, International Journal of Community Med Public Health. 2017 May;4(5):1488-1493

[30] Yadav NK, Sathian B. Kalai RS. Assessment of Diabetes Mellitus in India and Nepal. Webmed (Central BIOCHEMISTRY 2012; 3(6)

[31] Anjana MR, Deepa M, Pradeepa R, Mahanta J, Narain K, Das HK, et al. Drevalence of diabetes and prediabetes in 15 states of India: results from the ICMR-INDIAB population-based cross-sectional study. The Lancet Djabetes & Endocrinology 2017 August; 5(8): 585-596

[32] Pradhan R, Kumar BD, Mitra A. Some Salient Points in Type 2 Diabetes Prevalence in Rural Bengal. Ethno-

Med. 2009; 3(2): 127- 131

[33] Uma Maheshwari R., Sowmiya K. R., Kavin S. Self-care practices among type II diabetics attending primary health centre, Thiruvallur district, Tamil Nadu. International Journal of Community Medicine and Public Health. 2017; 4(8)

[34] Johani KA, Kendall GE, Snider PD. Self-management practices among type 2 dabetes patients attending primary health-care centres in Medina, Saudi Arabia. East Mediterr Health J. 2015 Oct 2: 21(9): 621 -8.

[35] Rajasekharan D, Kulkarni V, Unnikrishnan B, Kumar N, Holla R, Thapar R. Selfcare activities among patients with diabetes attending a tertiary care hospital in salore; Karnataka, India Ann Med Health Sci Res. 2015 Jan-Feb; 5(1): 59 64.

[36] Raithatha SJ, Shankar SU, Dinesh K. Self- care practice among Patients in Anand District of Gujarat. ISRN Family Med. 2014 Feb ll: available at https://www.ncbi.nlm.nih.gov/pubmed/. Accessed on 03.05. 18

[37] Kushwalha AS, Kunnari S, Kushwaha N. Sclf care in diabetes: a study amongst diabetics in an urban community. International Journal of Community Medicine and Public Health. 2016 Jan; 3(|): 293- 298

[38] Shrivastava PS, Shrivastava SR, Ramasamy J. An Epidemiological Study to Assess the Knowledge and Self Care Practices among Type 2 Diabetes Mellitus Patients Residing in Rural Areas of Tamil Nadu. Biology and Medicine. 2015 June: available at https://www.omicsonline.org/. Accessed on 03.05.J8

[39] Kugbey N Asante KO, Adulai K* illness perception, diabetes knowledge and self-care practices among type-2 diabetes patients: a cross-sectional study. BMC Researcher Notes. 2017 December: 10: 381

[40] Jeeva S, Babu. M. Knowledge of Diabetic Clients Regarding Self-care Practices in Management of type II Diabetes Mellitus at selected Rural Community of Bangalore, Karnataka. Asian Journal of Nursing Education and Research. 2017; 7(|): 86 -94

[41] Sina M, Graffy J. Simmons D, Associations between barriers to self-care and diabetes complications among patients with type 2 diabetes. Diabetes Research and Clinical Practice. 2018 July: 141: 126 – 131

[42] Shahnawaz LV, Farzana A, Fahmida F, Farzana D, Das SK, Ahmed T, et al. conduct a study on Self-care practices and barriers to compliance among patients with diabetes in a community in rural Bangladesh. International Journal of Diabetes in Developing Countries. 2016 September; 36(3): 320-326

[43] Munshi MN, Segal AR, Suhl E, Ryan C, Sternthal A, Giusti J, ct.al.42 conducted a study on Assessment of Barriers to Improve Diabetes Management in Older Adults. Diabetes Care 2013: 36:543-549

[44] Seid A, T'sige Y.44 carried out a study on Knowledge, Practice, and Barriers of tat Care among Diabetic Patients Attending Felege Hiwot Referral Hospital. Bahir Dar, Northwest Ethiopia. Advances in Nursing, Vol 2015, Article ID 934623, 9 pages.

[45] Elizabeth A. Melanie F, Autumn B, Kayla E, Nedyalko N.45 conducted a study on Patient-Physician Communication and Diabetes Self-Care. Journal of Clinical Outcomes Management. 2016 November; 23(1)