ABSTRACT

INTRODUCTION

Diabetes mellitus is now recognized as a "Disease Epidemic" of the 21st century, affecting millions of people worldwide[1]. According to World Health Organization (WHO) and International Diabetes Federation (IDF), more than 422 million people worldwide and 62.1 million people in India are affected by Diabetes mellitus[2].

Proper self care management can decrease diabetes associated complications and improve Glycemic control.

The objective of this study is to analyze self care practices among patients with Diabetes, identify its barriers to compliance and justify any association between barriers to compliance with their demographic components.

METHODOLOGY:

A descriptive qualitative research design was used in this study. Data was collected by an interviewer administered structured questionnaire. 100 samples diagnosed with type 2 diabetes, at least two year prior were selected as participants in this study by using convenient sampling technique. Data was analyzed to generate information about self care practices which were followed by patients, and their possible barriers against those self care practices.

FINDINGS

Our first objective was to find out self care practices, among six selected component such as Diet, Medication, Exercise, Foot care, Blood glucose monitoring and stress. About 19.1%, 21. 3% and 20.3 % people followed the given self care practices always, some times and never respectively.

Our second objective was to identify the barriers in diabetic patients. Patients identified with maximum barriers was found in foot care i.e 32.5% were mostly unaware about the technique of foot care; whereas 29.3% barriers was found in diet component. 22 % patients had fewer barrier in areas like medication and blood glucose monitoring .

Research also showed association between demographic variable INCOME to DIET (income<50000 shows more barrier) (chi-square test given P value 0.002)

Researchers analysis revealed that standard deviation (SD) value for component age from demographic variable are as follows :

Diet (5.8), Medication (3.9), Exercise (5.54), Foot care (5.16), Blood glucose monitoring (7.12), Stress (4.49)

CONCLUSION

Patients consistently identified problems with health as a barrier to diet, exercise, foot care & medication adherence in diabetes. Awareness programs & counseling should be mandatory in all hospitals & diabetic clinics. More emphasis should be given on foot care.

KEY WORDS: Barriers, Self care practices, compliance, diabetes

INTRODUCTION

"Self care is not a Luxury, it's a Priority."

Diabetes mellitus is a metabolic disorder which can be controlled through medical treatment and life style modification[3]. Self care practices are the personal and medical care performed by the patient usually in collaboration with, and after instruction, by a health care professional to manage their own condition. (Dorland's Medical Dictionary, 2007). A diabetes patient is expected to follow a complex set of behavioural action to care for their disease on a daily basis. The present research group is investigating on the barriers to compliance of self care practices in diabetic patients.

A study on "Assessment of self care practices and associated factors among type 2 DM patients"(Feyissa ,Lemessa) Ethiopia, showed that out of 327 samples of diabetic patients, only 120 people adhered to self care practices. Another cross-sectional, co relational study examined the relationship of diabetes-specific treatment barriers and self-efficacy with self-care behaviors. 309 patients with type 2 diabetes participated in this study. The researcher found perceived barriers to carrying out self-care behaviors, were associated with a worst diet and exercise behavior. Greater self-efficacy predicted more frequent blood glucose testing, and closer adherence to an ideal diet, less frequent skipping of medication and binge eating.

Saurabh Ram Biharilal Shrivastava reviewed an article on ,Role of self care in Management of Diabetes Mellitus(Journal of Diabetes and Metabolic Disorder 2013 ,Biomed central)[3] .The researcher concluded that, to prevent diabetes related morbidity and mortality, there is an immense need of dedicated self care practices in multiple domains.

A qualitative study on Diabetic Compliance was conducted by Mrs.Jansi Rani Natarajan (Fundamentals and administrative Department, Sultan Qaboos University, Oman) .The study revealed that a patient centered collaborative model of care recognizing patient autonomy would provide a more skillful approach to improving compliance.

Analyzing the severity of diabetes and its related morbidity and mortality, the human and economic toll of diabetes mellitus particularly type2 diabetes is likely to grow globally in the foreseeable future due to rapid cultural changes, aging population, increasing urbanization, dietary changes, decreased physical activity and other unhealthy lifestyle and behavioral patterns. Many studies have assessed the level of compliance, but the factors influencing compliance from patient perspective are remarkably absent. Type2 DM needs therapeutic control, generally involving strict, rigorous and permanent lifestyle changes that include dietary interventions, physical activity, strict medication regimes and good metabolic control.

Although there are many educational interventions conducted for diabetic patients in every hospital, yet recurrent admissions with complications are increasing. Thus the implementation of self-care practices of patients and the barriers to compliance is questionable. It is essential to understand the barriers to diabetes self-care in order to promote successful self-care practices. There is also a need to understand the relation between demographic component and barriers to those self care practices. As there is a possibility of elements like gender, age, level of education, occupation, economic status, duration of disease etc having strong relation with individual barriers to self care, the researcher would like to investigate and test the hypothesis : What are the barriers to complying with self-care practices and diabetes self care management in Type 2 DM patients?

With the above context the researchers planned to conduct "A study to analyze barriers to compliance of self care practices among patients with diabetes in a selected area of Mumbai."

The objectives of the study were

- To analyze self care practices among patients with Diabetes.
- To identify barriers to compliance among patients with Diabetes.

- To justify association between barriers to compliance with selected demographic variable.

The researchers assumed that

1. Most of the diabetic patients do not comply with their self care practices.

2. Self care practices and their barriers can vary from person to person among diabetic patients

3. There are various factors that influence self care practices among diabetic patients.

The conceptual framework for this study is based on Health Promotion Model, which was developed by Nola J. Pender (1982; 1993, 1996)[4].This model focuses on determinants or background factors that influence individual health behaviors. It describes the multi dimensional nature of person as they interact within their environment to perceive health. This model has three components:

- Individual characteristics and experiences
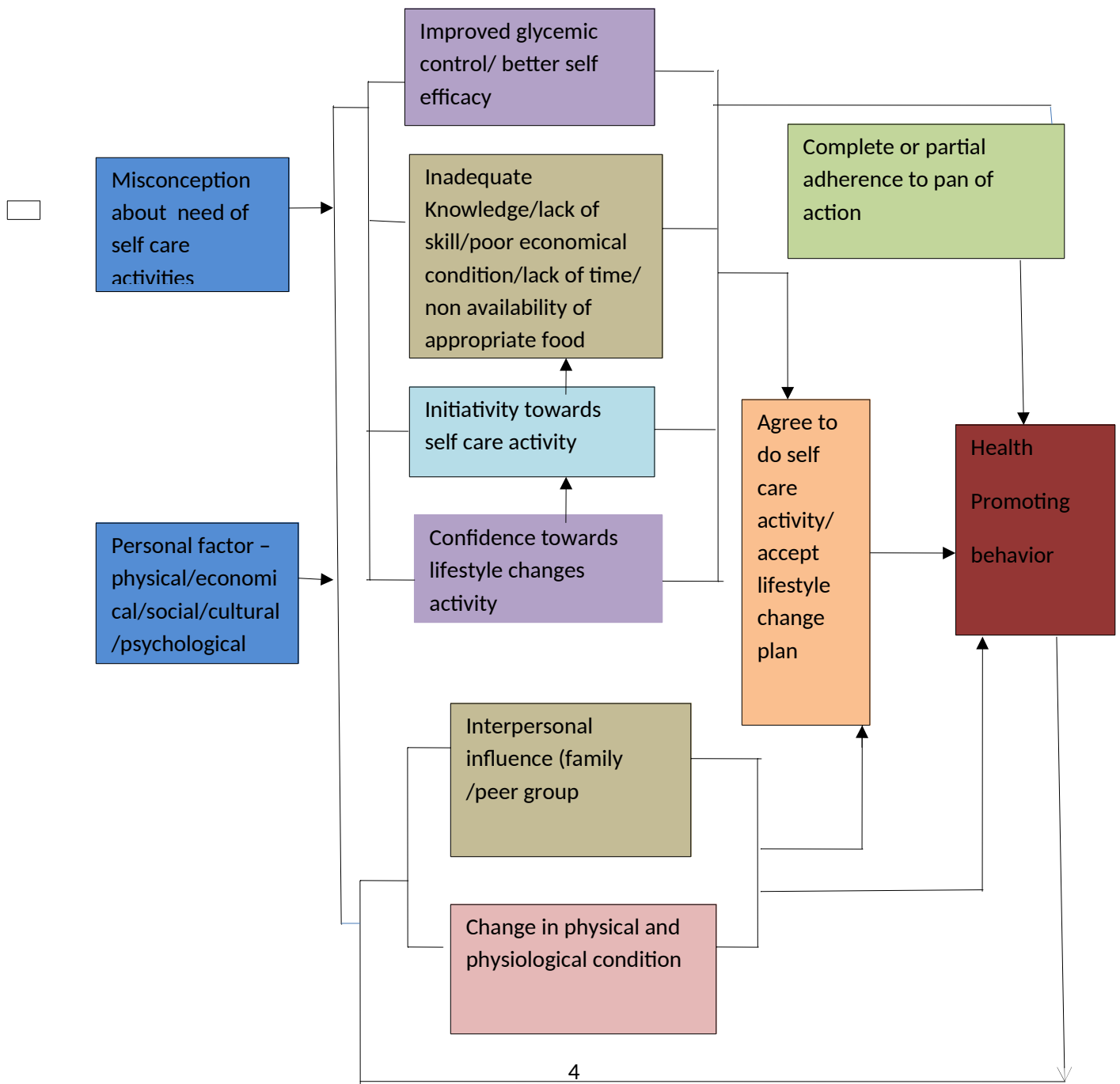- Behavior specific cognitions and affect
- Behavioral outcomes.

Box	Content
Improved glycemic control/ better self efficacy	
Misconception about need of self care activities	
Inadequate Knowledge/lack of skill/poor economical condition/lack of time/ non availability of appropriate food	
Complete or partial adherence to pan of action	
Initiativity towards self care activity	
Agree to do self care activity/ accept lifestyle change plan	
Health Promoting behavior	
Personal factor – physical/economical/social/cultural/psychological	
Confidence towards lifestyle changes activity	
Interpersonal influence (family /peer group	
Change in physical and physiological condition	

4

Figure 1: Conceptual Framework

OPERATIONAL DEFINITIONS:

1) **Analyze**

   ➢ **According to oxford dictionary,** Analyze means to examine something methodically and in detail, in order to explain and interpret it.

   ➢ **In this research study,** Analyze means to study in detail the self care practices and the barriers to compliance of these self care practices in diabetic patients.

2) **Barrier**

   ➢ **According to oxford dictionary,** barrier means a fence or other obstacles that prevents movement or access.

   ➢ **In this research study,** Barriers are those that directly or indirectly influence self care practices such as blood glucose monitoring, diabetic diet, and exercise, regular intake of oral or injectable hypoglycemic agent.

3) **Compliance**

   ➢ **According to oxford dictionary, compliance** means the action or fact of complying with a wish or command.

   ➢ **In this research study :** Compliance refers to adherence with required self care practices.

4) **Diabetic patient**

   ➢ **According to oxford dictionary**, Diabetic patients are those patients whose body's ability to produce or respond to the hormone insulin is impaired resulting in abnormal metabolism of carbohydrate and elevated level of glucose in the blood .

   ➢ **In this research study**, A diabetic patient is a person with type -2 diabetes in the age group of 40-65 years, irrespective of their treatment modalities.

5) **Self care practices**

   ➢ **According to oxford dictionary :** Self care practices means those practices of activities that are necessary to sustain life and health, normally initiated and carried out by individual for himself / herself.

➢ **In this research study,** Self care practices are those practices which are necessary to maintain one's blood glucose level, and an appropriate metabolism of carbohydrate to maintain a fruitful living.

This study is delimited to Type -2 diabetes patients, who has diabetes since 2 years in the age group of 40-65 years in a selected area of Mumbai

MATERIALS AND METHODS

Descriptive qualitative research design using convenient sampling technique was collected using interviewer administered structured questionnaire, 100 samples were collected, who were diagnosed at least two year prior to within the age criteria of 40-65 years. The researcher excluded people from early and late adulthood group, and also type 2 diabetic patient who were not willing to participate in the study. A set of structured questionnaire was used as a tool .It was validated by experts from the nursing field and the research ethical committee members of Fortis hospital. Individualized evaluations of tool by 8 MSc teachers were also obtained. Significant suggestions were incorporated in the tool.

The pilot study was conducted on 10 samples in Fortis hospital. The data collected was analyzed and reliability was assessed by KUDER & RICHARDSON formula (21K R 21).The reliability score was 0.9 for both self care practices and barrier questionnaire, hence the researcher concluded that the tool was reliable.

The main study was conducted on 100 samples, over an extraneous time period of two months. Data tabulation and analysis was done, by descriptive statistics using frequency and percentage and its association will be interpreted using chi-square test.

RESULT

Table I

DEMOGRAPHIC DATA OF RESPONDENTS

N=100

SR NO.	CHARACTERISTICS	FREQUENCY	PERCENTAGE
1	Gender:		
	• Male	62	62%
	• Female	38	38%
2	Age:		
	• 40-44 years	4	4%
	• 45-49 years	6	6%
	• 50-54 years	13	13%
	• 55-59 years	29	29%
	• 60-65 years	48	48%
3	Marital status:		
	• Single	0	0%
	• Married	96	96%
	• Divorced	0	0%
	• Widowed	4	4%
4	Education:		
	• Primary	28	28%
	• Secondary	30	30%
	• Graduate	31	31%
	• Postgraduate	11	11%
5	Occupation:		
	• Unemployed	9	9%
	• Retired	44	44%
	• Employed	25	25%
	• Housewife	17	17%
	• Business	5	5%
6	Religion:		
	• Hindu	91	91%
	• Christian	6	6%
	• Muslim	2	2%

	• Others	1	1%
7	Family income:		
	• Very low(>10,000)	2	2%
	• Low(10,000-20,000)	12	12%
	• Medium(20,000-35,000)	26	26%
	• Average(35,000-50,000)	26	26%
	• High(above 50,000)	34	34%
8	Family history of DM		
	• 1st degree relative	52	52%
	• 2nd degree relative	3	3%
	• No family history	34	34%
	• Don't know	11	11%
9	Duration of DM		
	• 2-4 Years	29	29%
	• 5-7 years	19	19%
	• 8-10 years	11	11%
	• >10 years	41	41%

The study shows that, among 100 participants, the number of males were 62% & females were 38%. Most of the respondents i.e. 48% were in the age group of 60-65 years. Among 100 respondents 96% were married & 4% were widowed. Out of 100 samples 28% were primary educated, 30% were secondary educated, 31% were graduates & 11% were postgraduate. Most of the respondents i.e. 44% were retired, 25% were employed, 9% were unemployed, 17% were housewife & 5% respondents were doing business. Out of 100 respondents 91% were Hindu, 6% were Christian, 2% were Muslim. Most of the respondents i.e. 34% were family income is >50000, there were same average & medium income respondents i. e. 26%. Among 100 respondents 52% were had family history of diabetes in 1st degree relative, 3% had 2nd degree relative history, 34% peoples were don't had family history of diabetes & 11% respondents were don't know about the family history of diabetes.
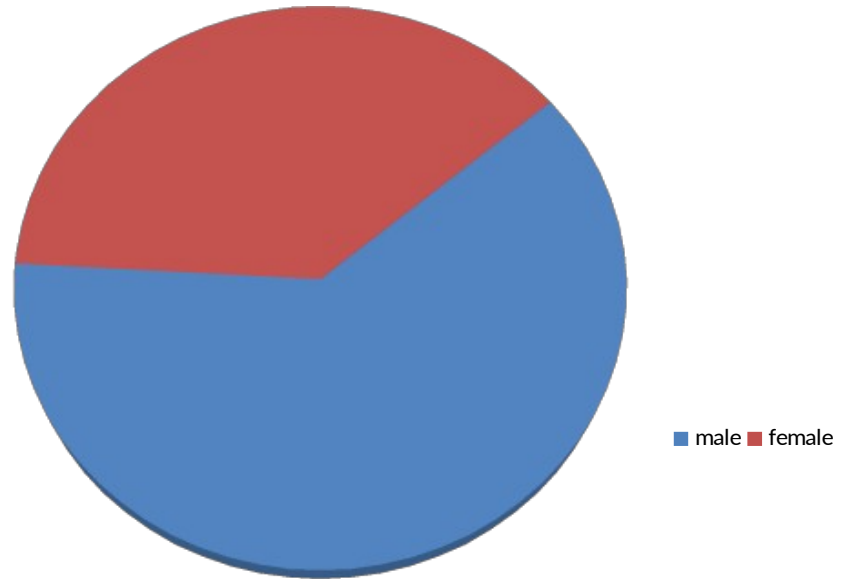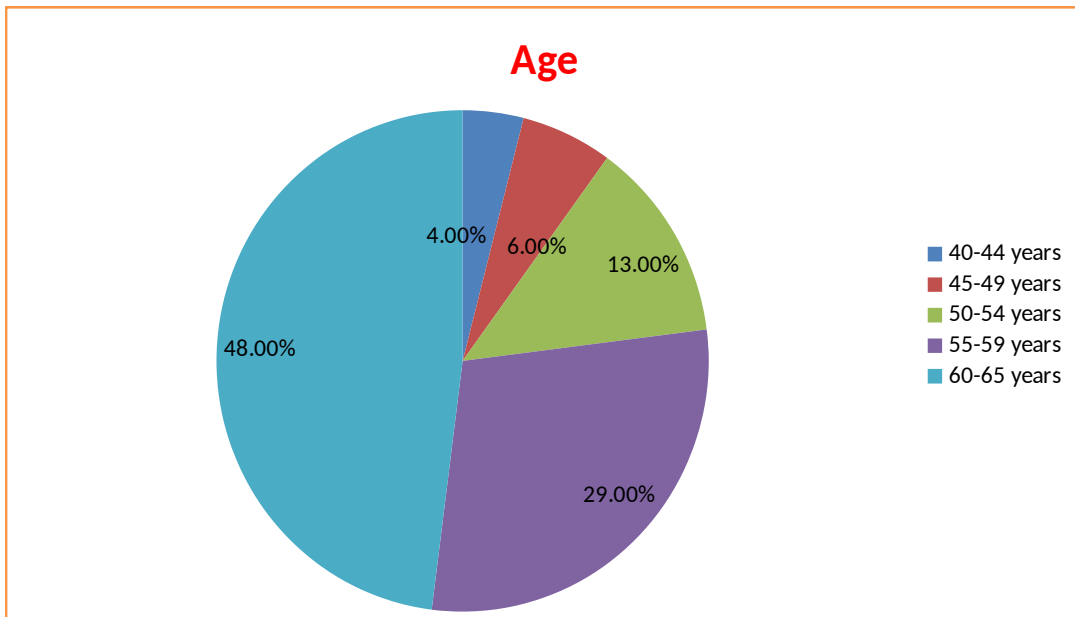
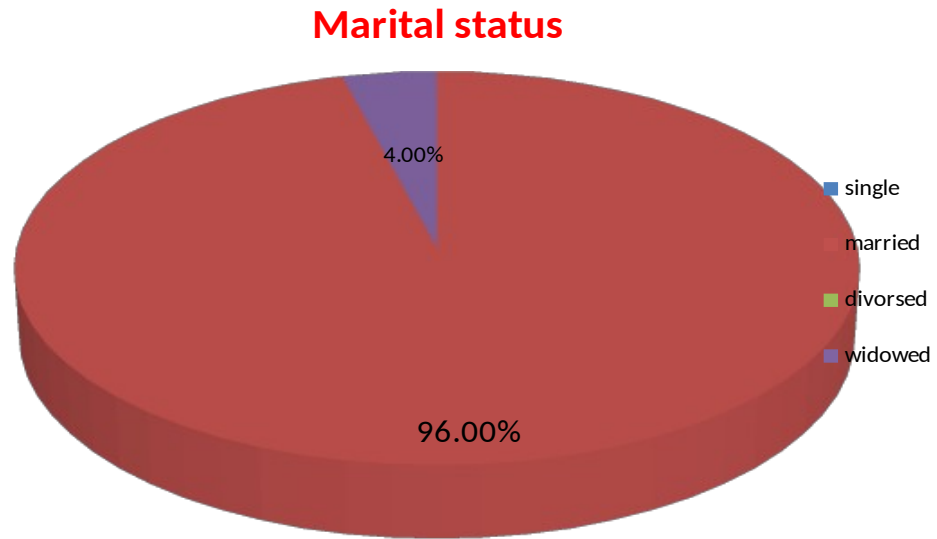Figure 2: Gender of respondents

Figure 3: Age of respondents

Marital status

Figure 4: Marital status of respondents
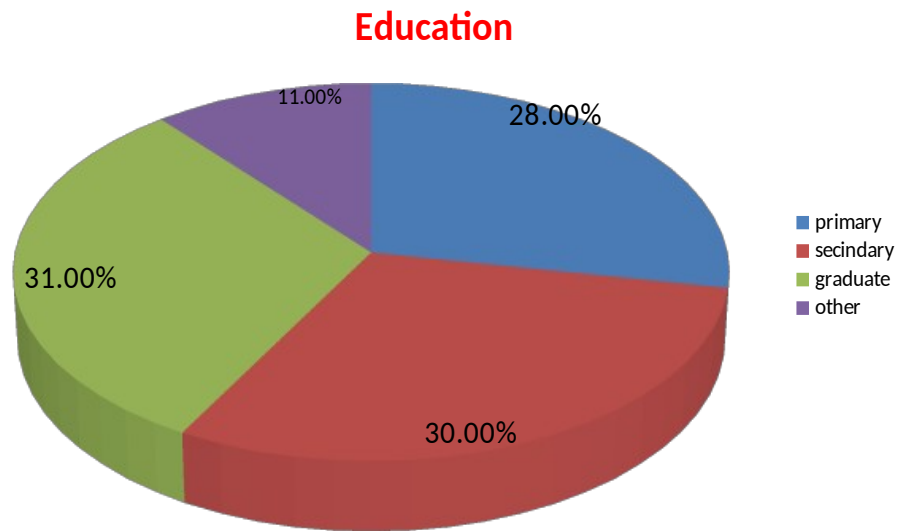
Education

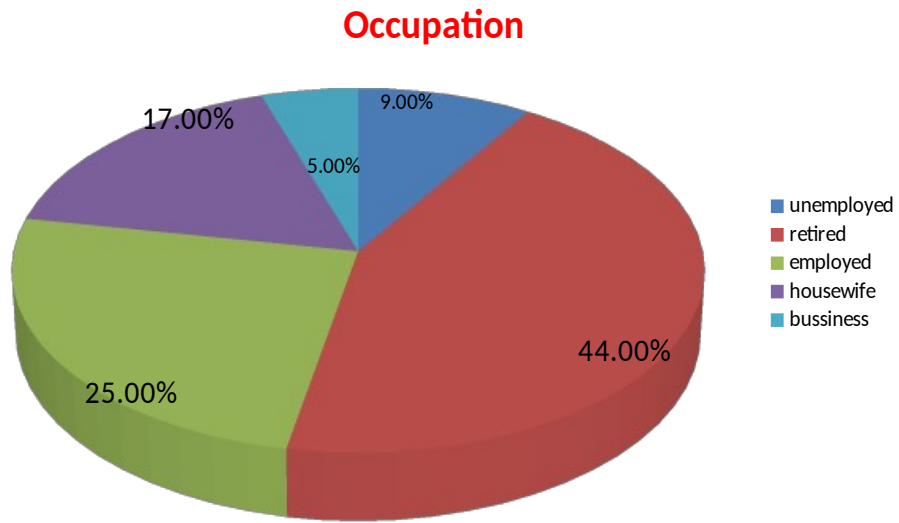Figure 5: Education of respondents

Occupation

Figure 6: Occupation of respondents
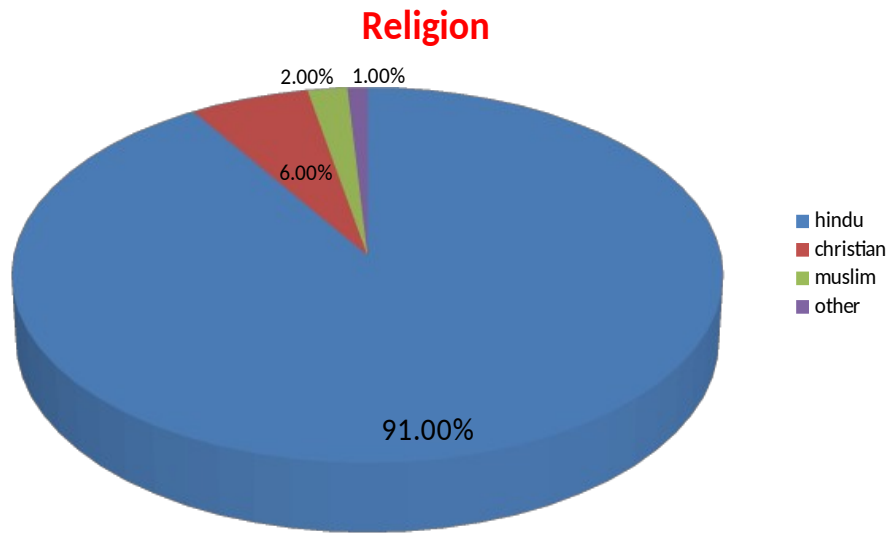
Religion

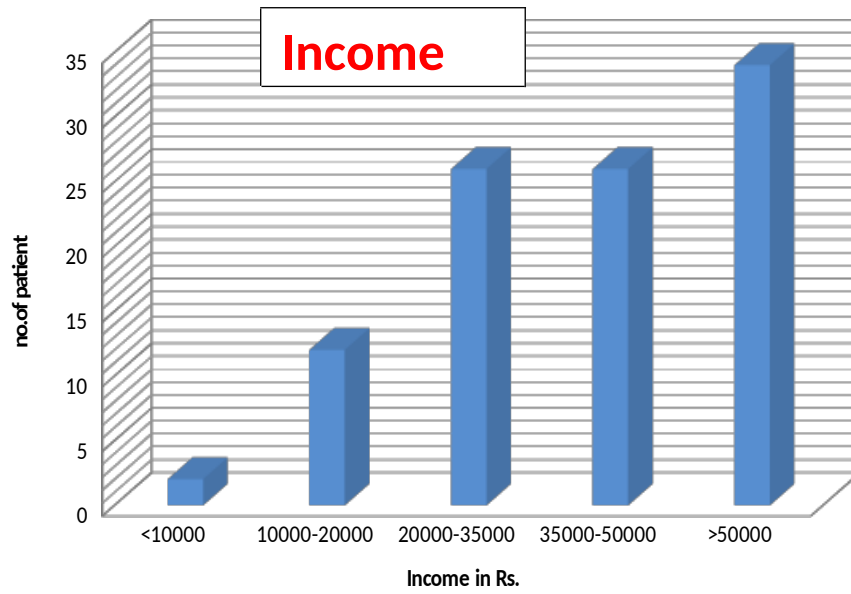Figure 7: Religion of respondents
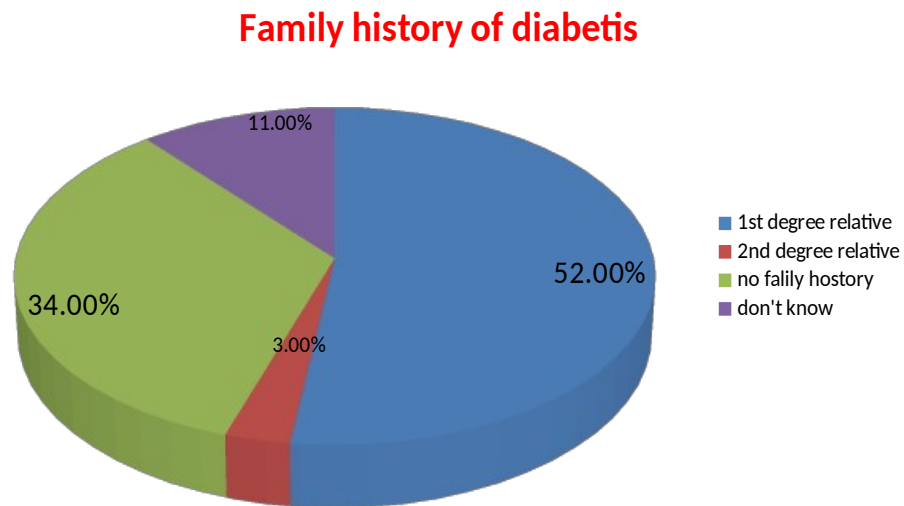
Figure 8: Income of respondents

Figure 9: Family history of diabetes

Duration of diabetis

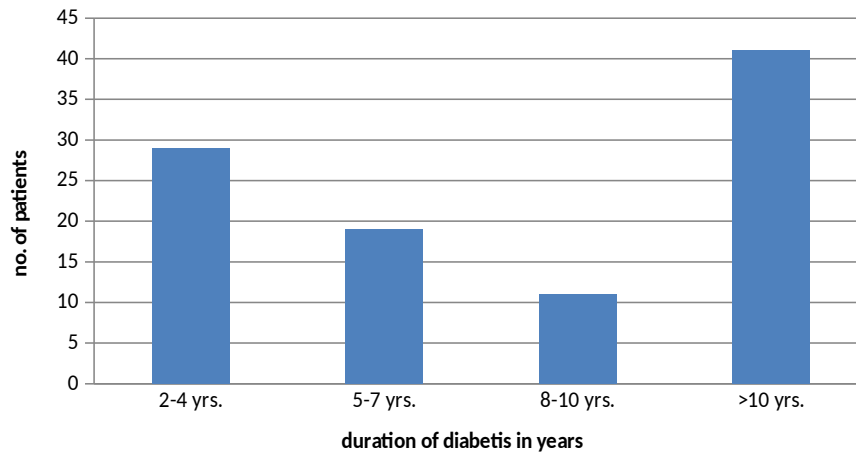Figure 10: Duration of diabetes

SELF CARE PRACTICES OF RESPONDENTS

One objective of the study was to "analyze the self care practices among selected diabetic patient". The Researches have assessed self care practices with selected components such as dietary pattern, Exercise, Medication, blood glucose monitoring, foot care, and stress management. Researches prepared the tool with standard self care guide line given by American diabetic association. In each component the researches have given sub component which was patient prospective carrying weight age from 5 to 1, i.e. (5) for doing always and (1) for doing it never.

Graphical representations of our selected components are given below:
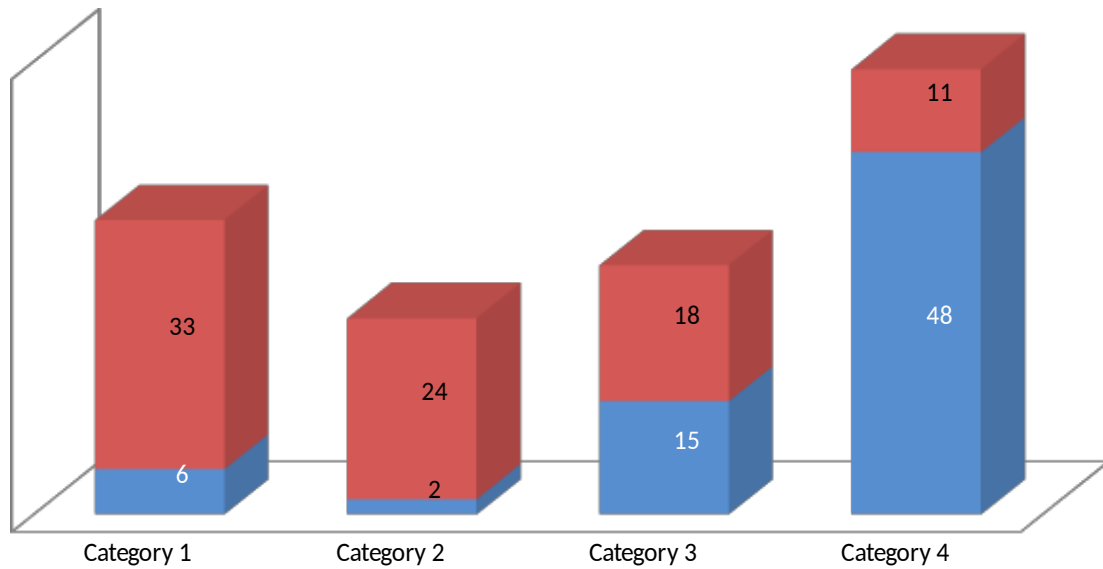
Component 1: Diet

Figure 11: Self care practices in diet

- ■ Total no. of people doing practices always.
- ■ Total no. of people doing practices never.

Cat.1- Following dietary recommendation given by health care people

Cat.2- Use of low glycemic index food.

Cat.3 - Followed fixed meal time.

Cat.4 - Weight monitoring.
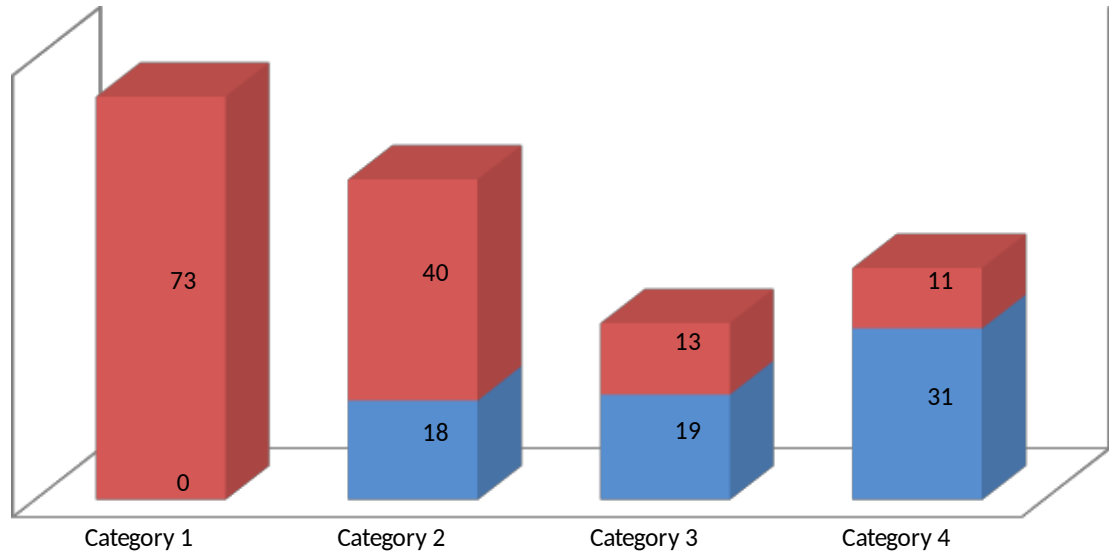
Component 2: Medication

Figure 12: Self care practices in medication

■ Total no. of people doing practices always.

■ Total no. of people doing practices never.

Cat.1 – Followed instruction.

Cat.2 – Never miss drug.

Cat.3 - Active involvement in treatment.

Cat.4 – Update self with treatment.
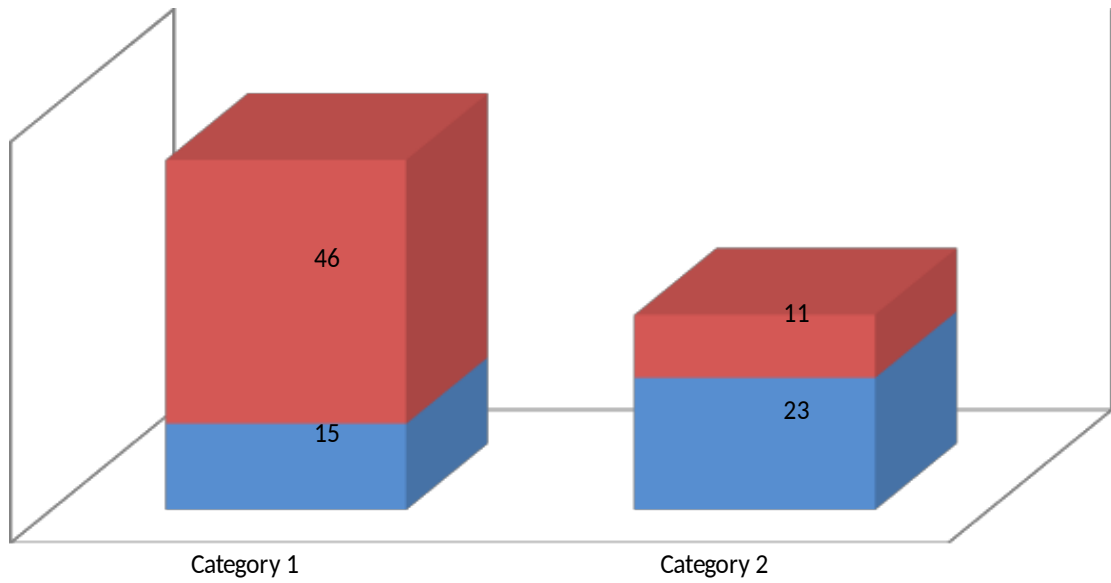
Component 3: Exercise

Figure13: Self care practices in exercise

■ Total no. of people doing practices always.

■ Total no. of people doing practices never

Cat.1 – Daily 30 min. walk.

Cat.2 – Be more active throughout a day.
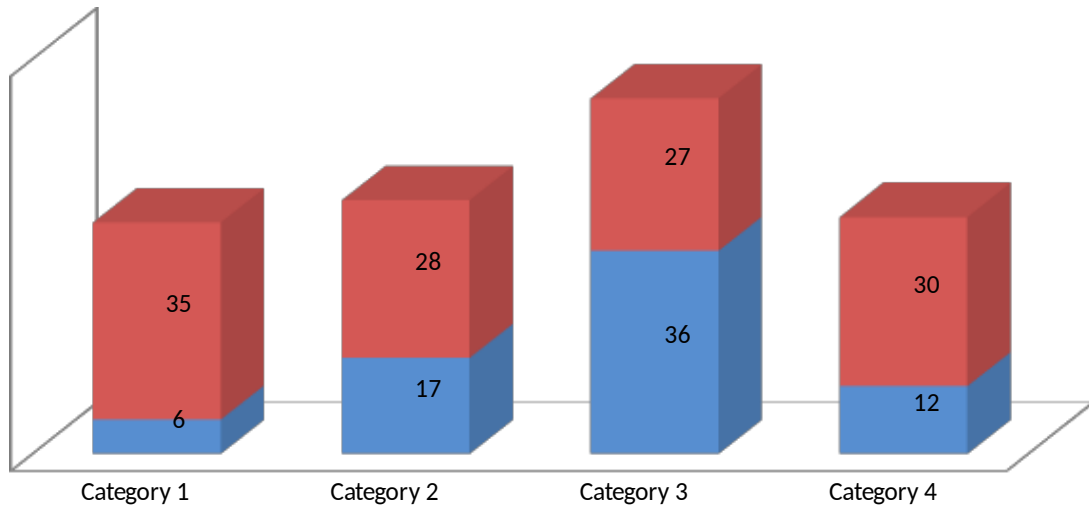
Component 4:
Blood glucose monitoring

Figure 14: Self care practices in blood glucose monitoring

█ Total no. of people doing practices always.

█ Total no. of people doing practices never

Cat.1 – Checking blood glucose as recommended by health care personnel.

Cat.2 – Keeping record of monitoring.

Cat.3 – Able to interpret blood glucose monitoring.

Cat.4 – Concerning health care personnel.
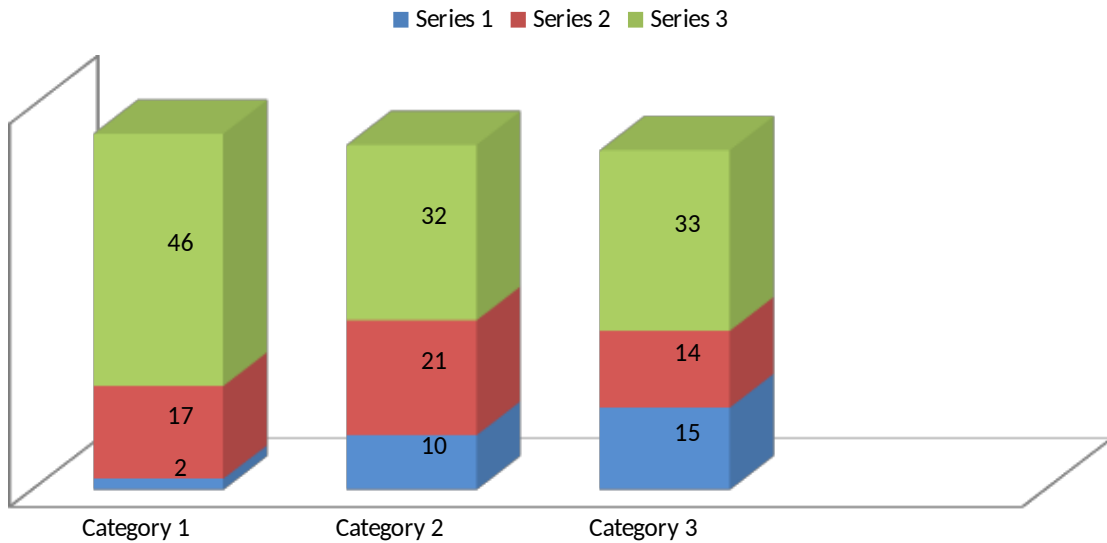
Component 5: Foot care

Series 1   Series 2   Series 3

46		32		33	
17		21		14	
2		10		15	
Category 1		Category 2		Category 3	

Figure 15: Self care practices in foot care

■ Total no. of people doing practices always

■ Total no. of people doing practices never.

■ Total no. of people doing practices sometimes.

Cat.1 – Check feet for colour change, wounds, cracks etc.

Cat.2 - Drying well between toes.

Cat. 3 – Inspect inner surface of shoes for foreign objects or torn lining.

Component 6: Stress

■ always ■ sometime ■ never
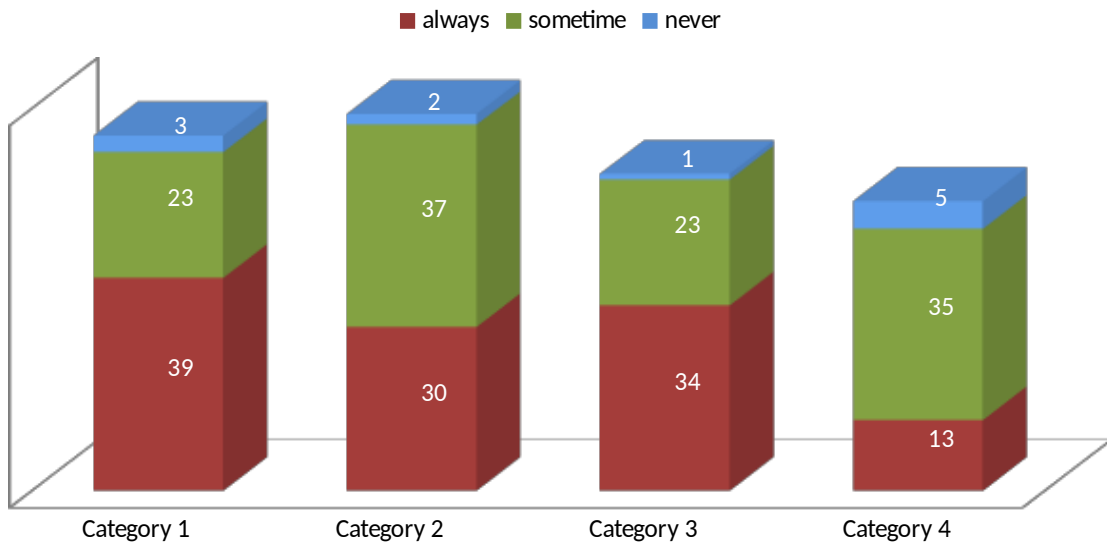

Figure 16: Self care practices in management of stress

■   Total no. of people doing practices always.

■   Total no. of people doing practice sometime.

■   Total no. of people doing practices never.

Cat.1 – Get enough sleep (7-8 hours)

Cat. 2– Talk with family and friend.

Cat.3 – Remember to laugh.
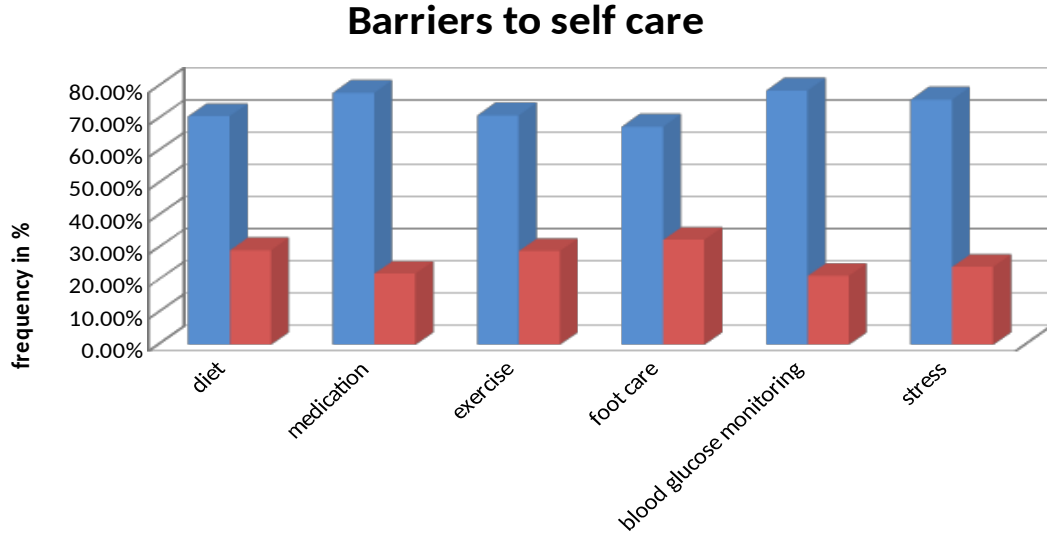
Barriers to self care

Figure 17: Barriers to self care practices

The result revealed that, out of 100 respondents 29.30% had barriers in diet, 22% respondents had barriers in medication, 29% respondents had barriers in exercise, 32.5% respondents had barriers in foot care, 21.3% people had barriers in blood glucose monitoring & 24.1% respondents had barriers in stress.

ASSOCIATION OF BARRIERS TO SELF CARE PRACTICES & DEMOGRAPHIC DATA

GENDER

Table II: Association of gender & barriers to self care practices

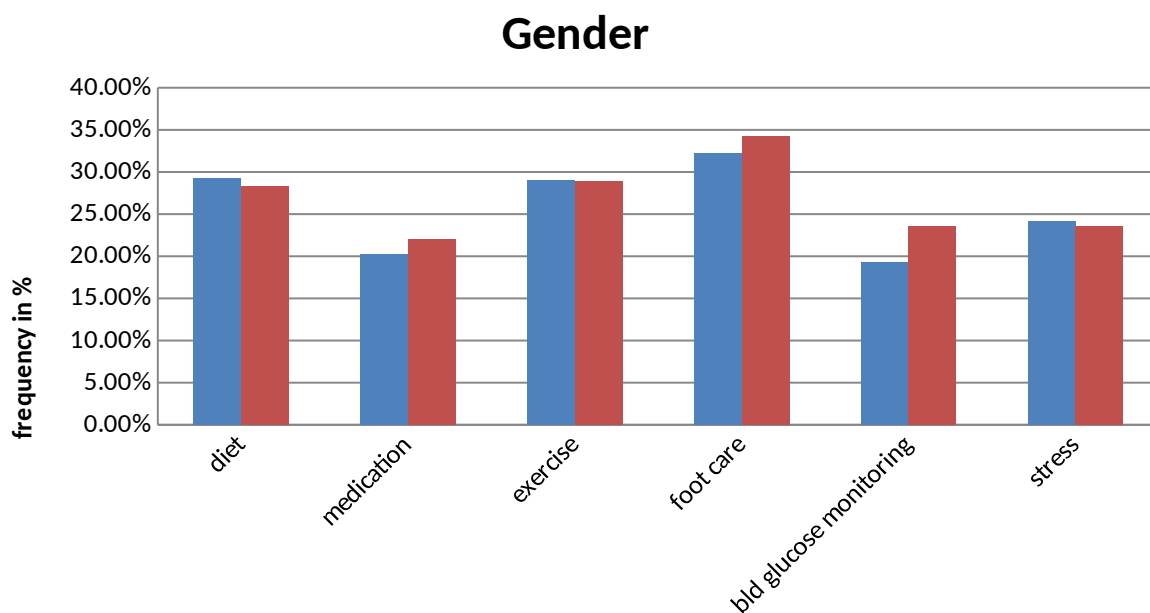|	Diet	Medication	Exercise	Foot care	Blood glucose monitoring	Stress
Male	44 (29.3%)	13 (20.96%)	18 (29.03%)	20 (32.25%)	12 (19.35%)	15 (24.18%)
Female	11 (28.3%)	8 (21.96%)	11 (28.94%)	13 (34.21%)	9 (23.68%)	9 (23.68%)

Gender

Figure 18: Association between gender & barriers to self care practices

The result shows that, the more barriers are in the foot care to both male & females. Males are having more barriers in diet, exercise & stress compare to females. Females having maximum barriers in medication, foot care & blood glucose monitoring.

AGE

Tables III: Association between age & barriers to self care practices

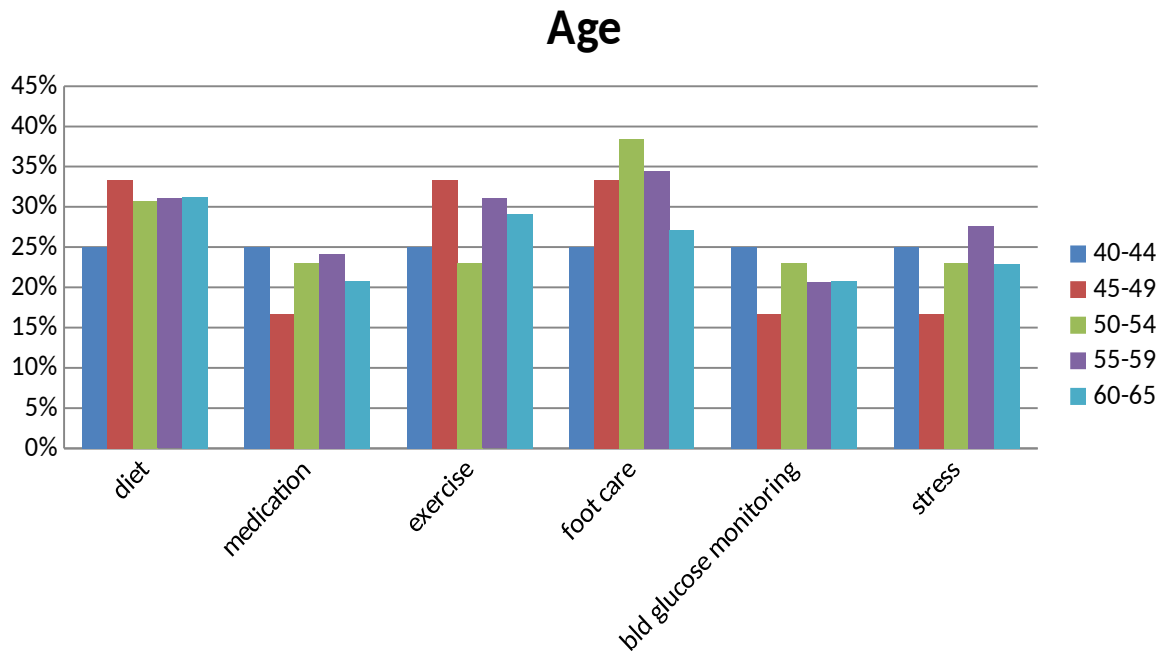|	Diet	Medication	Exercise	Foot care	Blood glucose monitoring	Stress
40-44	1 (25%)	1 (25%)	1 (25%)	1 (25%)	19 (25%)	1 (25%)
45-49	2 (33.3%)	1 (16.66%)	2 (33.33%)	2 (33.33%)	1 (16.66%)	1 (16.66%)
50-54	4 (30.77%)	3 (23.07%)	3 (23.07%)	5 (38.46%)	3 (23.07%)	3 (23.07%)
55-59	9 (31.04%)	7 (24.13%)	9 (31.03%)	10 (34.48%)	6 (20.68%)	8 (27.58%)
60-65	15 (31.2%)	10 (20.83%)	14 (29.1%)	13 (27.08%)	10 (20.83%)	11 (22.91%)
Standard Deviation	5.8	3.9	5.54	5.16	7.16	4.49

Age

Figure 19: Association between age & barriers to self care practices

      The above result shows that, in initial stage the barriers were less. Later on there acceptance of disease & in old age various factors such as physical condition, family separation, retiredness contributing to various barriers.

 MARITAL STATUS

Table IV: Association between marital status & barriers to self care practices

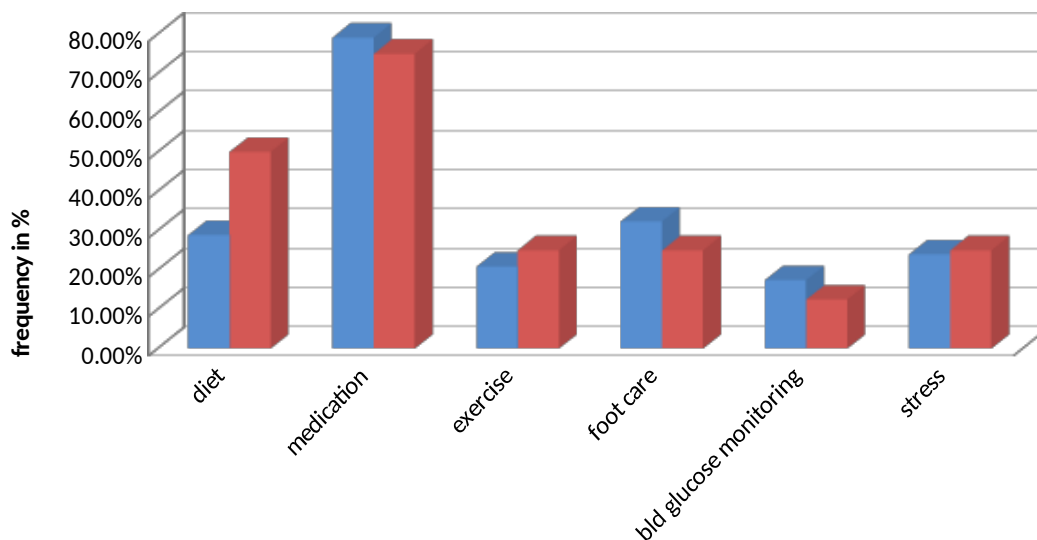|	Diet	Medication	Exercise	Foot Care	Blood Glucose	Stress
Married	28 (28.5%)	76 (79.1%)	20 (20.83%)	31 (32.29%)	16 (17.39%)	23 (23.95%)
Widowed	2 (50%)	3 (75%)	1 (25%)	1 (25%)	1 (12.5)	1 (25%)

Mariral Status

Figure 20: Association between marital status & barriers to self care

The above result showed that, in widowed due to more responsibility, less motivation there was more barrier in diet, stress exercise. Whereas in married peoples foot care, blood glucose, medication barriers found more.

EDUCATION

Table V: Association between education & barriers to self care

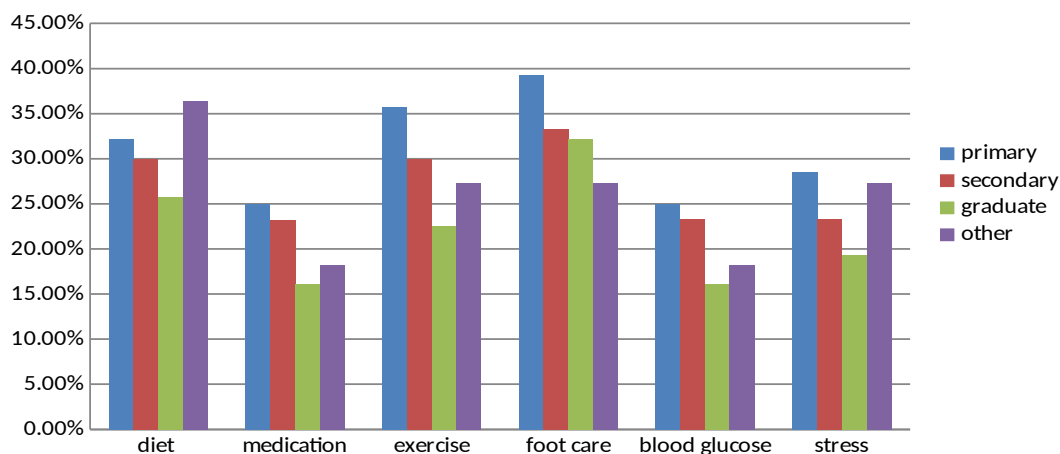|	**Diet**	**Medication**	**Exercise**	**Foot Care**	**Blood Glucose**	**Stress**
Primary	9 (32.14%)	7 (25%)	10 (35.71%)	11 (39.28%)	7 (25%)	8 (28.57%)
Secondary	9 (30%)	7 (23.33%)	9 (30%)	10 (33.33%)	7 (23.33%)	7 (23.33%)
Graduate	8 (25.8%)	5 (16.12%)	7 (22.58%)	10 (32.25%)	5 (16.12%)	6 (19.35%)
Other	4 (36.4%)	2 (18.18%)	3 (27.27%)	3 (27.27%)	2 (18.18%)	3 (27.27%)

Education

Figure 21: Association between education & barriers to self care practices

   The above result showed that educated peoples seems to have fewer barrierstha less educated people except in diet may be because of their busy schedule & not adhere to the timing & type of food. The result showed that there are maximum barriers in foot care.

OCCUPATION

Table VI: Association between occupation & barriers to self care practices

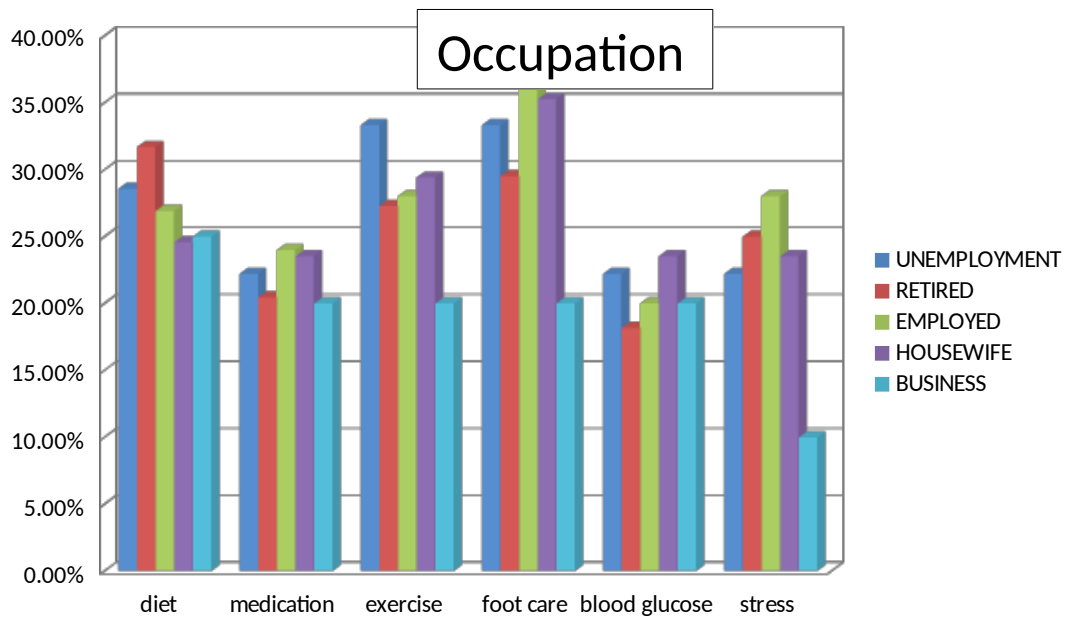| Component	Diet	Medication	Exercise	Foot care	Blood Glucose Monitoring	Stress management
Unemployed	4 (28.57%)	2 (22.22%)	3 (33.33%)	3 (33.33%)	2 (22.22%)	2 (22.22%)
Retired	13 (31.70%)	9 (20.45%)	12 (27.27)	13 (29.54%)	8 (18.18%)	11 (25%)
Employed	7 (26.92%)	6 (24%)	7 (28%)	10 (40%)	5 (20%)	7 (28%)
Housewife	4 (24.6%)	4 (23.52%)	5 (29.41%)	6 (35.29%)	4 (23.52%)	4 (23.52%)
Business	1 (25%)	1 (20%)	1 (20%)	1 (20%)	1 (20%)	1 (10%)

Figure 22: Association between occupation & barriers to self care practices

The above result showed that, the employed peoples are having maximum barriers in foot care, stress & adherence to medication

INCOME

Table VII: Association between income & barriers to self care practices

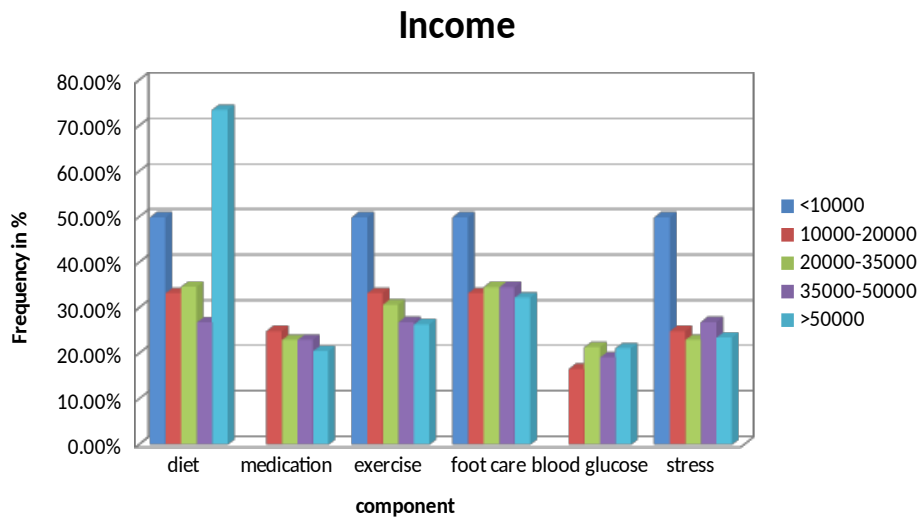|	DIET	MEDICATION	EXERCISE	FOOT CARE	BLOOD GLUCOSE	STRESS
<10000	1 (50%)	0	1 (50%)	1 (50%)	0 (0%)	1 (50%)
10000-19999	4 (33.3%)	3 (25%)	4 (33.33%)	4 (33.33%)	2 (16.66%)	3 (25%)
20000-34999	9 (34.7%)	6 (23.07%)	8 (30.76%)	9 (34.61%)	6 (21.42%)	6 (23.07%)
35000-49999	7 (26.9%)	6 (23.07%)	7 (26.91%)	9 (34.61%)	5 (19.23%)	7 (26.92%)
>50000	25 (73.5%)	7 (20.58%)	9 (26.47%)	11 (32.35%)	7 (21.21%)	8 (23.52%)

Income

Figure 23: association between income & barriers to self care practices

The result showed that, peoples from highest & lowest income were having maximum barriers in diet & in other components low income group having maximum barriers.

RELIGION

Table VIII: Association between religion & barriers to self care practices

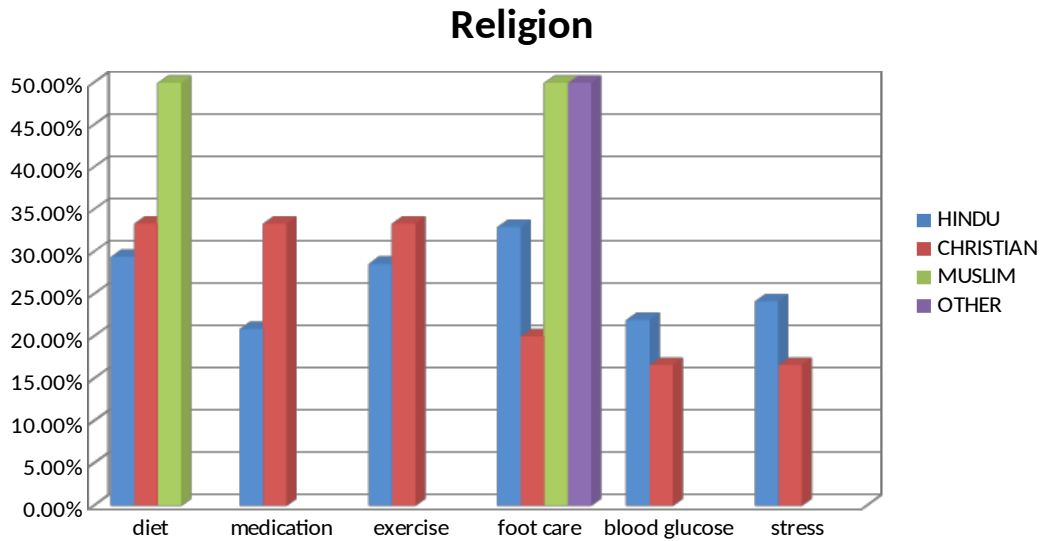| Component	Diet	Medication	Exercise	Foot care	Blood glucose Monitoring	Stress management
Hindu	27 (29.4%)	19 (20.87%)	26 (28.57%)	30 (32.96%)	20 (21.97%)	22 (24.17%)
Christian	2 (33.3%)	2 (33.33%)	2 (33.33%)	1 (20%)	1 (16.66%)	1 (16.66%)
Muslim	1 (50%)	0	0 (0%)	1 (50%)	0 (0%)	0 (0%)
Other	0 (0%)	0	0 (0%)	1 (50%)	0 (0%)	0 (0%)

Religion

Figure 24: Association between religion & barriers to self care practices

The above result showed that Muslim peoples having maximum barriers in diet & foot care. Hindus are more compliance to diet, medication & exercise. Christians are showing more attitude towards foot care, blood glucose monitoring & stress.

FAMILY HISTORY

Table IX: Association between family history & self care practices

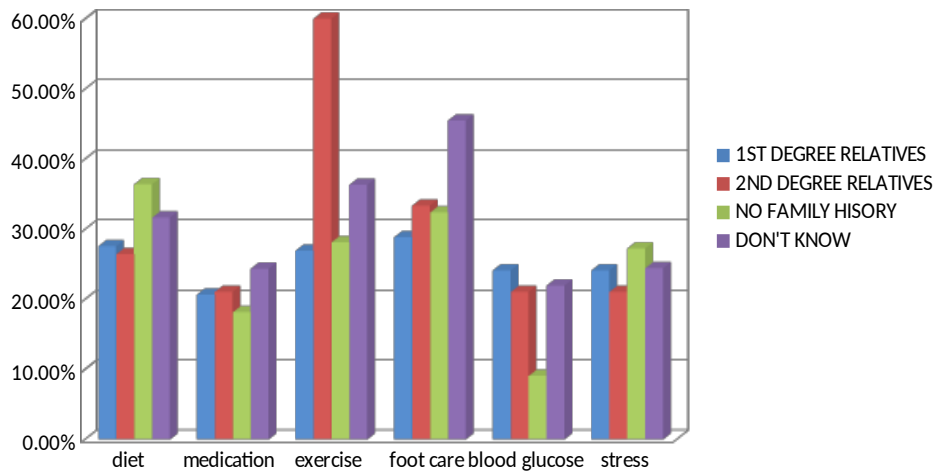|	DIET	MEDICATION	EXERCISE	FOOT CARE	BLOOD GLUCOSE	STRESS
1ST DEGREE RELATIVE	8 (27.6%)	6 (20.68%)	14 (26.92%)	15 (28.84%)	7 (24.13%)	7 (24.13%)
2ND DEGREE RELATIVE	5 (26.4%)	4 (21.05%)	3 (60%)	1 (33.33%)	4 (21.05%)	4 (21.05%)
NO FAMILY HISTORY	4 (36.4%)	2 (18.18%)	9 (28.12%)	11 (32.35%)	1 (9.09%)	3 (27.27%)
DON'T KNOW	13 (31.7%)	10 (24.39%)	4 (36.36%)	5 (45.45%)	9 (21.95%)	10 (24.39%)

Family History

Figure 25: Association between family history & barriers to self care practices

Result showed that because of direct exposure to needs, complications & life style management of 1st & 2nd degree relativespeople are having more compliaces towards self care activities.

 DURATION

Table X: Association between duration of diabetes & barriers to self care practices

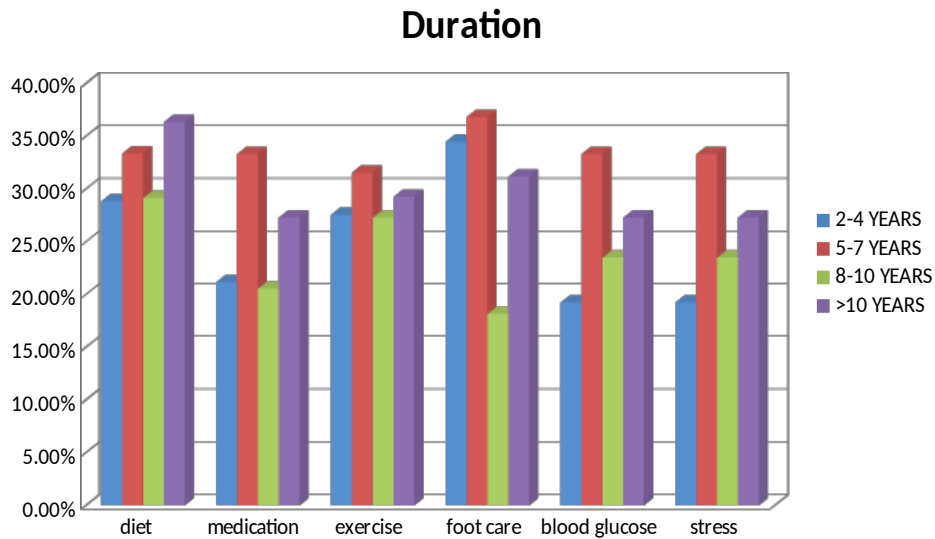| Component	diet	medication	exercise	Foot care	Blood glucose monitoring	Stress management
2-4 Yrs.	15 (28.84%)	11 (21.15%)	8 (27.58%)	10 (34.48%)	10 (19.23%)	10 (19.23%)
5-7 Yrs.	1 (33.37%)	1 (33.33%)	6 (31.57%)	7 (36.84%)	1 (33.33%)	1 (33.33%)
8-10 Yrs.	10 (29.14%)	7 (20.58%)	3 (27.27%)	2 (18.18%)	8 (23.52%)	8 (23.52%)
>10 Yrs.	4 (36.36%)	3 (27.27%)	12 (29.26%)	13 (31.70%)	3 (27.27%)	3 (27.27%)

Duration

Figure 26: Association between duration of diabetes & barriers to self care practices

The above result showed that initially there were fewer barriers. As duration of diabetes increases barriers are increases.

DISCUSSION

The purpose of the study is to analyze barrier to compliances of self care practices. The study tried to analyze self care practices & barriers to compliances of self care practices. In this study the majority of subject 48% was found in age group of 60-65 years. This study showed that 59.2% respondents adhere to self care practices where 40.8% participants are not adhere to self care practices. This result is higher than study done in Ethiopia. The study in Ethiopia showed that 51.5% respondents adhere to self care practices & 48.5% not adhere to self care practices.

This study shows barrier to those self care practices, where we found people are having good compliances in area such as medication (78%) and (22%) barrier, blood glucose monitoring (21.3) where other area such as foot care, people are facing maximum barrier and poor compliances,(32.58%) which is mainly associated with no knowledge related to technique of foot care. People are having moderate barrier for exercise where barriers such as co-morbid condition and time factor are maximum encountered. Another same study done, which showed that maximum barriers were found in medication & exercise.

Diabetes self practices such as diet, medication, exercise, foot care etc. involve & depend on guidance from the health care provider, meal preparation in family context & exercising with partner or in a group.

LIMITATIONS

1. Composition of respondents is small

2. Only limited factors are there

3. The study was carried out in only one hospital in Mumbai

4. The study was limited to only patients who are available at the time of data collection in the hospital

5. The period of data collection were short

CONCLUSION

Despite the important role of self care practices in management of diabetes were recognized to be useful & effective in achieving diabetes control & preventing its complications. The finding of the study showed that participants were more adhere to diet, medication & blood glucose monitoring wherein maximum barriers found in foot care & exercise.

More emphasis should be given on foot care & exercise is need from health care provider as well as continuous monitoring of patients' compliance to glycemic control & diabetes self care behaviours.

RECOMMENDATIONS

➢ The same study can be conducted in community
➢ Family members should inform about their important role in encouraging patient to undergo a glycemic control or self care practices
➢ Health care personnel must increase patient awareness towards the importance all domains of self care practices & they should able to identify the barriers to compliance of self care practices.
➢ The study can be done on larger samples from different ares of Mumbai, India.
➢ The study can be conducted in rural areas of country.
➢ The health care perssonels should give more emphasis on foot care councelling along with other components.

ACKNOWLEDGEMENT

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APPENDICES

APPENDIX I- Ethical Committee approval letter

LETTER SEEKING EXPERT OPINION IN VALIDATING THE CONTENT & CONSTRUCT OF THE TOOL

From

Research Group –I
FIN, Mumbai.

To,

—— _ _ _ _ _ _ ——

—— _ _ _ _ _ _ ——

SUB: CONTENT VALIDITY OF THE TOOL.

Respected Madam/Sir,

We the undersigned students have undertaken the following Research topic for our research project in partial fulfillment of the P. B. B.Sc. Nursing program.

"A study to analyze barriers to compliance of self care practices among patients with diabetes in selected area of Mumbai."

OBJECTIVES:-

1. To analyze the self care practices among patient with diabetes.
2. To identify barriers to compliance among patient with diabetes.
3. To justify association between barriers to compliance among patient with diabetes.

May we kindly request you to validate the content and construct of the tool & give your valuable suggestions.

Your sincerely,

RESEARCH GROUP

Ms. Yojana Jadhav

Mrs. Samrudhi Shinde

Mrs. Rekha kumbhar

Ms. Ankita Bhoir

Ms. Nirmal Chilvante

APPENDIX II-   COVERING LETTER TO RESPONDENTS TO PARTICIPATE IN THE RESEARCH

Dear participant (Sir /Mam),

You are invited to participate in this research study that will determine the Self care practices & barriers to compliance of these practices in diabetic patients. The study will be conducted in the premises of selected hospital in Mumbai. The research is conducted by us, students of FIN under the guidance of the teacher as a requirement of our degree courses – Post Basic B.Sc. Nursing studies. The study has been reviewed by ethical committee of FIN.

You have been asked to participate in this study because you all belong to the study setting which we have selected. The purpose of the study is to identify self care practices &barriers to compliances of self care practices.

To achieve this, a Questionnaire will be given to you. The questions in the questionnaire will ask you in general about your demographics, Diet, Exercise,

Medication, Foot care, Blood glucose monitoring & Stress. The data collection will take 30 minutes and will be collected in selected hospital unit.

Your participation in this study is entirely voluntary. You may refuse to participate or choose to stop the participation at any point, without any form of penalty or negative consequences of any kind to you.

Your response will be held strictly confidential .The result of study may be published in scientific journal or presented at professional meeting.

You may not benefit directly as a result of taking part in the study but knowledge may be generated through the study that might benefit someone and further studies of similar kind.

There will be no risk or discomfort in this research. No compensation will be there for participating in this study.

Your signature in the attached consent form certifies that you have read and understood the information presented here and that you have decide to participate.

You will be given a copy of this consent form if desire by you. We are open to all clarifications before you sign in the consent form.

Our sincere request to you is to please be honest in your responses so that we conclude with genuine data. Your collaboration is extremely appreciated.

Thanking you ,

Yours sincerely,

2nd year Post Basic B.Sc nursing students,

Fortis Institute Of Nursing

APPENDIX III- INFORMED CONSENT

(Please read the document and sign it at the bottom of the page if you consent to participate in the investigate project).

I understand that the purpose of this research is to analyse barriers to compliance of self care practices among patients with diabetes in a selected area in Mumbai.

I understand that by participating in this research I will be asked to complete a questionnaire. There will be neither risk nor discomfort to me with the participation in this research. I will be given 20-30 minutes for the completion of this questionnaire.

I understand that the participation in this study is absolutely voluntary and that I can withdraw from the study at any time without giving any reason and without giving any kind of loss to me. I also understand that this information I provide will be treated confidential, so that it is impossible to trace this information back to me individually , as all raw data will be kept in a secured area by the researcher . I understand that in accordance with the data protection at, this information will be retained indefinitely .   I also understand that the result of this research will be reported as aggregate summary data and no individually identifiable information will be provided, I also have a right to view the result of this research , if I wish to do so . A copy of the result may be obtained by me contacting the researcher at Fortis Institute Of Nursing, Mulund .

I have read and understood the foregoing information explaining the purpose of this research and my rights and responsibilities as a respondent. My signature below designates my consent to participate in this research, according to terms and conditions outlined above.

Name :-

Signature:-

 APPENDIX IV- TOOL

TOOL TO ASSESS SELF CARE PRACTICES AND THEIR BARRIERS AMONG DIABETIC PATIENT

Instructions: Read the following questions carefully and choose the appropriate answer. Mark the click   in appropriate box for your answer.

DEMOGRAPHIC DATA: Date:

1. Gender: Male ☐   Female ☐

2. Age in years :

3.   Height (in cm):

4. Weight (in kg):

5. Marital status:
   ☐ Single ☐ Married ☐ Divorced ☐ widowed\widower

6. Education:
   ☐ Primary ☐ Secondary ☐ Graduate ☐ Other (specify)

7. Occupation (specify): _____

8. Religion:
   ☐ Hindu ☐ Christian ☐ Muslim ☐ Others

9. Family income (monthly/specify):

10. Does anyone else in your family have diabetes?
    ☐ 1st degree relative (parents/ sibling/children)
    ☐ 2nd degree relative grandparents /aunt/uncle/their children)
    ☐ No family history
    ☐ Don't know

11. Duration of diabetes:
    ☐ 2-4 years ☐ 5-7 years ☐ 8-10 years ☐ More than10 years

12. History of medical illness :
    Specify _____

13. History of surgical illness :
    Specify _____

DIABETES SELF CARE & BARRIER TOOL

Dear respondent,

Below are statements about yourself. Five possible modes of responses are provided: Always=5, Often= 4, Sometimes = 3, Rarely=2 and Never= 1. Read each question carefully and put a tick mark in any one of five alternative response modes to indicate yourself care with the particular content of the statements. Do not think for too long while answering. Answer considering your activities in last 15 days. Your responses will be kept confidential.

Sr No.	Statement	Always	Often	Sometimes	Rarely	Never

1.	Diet					
1.1	Strictly follow dietary recommendations given by health care personnel					
1.2	A dietary pattern that include carbohydrate from fruits, whole grain, legumes and low fat milk					
1.3	Reduce caloric sweetener include sugar from alcohol, cold drinks, maida etc.					
1.4	Limit dietary cholesterol (reduced intake of butter, ghee, coconut cream etc.)					
1.5	Followed fixed time for eating					
1.6	Frequency of meals at least 4 times per day					
1.7	Measured food before eating meal					
1.8	Use sugar substitutes in place of sugar, honey or syrup					
1.9	If taken Sucrose containing food as a substitute for a carbohydrate in the meal plan then covered with insulin oral medication					
1.10	Monitoring weight					

Barriers:

Read the following barriers carefully and put tick mark on those barriers which are appropriate to you.

☐ No one has told me about my diet plan.

☐ Forgetting my diet

☐ My festivals and traditions made me to break my diet rule.

☐ No one else eat food like I have at home

☐ Too few foods I like that are included in my diet

☐ Think of high cost of food

☐ Unavailability of the food

☐ I am fed up to have same food

Sr No.	Statement	Always	Often	Sometimes	Rarely	Never
2.	**Medication**					
2.1	I take my antidiabetic drug as per instruction by health care personnel					
2.2	I never miss my diabetic drug dose					
2.3	I use daily medication reminder					
2.4	I never do modification in the timing of diabetic drug					
2.5	I actively involve myself in treatment decision					
2.6	Discussing difficulties encountered while taking antidiabetic drug with health care personnel					
2.7	Updating self by complete knowledge about disease and available management of medication and injectable devices					

Barriers:

☐ Costly

☐ Too busy

☐ Forgot to take

☐ Don't like to take medicine

☐ Lack of motivation

☐ Lots of discomfort while taking antidiabetic drug.

☐ There are lots of side effect of drug

☐ Lack of privacy

☐ Multiple drug therapy

☐ Not understanding instruction given by health care personnel

☐ Lack of knowledge

☐ Unfriendly relation with health care personnel

Sr No.	Statement	Always	Often	Sometimes	Rarely	Never
3.	**Exercise**					
3.1	Atleast 30 min. of physical activity on daily basis (e.g. walking, jogging etc.)					
3.2	Brisk walking					
3.3	Bicycling / stationary cycling					
3.4	Swimming					
3.5	Stair climbing					
3.6	Meditation / yoga					
3.7	Attaining gym					
3.8	Attaining classes that involve strength training					
3.9	Be more active throughout the day					
3.10	10 min. walk after each meal					

Barriers:

☐ Lack of time / too busy

☐ Forgetting to exercise

☐ Problems with my health

☐ Feeling tired or depressed

☐ Lack of facilities

☐ Lack of motivation

☐ Costly

☐ Not have equipment to do exercise

☐ Don't like exercises

☐ Feel intimidated or embarrassed in an exercise setting

☐ Family obligations may make it difficult to exercise

Sr No.	Statement	Always	Often	Sometimes	Rarely	Never
4.	**Foot care:**					
4.1	Check feet for colour change, wound, cracks etc.					
4.2	Washing feet					
4.3	Drying well between toes					
4.4	Cut toenails					
4.5	Inspecting inner surface of shoes for foreign objects or torn lining					
4.6	Used moisturizing cream on feet					
4.7	Wearing shoes with socks at all times					
4.8	Protect feet from hot and cold					
4.9	Tested water before submerging their feet in water					

Barriers:

☐ Too busy

☐ Foot care is not going to make any difference in my health status

☐ Less interest in foot care

☐ Unavailability of material like moisturize cream

☐ Unaware about techniques of foot care

☐ Time consuming

☐ Costly

Sr No.	Statement	Always	Often	Sometimes	Rarely	Never
5.	**Blood glucose monitoring:**					
5.1	Checked my blood glucose as recommended by health care					

	personnel					
5.2	Keeping record of blood glucose monitoring					
5.3	I am able to interpret blood glucose monitoring result					
5.4	Concerning to health care personnel regarding blood glucose level.					

Barriers:

☐ It is not going to help out to treat my disease

☐ I am scared

☐ Costly

☐ Time consuming

☐ Each time I loss my blood

☐ Unavailability of equipment

☐ My health care personnel not taught me

☐ I am not intetested

☐ No knowledge regarding blood glucose monitoring

Sr No.	Statement	Always	Often	Sometimes	Rarely	Never
6.	**Stress**:					
6.1	Get enough sleep(7 to 8 hrs. in night)					
6.2	Maintain social support					
6.3	Doing exercise/ meditation/ yoga					
6.4	Get involved in hobbies					
6.5	Having smile on face					
6.6	Maintain spiritual practice					
6.7	Talk with family and friends					
6.8	Remember to laugh					
6.9	Listening music					

Barriers :

☐ Too busy to do a regular stress management practice

☐

Too tired by end of the day

☐ These all practices are not going to treat my disease

☐ No one is cooperative hence become irritable

☐ Physical health prevent to take sound sleep

☐ Conflict with family members

☐ Conflict with friends

☐ Conflict with colleagues (workplace)

☐ Not happy with job structure

☐ Economical condition make me stressful