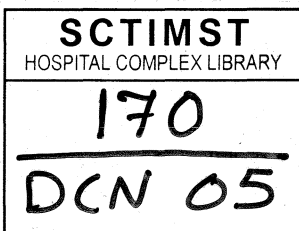
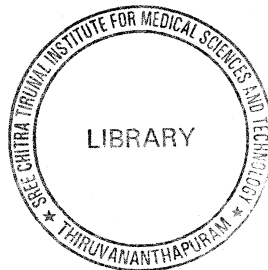


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**A STUDY TO THE KNOWLEDGE & PRACTICE
OF SELF CARE ACTIVITIES OF PATIENTS
WITH DIABETES MELLITUS, IN COMPRE-
HENSIVE ACUTE CORONARY CARE UNIT**

Project Report

SIMI SREENIVASAN



**SREE CHITRA TIRUNAL INSTITUTE FOR MEDICAL
SCIENCE AND TECHNOLOGY
THIRUVANANTHAPURAM**

2005

ACKNOWLEDGEMENT

The study has been conducted and undertaken under the inspiring guidance for Mrs. P.P. Saramma, Lecturer in nursing, Sree Chitra Thirunal of Medical Science and technology, Thiruvananthapuram. The investigator expresses sincere gratitude for their enlightening and sustained guidance.

With profound sentiments and gratitude the investigator acknowledges the encouragement and help received from the following persons for the successful completion of this study.

The investigator's first duty was to express the heartiest gratitude to "God Almighty" for his unending love, strength, guidance, wisdom, care and support in completing the research successfully.

The investigator takes this opportunity to express sincere thanks to Dr. Noble Gracious, Consultant, Diabetes Centre, TVM for giving an opportunity to conduct this study.

The investigator is grateful to Dr. A.V. George Registrar, SCTIMST, TVM and also sincere thanks to Dr. Jagamohan Tharakan HOD, Cardiology, Department of SCTIMST.

The investigator takes this opportunity to express sincere gratitude to Mrs. Aleyamma John (ward sister) and all staff in CACCU, SCTIMST, Tvm and also grateful to patients for their co-operation in conducting the study.


The investigator sincerely record, special thanks to the library staff of Achutha Menon for health science and studies Tvm for granting permission to utilize the library facility.

The investigator express thanks to all friends and family for help and support given through out the project work.

CERTIFICATE

Certified that this study to assess he knowledge and selfcare activities of diabetes patients admitted in CACCU bonafide work of Simi Sreeniasan, at Sree Chitra Thirunal Institute for Medical Science and Technology.

Submitted in partial fulfillment of the requirement for the Diploma in cardio vascular and Thoracic Nursing from the Sree Chitra Tirunal Institute of Medical Science and Technology.



Mrs. Saramma, P.P. M.N.
Lecturer in Nursing
SCTIMST
Thiruvananthapuram

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CHAPTER 1

INTRODUCTION

Diabetes mellitus is a flaw in the way your body handles the sugar it takes from the blood. It shortens the average life expectancy upto 15 years. In diabetic patients, the chance for the blindness is 25 times greater than the others, kidney problem 17 times and for amputation the chances are 30-40 times. The chances for cardiac problem is 2-4 times and 1 time greater for stroke. By changing the life style, this disease can be controlled. For this food modification and exercise makes a good role

BACKGROUND OF THE STUDY

According to WHO when 2025 reaches there will be 300 crore people are affected with diabetes mellitus. Notwithstanding the fact that the fundamental defect affects the carbohydrate metabolism, diabetes mellitus is a disease with a wide spread effect throughout the body and the care of diabetes patients may will comprise multiplicity of problem involving many organs and systems notably the eyes, kidneys, heart, blood vessels, & peripheral nerves.

It is likely that improved control of the underlying metabolic defect, a goal that seems within reach with various techniques currently under investigation, how the incidence of complication will fall. There can be no question that we expect in the long run the goal to be achieved in their prevention, rather than management. None the less at the present time it remains the care that the complications are the important causes of disability. The management of complication are the important of constitute an essential part of the care of many diabetic patients.

Many of the diseases today are associated with habits and life style of individuals. In this the place of communicable disease, as a public health problem in developing countries. These can be prevented by the adoption of healthier life style. The prevention of all diseases including diabetes mellitus involves action by all the sectors of the community. Government, education, industry, medical services and the people themselves. Health professional must emphasize the prevention of this disease to the rising complications. Prevention of diabetes mellitus through creating awareness about the need for change in life style of all population is challenging task for nurses.

NEED FOR STUDY

The incidence of diabetes mellitus in all classes of people is increasing day to day. Diabetes mellitus is a disease with a wide spread effect throughout the body and the care of diabetes patients may will comprise multiplicity of problems involving many organs and systems notably the eyes, kidneys, heart blood vessels and peripheral nerves.

Most of the patients admitting in Comprehensive Acute Coronary Care Unit (CACCU) with Coronary Artery Disease (CAD) have a history of diabetes mellitus. Now a- days Kerala is becoming a territory of diabetes mellitus. This disease can be controlled by the life style modification like exercise and food limitations. So assessing the awareness of patients about the disease condition, complication and proper health education need intense importance as a health personnel.

STATEMENT OF THE PROBLEM

A study to assess the knowledge and practise of self care activities of patients with diabetes mellitus, in comprehensive acute coronary care unit (CACCU), Sree Chitra Thirunal Institute of Medical Sciences and Technology (SCTIMST), Trivandrum.

DEFINITION OF TERMS

Knowledge :- Refers to the respondents verbal response to test items or diabetes mellitus.

Diabetes mellitus :- means blood sugar above

VALUES FOR DIAGNOSIS OF DIABETES - WHO 1999 GLUCOSE IN MG/DL.

	Venous Plasma
Diabetes Mellitus	
Fasting or	≥ 126
2-hr PG	≥ 200
Impaired Glucose Tolerance (IGT)	
Fasting (if measured) &	< 16
2 hr. PG	140-<200
Impaired fasting Glucose (IFG)	
Fasting	110 <126
2 hr PG (if measured)	< 140

VALUES FOR DIAGNOSIS OF DIABETES - WHO 1999 GLUCOSE IN MG/DL.

	Venous Plasma
Diabetes Mellitus	
Fasting or	≥ 110
2-hr PG	≥ 200
Impaired Glucose Tolerance (IGT)	
Fasting (if measured) &	< 110
2 hr. PG	140-<200
Impaired fasting Glucose (IFG)	
Fasting	110 <109
2 hr PG (if measured)	< 140

Self care activities :- The activities the patient had to followed to control diabetes mellitus and for preventing complications.

OBJECTIVES

1. To assess the clients awareness about the dietary regulations to maintain normal blood glucose level.
2. To find out the awareness of diabetes clients about the importance of proper medication.

METHODOLOGY

The interview approach was used in this study. The data collected from twenty five patients who are admitted in CACCU, SCTIMST, After obtaining informed consent from the patients interview was done. The questions are related to the knowledge and daily living practices. The validity of the tool were checked by the experts. The duration of the study was August to October 2005.

LIMITATIONS

Since the validity of sample is limited, randomization is not possible. Sample size was limited to 25 patients only. Time for data collection limited to one month. The assessment of knowledge was limited to responses to the objective type test items. The study was limited to patients admitted in CACCU, SCTIMST.

SUMMARY

This chapter deals with the introduction background , of the study, need and significance of the study, statement of the problem, definition, objective of the study, methodology and limitation.

CHAPTER - II

REVIEW OF LITERATURE

According to Metoo. D Studies on 2004 “ Dietary pallen of selfcare among Asian and Caucaxicum diabetes patients, diabetes mellitus is a grows pandemic and its 8 years management rest primarily with the individual. Study conducted among a group of 25 Asians and 24 caucasians diagnosed with diabetes mellitus. Data collected from Semi-structured interview and a seven day health diary explored the self care activities undertaken by the participants to establish metabolic control. The findings suggest that most of the participants were located in the moderately flexible and flexible adherence categories of diet related to self care. This study suggest that we have to explain the importance of strict adherence to the diet and exercises and other self care activities.

The association of patient trust and selfcare among patients with diabetes mellitus- a study conducted by Bords. DE and group at public health in renal north carotina, U.S.A.. The objective of this study was to determine whether patients trust in associated with reduced difficulty

and hassles in altering- life style and completing selfcare tasks .A cross sectional telephone survey and a medical record review as performed. The association of patients. Recent with self management was examined after controlling for patients demographics, physical functioning, mental healths and co-morbidities. The result was higher trust level was associated with lower levels harsles and lower difficulty in completing self care activities. So first of all higher patient trust in the health care provider is important in completing disease specific tasks.

A study conducted by M. Pilote study quality of life issues in patients with diabetes and lower extremity ulcers, patients and care givers in 1988. 14 patients with diabetes and lower extremity ulcers and caregivers participated in focus group. Semi-structured discussion reveals the patients and caregivers experience a negative impact on all domain Quality Of Life (QOL). Because of the limitation in mobility caused by the ulcer which required an adaption of a different life style. The result from this disease specific focus will allow for an improved clinical understanding with targeted interventions and contribute to the development of a disease.

Gerald shapes and colleagues made study "Body weight" implications for the prevention of heart disease and diabetes mellitus in a cohort study of middle aged men. The objective is to determine the body mass index associated with the lowest morbidity and mortality. The subjects are 7735 men aged 40-59 years at screening. There were 974 heart attacks and 245 new cases of diabetes mellitus. Heart attack and diabetes increased progressively from an index of >20 . There is an important role in controlling the body mass in controlling diabetes mellitus.

A study done by Persell SD and colleagues having the purpose to experience whether and how chronic pain affects diabeters. A cross sectional study on 1993 patients with diabetes receiving care. Multivariable regression techniques were used. Patients with chronic pains had poorer diabetes selfmanagement overall and more difficulty following a recommended exercise plan and eating plan. Individual with severe pain reported significantly poor diabetes self management.

According to Huang ES study, with an objective of promote the

individualization of treatment goals and plans for patients aged 65 and adult. Design was semistructured interviewer of focus clinics of a midwestern urban academic medical centre. The majority patients expressed their healthcare goals is social and functional language in contrast to the biomedical language of risk factor control and complication its diabetes mellitus care recommendation for older patients grow more complex, provides could enhance their communication about such medical decisions by exploring patients specific circumstances and reforming diabetes mellitus treatment goals in patients own language.

T. Charskinner, and colleagues done a study on 52 patients with type I diabetes with objective to examine whether peer support and illness representation medicals link between family support, self management and well being. Perceived impact of diabetes supportive family and friend were prospectively predictive of participants well being measures. Although support from family and friend are improtant to support adolescents as the live with and manage their diabetes. Models may serve to medicate the relationship between social support and dealing behaviour.

Klas malmberg study with the objective to test the hypothesis that intensive metabolic treatment with insulin glucose infusions followed by multidose insulin treatment in patient with diabetes mellitus and acute myocardial infarction improves the prognosis. Design was the patient with diabetes insulin glucose infusion for at least 24 hrs. Followed by multidose insulin treatment group compared with 138 deaths. The effect was most pronounced among the predefined group.

Tobber DJ et al done a study to review reliability, validity and normative data from seven different studies involving a total of 1988 people with diabetes mellitus, and provide a revise version of the summary of diabetes self care activities measures. Methods is a brief self report questionnaire of diabetes regimen normative data, into item and test criterious measures and sensitivity to change scores are presented for the seven different studies. Thee average intestinal correlation within scales were high, with the expectation of specific diet, test retest correlation were moderate. There are numerous benefits from standardization of measure cross studies.

K. Allen made a study having the purpose of to provide baseline

information on the perception use and knowledge of hemoglobin A1C values among health care nurses and patients study done one convenient sample (44 patients and 26 nurses) from a medicare. Data collected from telephone interviews written questionnaire and medical record reviews were analyzed using descriptive method. Result was education related to target A1C values is needed. Methods to increase availability of A1C results in the home care setting should be exposed. The importance and clinical activity of A1C values need to be more efficiency conveyed to both nurses and patients in the home care settings.

SUMMARY

The reviews of literature on the above area helped to investigator to gain knowledge about the practise of selfcare activities of patients with diabetes mellitus, which inturn helped in construction of the tool.

The literature reviews also helped in design of the study development of tool, information about sample, data collection procedures and plan for analysis.

CHAPTER - III

METHODOLOGY

INTRODUCTION

Methodology is a way of systematically solving the problem. It may be understood as a science of studying how research is doing scientifically (C.R. Kothari, 1990). This chapter provides a brief description of different steps taken to conduct this study. It includes research approach, setting, sampling, development of tool, procedure for data collection.

RESEARCH APPROACH

Interview approach was selected as the objective of the study were:

1. To answers the clients awareness about the dietary regulation to maintain normal blood glucose level.
2. To find out the awareness of diabetes clients about the importance of proper medication.

SETTINGS

The rationale for selecting this institute (SCTIMST) for study was the investigator was most familiar with the institution. The study was conducted inpatients admitted in CACCU, SCTIMST, Tvm.

POPULATION

The population of the study was admitted in CACCU, SCTIMST, diagnosed as

The population of the study was patients diagnosed as diabetes mellitus admitted in CACCU, SCTIMST. There are approximately 60 patients admitted during one month. It includes the people belonging to different educational qualification and varying family classes.

SAMPLE AND SAMPLING TECHNIQUE

Convenient sampling technique was used to select the sample for study. Two stages sampling was used for the present study. In the first stage 5 samples were selected for the pilot study. In the second stage 25 patients were selected for the purpose study.

SCHEMATIC DESIGN OF THE STUDY

Attribute Variables	Study population and Sample	Tool	Criterion Measures
Knowledge	Study Population 60 diabetic patients CACCU, SCTIMST, within study period.	Interviewed with a structured interview	Diet control regular Exercise Regular medication Regular Foot care Compli cationswith a structured interview
Practice	Study sample of 25 patients are considered		

DEVELOPMENT OF TOOL

The review and study of literature helped in preparing items for the tool. The tools examined and consulted with experts.

The steps taken for development of tool are given below.

Step I :- A knowledge test of 23 objective type questions was made based on the literature reviewed and an experts opinions. It was administered on 5 patients. Average time for completion of the test was 15 minutes.

Step II :- With necessary modification the tool was pilot tested on a convenient sample of 5. Pilot group was similar to the population sampled in the main study. The time taken for completion of the test varies from 10-15 minutes.

Step III :- Pilot study was done on 22nd September 2005 amount 5 patients admitted in CACCU. The time taken for the study varies from 10-15 minutes. Essential modification done on the tool. The pilot study also gave information regarding the appropriateness of communication, item difficulty.

DESCRIPTION OF TOOL

The tool used in the present study consisted of two parts.

Part I :- For obtaining personal at a and general information

Part II :- For obtaining the data about knowledge and self care activities.

Part I of hetool contained items for obtaining information about background variables like age, sex, education, heridity, occupation, activity.

Part II of the knowledge and self practice test consisted of objective type items sub categories : food, medication, exercise, care of foot etc.

For each items two alternative answers were given, one of the answer was the best. The possible range of knowledge was (0-32)

DATA COLLECTION

The data was collected from 25 patients diagnosed is diabetes mellitus admitted in CACCU, SCTIMST, TVM.

The investigator visited each patient and administered the knowledge test. The purpose of the study and the confidentiality of their responses were assured. The data collected by interviewing method. The time taken for completion of the test was 10-15 mts.

PLAN OF ANALYSIS

The data obtained from the knowledge test would be analyzed by percentage method. Bar diagrams, Pie diagram and tables would be utilized to represent the distribution of total knowledge scores and sub scores in the different content areas.

SUMMARY

This chapter presented the research approach used for the study design of the study, setting of the study and sampling technique. As description of the development of knowledge test is given, along with plan for data collection and analysis.

CHAPTER - IV

ANALYSIS AND INTERPRETATION

This chapter analysis and interprets the data obtained from the knowledge test administered in 25 patients.

The purpose of the study was to determine the knowledge of patients regarding diabetes and its self care activities.

The analysis of data presented in 3 sections.

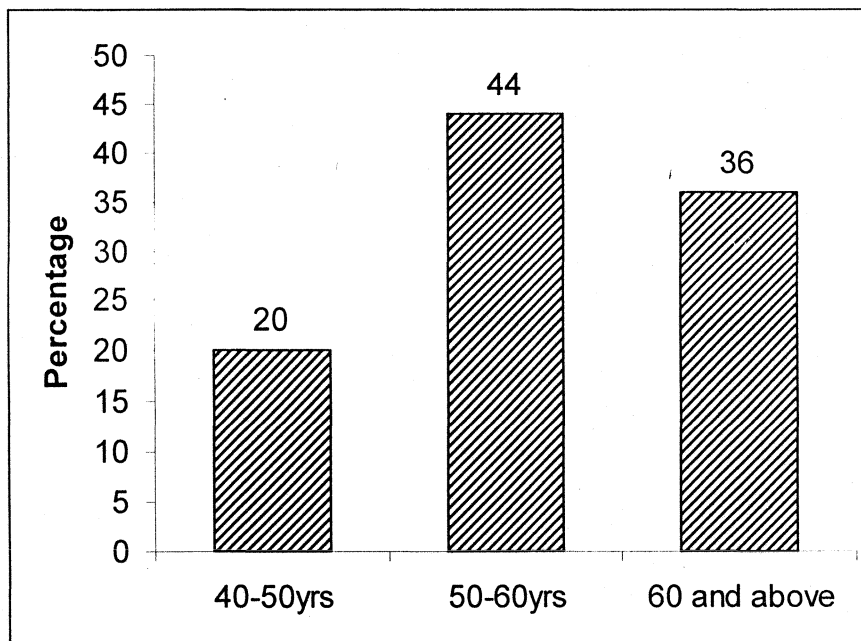
- 1) Sample characteristics
- 2) a. Data on patients knowledge in all content areas
b. Data on patients knowledge in specific areas.
- 3) Data on patients knowledge in self care activities.

DESCRIPTION OF SAMPLE CHARACTERISTICS

Sample of 25 diabetes patients are selected for the study. The demographic data included were age, sex, education and occupation of patient.

a) **Distribution of Patients according to Age group**

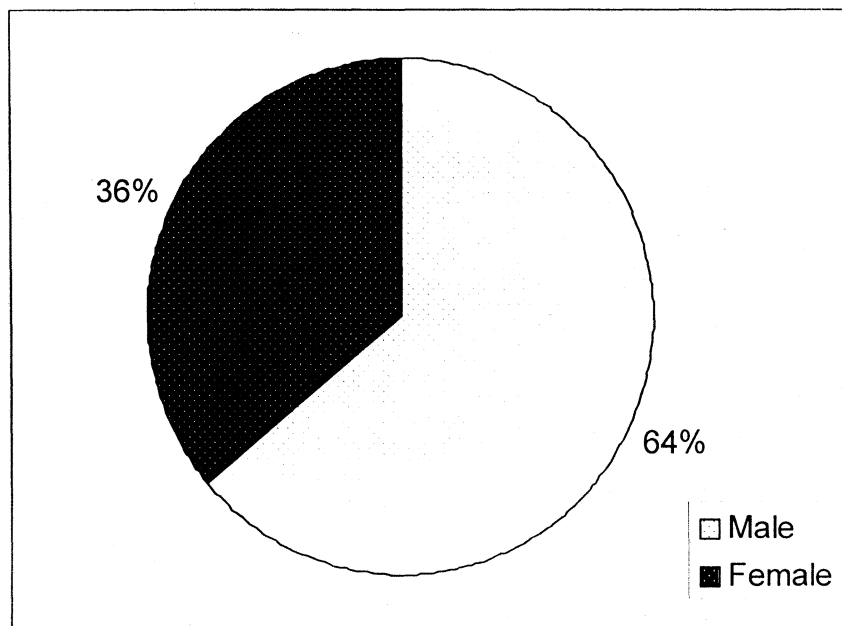
Demographic Data	Total Number	Percentage
40-50yrs	5	20
50-60yrs	1	44
60 and above	9	36



This bar diagram represents X axis age and Y axis percentage showing the maximum patients included 50-60 age group and minimum in 40-50.

b) Distribution of Samples according to sex

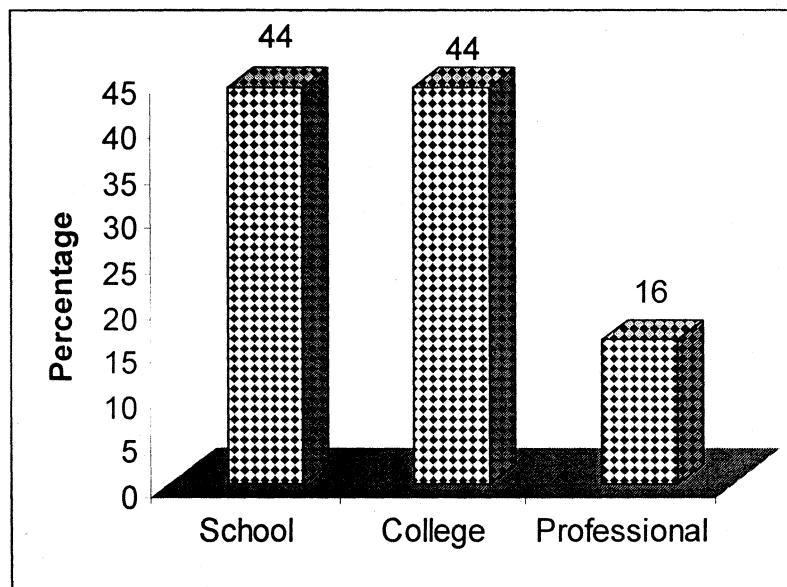
Sex	No.	Percentage
Male	16	64
Female	9	36



The Pie Diagram shows that the incidence is more in male (64%) than female (36%)

c) Distribution of samples according to the Educational Status

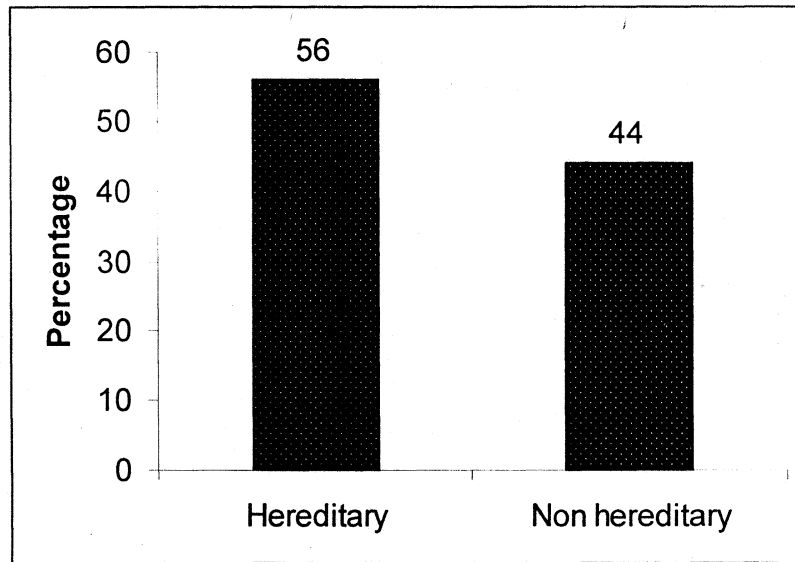
School	11	44
College	11	44
Professional	3	16



The incidence is equal in educational qualification of school and college (44%). Less in professionals (16%).

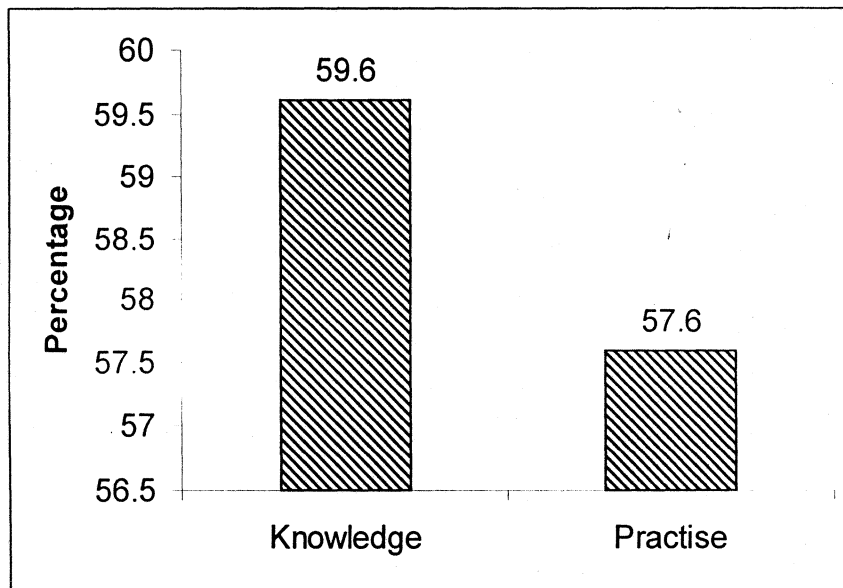
d) Distribution of samples according to Hereditary

	No	Percentage
Hereditary	14	56
Nonhereditary	11	44



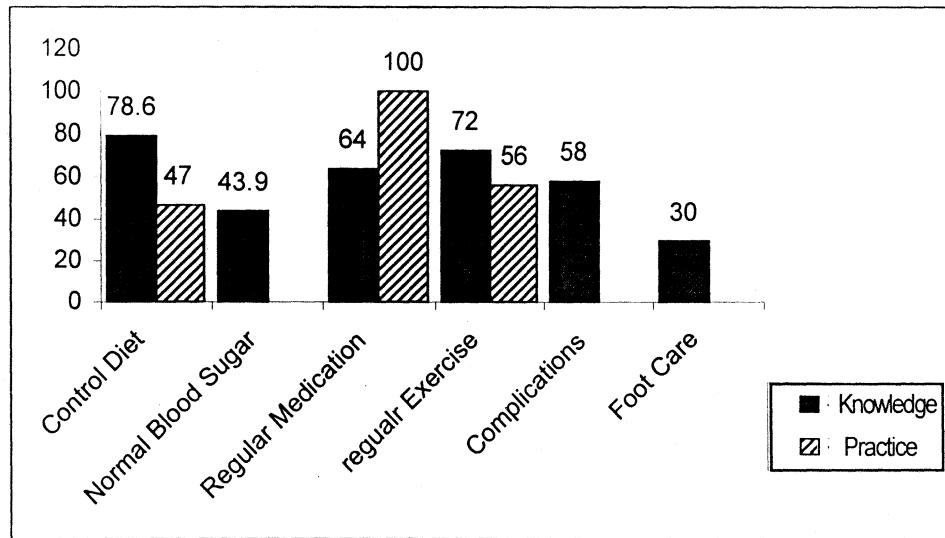
**DATA ON PATIENTS KNOWLEDGE AND PRACTICES IN
ALL CONTENT AREAS**

This part of the analysis show the distribution of tool sample of 25 patients and their knowledge about the risk factors and the activities practised towards the modification of risk factors. Total knowledge score in all content areas was

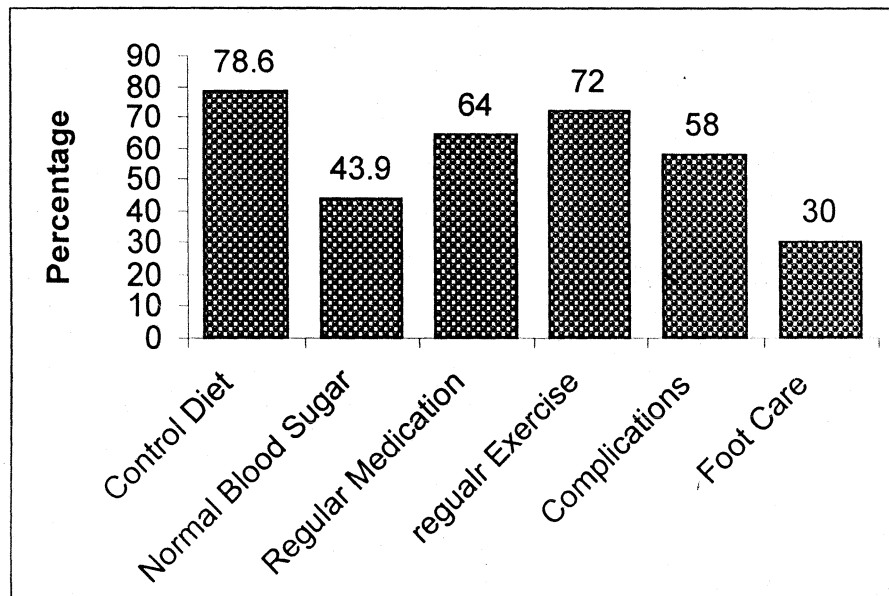


This figure represents among 25 patients knowledge was 59.6% and practice was 57.6%.

b) **Distribution of samples knowledge and practices in various content areas**



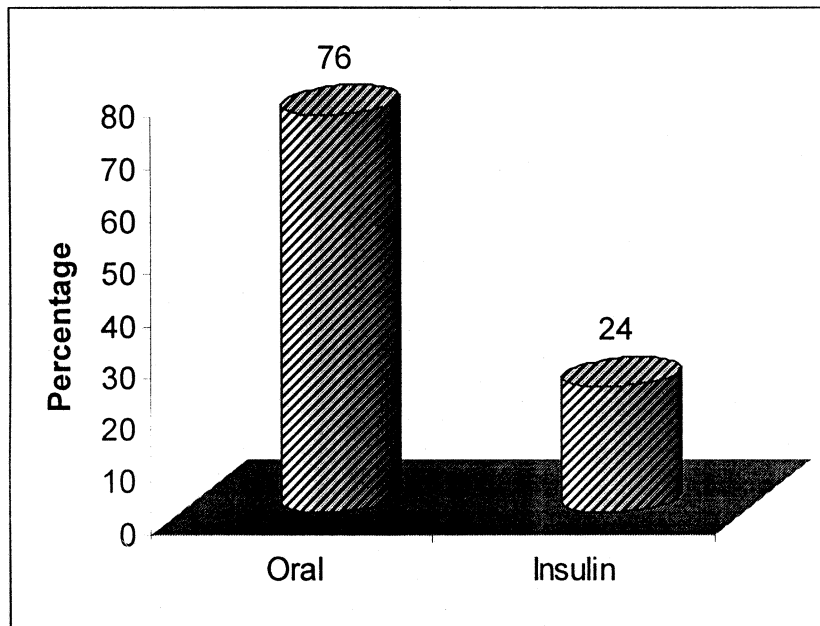
This graph represents that the awareness of foot care is very less.



Data on patients treatment method

	No	Percentage
Oral	19	76
Insulin	6	24

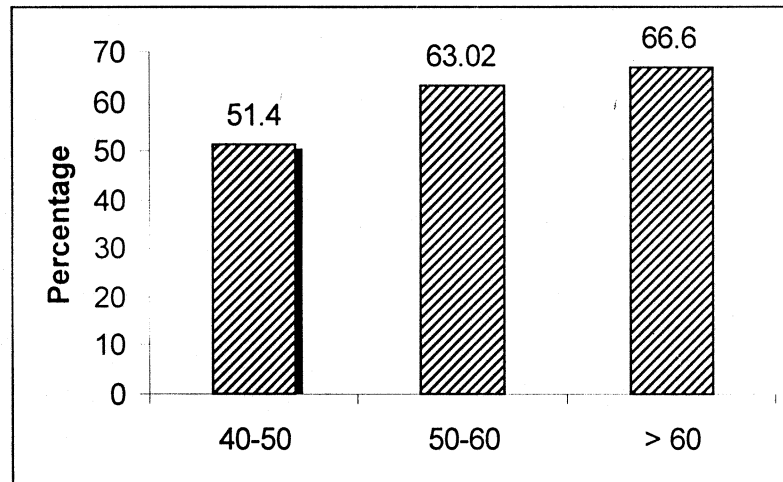
Distribution of Patients according to treatment mother



This figure represents that the patients above 60 years of age has higher level of knowledge and lower in the age group of 40-50 years.

Data on patients knowledge according to the age group

Age	Percentage
40-50	51.4
50-60	63.02
> 60	66.6



This figure represents that the patients above 60 years of age has higher level of knowledge and lower in the age group of 40 to 50 years.

CHAPTER VI

SUMMARY, CONCLUSION AND RECOMMENDATIONS

This chapter gives a brief account of the present study including conclusion drawn from the finding and possible application of the result. Recommendation for future research and suggestions for improving the present study were also presented.

SUMMARY

This study was undertaken to assess the knowledge and practise about diabetes mellitus.

THE SPECIFIC OBJECTIVES ARE :

- 1) To assess the patients awareness about the dietary regulations to maintain normal blood glucose level.
- 2) To find out the awareness of diabetic patients about the importance of proper medication.

Need of the study was the careful attention to the known factor leads to an appreciable reduction in long term morbidity and mortality

rate. Education is one method of improving knowledge about the risk factors and activities practised on risk factor modification. The assessment of baseline knowledge being the first step in any successful programme.

The review of related literature helped the investigator in understanding the list factors, determining methodology and developing the tool.

A structured questionnaire of 32 questions was developed content validity was determined and pilot text was done.

The study was conducted in SCTIMST at CACCU, Tvm, Kerala in September 2005. The sample comprised of 25 patients admitted in CACCU.

The data obtained were analyzed by using descriptive statistics. Both bar and Pie diagram were utilized to represent the distribution of knowledge and practise on the basis of scores obtained in all content areas.

THE MAJOR FINDINGS OF THIS STUDY WERE

The knowledge scores of patients in the study is 59.6%

The practice scores of patients in the study 57.6%.

IMPLICATIONS

Several implication can be drawn from the findings of the study.

This information can be used by staff nurses. Student nurses and other health professionals. Instructional programmes on health education, helps in the promotion of educational aspects of he patients. In future for the promotion of knowledge in younger generations, related topics can be included in this academic sessions.

LIMITATIONS

The limitations in this study are

- 1) The tool has been developed by the investigator as no standardized tool was available.
- 2) Study was limited to the patients admitted in CACCU, SCTIMST.

3) Those who are willing to participate are included in the study.

4) Only 25 convenient sample was selected.

CONCLUSION

Based on the findings of the study the following conclusions were drawn.

1) The knowledge of patient about modification of risk factors.

2) The activities practised by the patients towards the

RECOMMENDATION

The following recommendation are made on the basis of the present study.

1) A similar study can be conducted in other health care institution.

2) A study can be done to find out the effectiveness of planned health education in diabetic patients.

3) A similar study can be replicated in community testings.

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- 4) John W. Best and James V. Kahn 2001, 7th edition Research in education.

List of Journals :

- 1) American Journal of Nursing, 2003
- 2) American Journal of Nursing, 2000
- 3) British Journal of India, 2001
- 4) British Journal of India, 1999

UN PUBLISHED MASTER'S THESIS

1) Mrs. Saramma PP MN, (College Students knowledge about risk factors of coronary heart disease, Raja Kumari, Amrith Kumar College of Nursing, University of Delhi, 1985.

3. Alcohol intake :

1) Teetotaler 2) Previous Drinker

3) Occasional 4) Habitual

4. a. Smoking / Chewing : Non smoker/ Previous smoker/ Present smoker

b. No. of cigarette / day :

5. What is the treatment measures are you following.

1) Oral hypoglycemic agent 2) Insulin

3) Both 4) Other methods

6) What will you do if you are on insulin to safeguard the efficiency of the drug.

1) Store in fridge 2) Keep on freezer

(3) Keep it on room temperature

7. Exercise :

Regular/irregular

12. Do you aware of sign and symptoms of complications ?

- 1) Non healing wound- Yes No
- 2) Blurring vision - Yes No
- 3) Renal Problem - Yes No
- 4) Numbness - Yes No
- 5) Loss of sensation - Yes No
- 6) Inability to grip the chappels ?

Yes No

13. What do you do if you foot get injured ?

- 1) Ignor it 2) Take injection TT
- 3) Consult a medical professional

14. What will you do if you find that your blood sugar is above normal but your doctor is not available ?

- 1) Increase the dose 2) Seek help other health personal
- 3) Leave it

15) If you are on medication what will you do if you experience triggers and sweating ?

- 1) Leave as such 2) Go to a doctor
- (3) Take a lump of Sugar / Chocolate

16. Do you know that persons with diabetes experience less chest pain compared to non-diabetics, when they get a hart attack.

Yes

No

- c) Reducing amount of carbohydrate - Yes No
- d) Reducing amount of fat/ oil - Yes No
- e) Reducing fruits - Yes No

8) Is it right that you can take more quantity of wheat preparations than rice.

Yes No

9) Are you aware of complications ?

- a) Eye Yes No
- b) Renal Yes No
- c) Cardiac Yes No
- d) Neuro Yes No
- e) Infection Yes No

10. Do you know the importance of foot care

Yes No

11. Do you think your feet be examined by health care professional at least once a year.

Yes No.

BIO-DATA

1. Name :
2. Age :
3. Sex :
4. Age of detection :
5. Education :
5. Occupation :
a) Skilled b) Unskilled c) Professional
6. Type of activity :
a) Sedentary b) Moderately active c) Heavy worker
7. a) Family history of DM : Yes No
b) Specify relation :
- II. Type of diet :
1) Veg. 2) Non. veg
3) OVo veg. 4) Perco Veg.
2. No. of meals /day :
1) < 3 meals and 2) snacks
3) \geq 3 main meals and 2 snacks.

APPENDIX - 2
QUESTIONNAIRE

1. What is the normal blood sugar level ?

FBS PPBS
2. How much times difference needed between food intake and PPBS?
3. Is this any necessity of regular estimation of blood glucose level ?
 - b) If, yes, how frequent do you think ?
 - 1) Daily
 - 2) Monthly
 - 3) Once controlled not required
 - 4) Don't know.
- 4) It is necessary to take medicines regularly ?

Yes No
- 5) Is it necessary to control your diet ?

Yes No
- 6) It is necessary to exercise regularly ?

Yes No
7. Do you know how to make dietary regulation ?
 - (a) Reducing quantity of food - Yes No
 - b) Avoid food with refined sugar - Yes No

Appendix 3

സമ്മതപത്രം

രോഗിയുടെ അസുഖവുമായി ബന്ധപ്പെടുത്തിയും അറിവ് പരിശോധിക്കുന്നതിനായും ഞാൻ പൂർണ്ണമായും സമ്മതിക്കുന്നു. ഇത് ഒരു പഠനത്തിന്റെ ഭാഗമായാണ്. ഈ പഠനത്തിന് വേണ്ടി ഞാൻ സഹകരിച്ച് കൊള്ളാമെന്ന് സമ്മതിക്കുന്നു.

തീയതി :

എന്ന്

ഒപ്പ് :

പേര് :