



“A STUDY TO ASSESS THE KNOWLEDGE OF DIABETIC CLIENTS REGARDING SELECTED DIAGNOSTIC TESTS OF DIABETES IN A DIAGNOSTIC CENTER AT BANGALORE WITH A VIEW TO DEVELOP AN INFORMATION BOOKLET ON THESE TESTS.”

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Abstract: Diabetes mellitus is the ninth leading cause of death in the world. It requires continuous monitoring to know the prognosis of disease and prevention of complications through the diagnostic tests, which depend on specific preparations in order to get an accurate result. The present study was conducted to Assess the Knowledge of diabetic clients regarding selected diagnostic tests of diabetes in a diagnostic center at Bangalore with a view to develop an information booklet on these tests. Descriptive survey design was used. 100 diabetic clients who met the inclusion criteria were selected by simple random sampling technique. The tool consisted of 2 parts; Part –I consisted demographic variables of the subjects. Part II consisted of Structured Knowledge questionnaires to assess the knowledge of diabetic clients on selected diagnostic tests of diabetes. Majority (83%) of diabetic clients has inadequate knowledge, 17% have moderately adequate knowledge and none of the diabetic clients are having adequate knowledge on selected diagnostic tests of diabetes. Overall mean knowledge score obtained by the diabetic clients was 43.2% with standard deviation of 4.190 which was found to be inadequate knowledge, showed that diabetic clients were having inadequate knowledge regarding selected diagnostic tests of diabetes, Hence the investigator developed the information booklet on selected diagnostic tests of diabetes, which can be helpful in identifying the prognosis of diabetes and preventing the complications.

Key words - Diabetes Mellitus , Diagnostic tests, complications

INTRODUCTION

Health status is the impact of disease on the patient. The physicians focus on the complete range of health status of the patient depending on the diagnosis of the disease through the diagnostic tests. Diagnostic testing is a critical element of assessment and are either invasive or non-invasive. Evaluation of the clients expected outcome requires the incorporation of diagnostic findings; the results of diagnostic tests are used to formulate the medical diagnosis and plan a course of treatment to prevent complications. There are many diseases which require frequent monitoring through diagnostic tests, one such disease which requires regular monitoring is diabetes mellitus

Globally, the number of diabetic patients has sharply risen. While in 1985, 30 million people had diabetes, the number rose to 150 million in 2000. In 2010, 285 million people were found to be diabetic. By 2030, an estimated 435 million people are expected to suffer from this disease.

Diabetes Mellitus requires continuous assessment through the diagnostic test in order to identify prognosis or prevention of complications.

STATEMENT OF THE PROBLEM

“A Study to Assess the Knowledge of diabetic clients regarding selected diagnostic tests of diabetes in a diagnostic center at Bangalore with a view to develop an information booklet on these tests.”

OBJECTIVES OF THE STUDY

1. To assess the knowledge level of diabetic clients regarding the selected diagnostic tests of diabetes
2. To determine the association between the knowledge level of diabetic clients regarding selected diagnostic tests of diabetes with their demographic variables
3. To develop an information booklet regarding selected diagnostic tests of diabetes

NULL HYPOTHESIS

Ho: There will be no significant association between knowledge of diabetic clients regarding selected diagnostic tests of diabetes with their demographic variables.

METHODOLOGY

RESEARCH APPROACH

Research approach selected for this study is descriptive survey approach

RESEARCH DESIGN

The descriptive survey design is used to describe the characteristics of the variables.

POPULATION

In this study, population consists of all the clients who are having Diabetes Mellitus.

SAMPLE SIZE

In this study sample size consisted of 100 diabetic clients

SAMPLING TECHNIQUE

In this study simple random sampling technique using lottery method was adopted

Inclusive criteria: Study included the diabetic clients who:

- are ≥ 18 years of age
- are undergoing selected diagnostic tests of diabetes
- are willing to participate in the study
- have taken appointment for undergoing diagnostic tests on the day of data collection
- educated & can read and write English/ Kannada

SELECTION AND DEVELOPMENT OF THE STUDY TOOL**DESCRIPTION OF THE TOOL**

The investigator developed a tool, which consisted of two parts:

Part –I: Demographic data:

This part consisted of 12 items pertaining to the demographic variables of the clients such as age, gender, religion, marital status, education, occupation, residence, family monthly income, habitat, type of diet, life style habits, duration of illness and sources of information regarding the selected diagnostic tests of diabetes.

Part II- Assessment of Knowledge:

Structured Knowledge questionnaire was used to assess the knowledge of diabetic clients regarding selected diagnostic tests of diabetes. 40 multiple choice questions of four options with one correct answer were used. The total score was 40.

Data analysis

Analyzing knowledge of diabetic clients on selected diagnostic tests of diabetes in terms of frequency, percentage, mean, and mean percentage and standard deviation .Determining the association between selected demographic variables of diabetic clients with their knowledge regarding selected diagnostic tests of diabetes by using chi- square test.

RESULTS**FINDINGS RELATED TO DEMOGRAPHIC VARIABLES**

Most of the diabetic clients (65%), belonged to age of 50.1- 65 years and majority of them (73%) were males. It was noticed that most of them (62%) were Hindus and majority of them (73%) were married. Most of them (23%) were educated upto Intermediate/ post high school diploma& 88% of them are living in urban area. With regard to the occupation 32% were manual labors with 31% having an family monthly income, Rs. 14050- 28113.Majority of them (85%) were non vegetarians ,69% of them have the habit of daily exercise/ Physical activity. Pertaining to the duration of diabetes, 54% of them are with diabetes of 1-5 years and 66% had received the source of information on diagnostic tests of diabetes from persons

KNOWLEDGE LEVEL OF DIABETIC CLIENTS**N=100**

Knowledge level	Frequency	Percent
a. Inadequate knowledge	83	83%
b. Moderately adequate knowledge	17	17%
c. Adequate knowledge	0	0
Total	100	100%

**Mean, Mean percentage and standard deviation of the knowledge scores of diabetic clients
N=100**

Sl. No.	Knowledge aspects	No. of Items	Max Score	Mean	Mean %	SD
1	General information	2	2	1.73	86.5	0.510
2	Oral glucose tolerance test	1	1	0.15	15	0.359
3	Blood glucose tests	10	10	5.33	53.3	1.457
4	Blood lipid tests	8	8	2.68	33.5	1.456
5	Serum creatinine & urea test	5	5	1.9	38	1.0
6	Urine test	5	5	2.27	45.4	1.362
7	Eye examination	9	9	3.22	35.77	1.397
Overall		40	40	17.28	43.2	4.190

ASSOCIATION BETWEEN KNOWLEDGE OF DIABETIC CLIENTS WITH THEIR SELECTED DEMOGRAPHIC VARIABLES

N= 100

Demographic Variables	Below Median	Median and above	Chi square	df	P value (0.05)	Inference
1. Age in years						
a. 18-30 years	0	1	9.973	4	9.49	S
b. 30.1-40 years	0	5				
c. 40.1-50 years	5	3				
d. 50.1-65 years	32	33				
e. More than 65 years	5	16				
2. Gender						
a. male	29	44	0.574	1	3.84	NS
b. female	13	14				
3. Religion						
a. Hindu	29	33	5.20	3	7.82	NS
b. Christian	4	15				
c. Muslim	9	9				
d. Others	0	1				
4. Marital status						
a. Married	30	43	2.838	4	9.49	NS
b. Unmarried	3	7				
c. Divorce	1	2				
d. Widow	1	0				
e. Widower	7	6				
5. Education						
a. primary education	16	5	21.176	5	11.19	S
b. Middle school	9	5				
c. High school	7	13				
d. Intermediate/post high school diploma	6	17				

e. Graduate	3	16				
f. Post graduate and above	1	2				
6. Occupation						
a. Home maker	9	7	29.141	4	9.49	S
b. Unemployed	2	5				
c. Manual labor	24	8				
d. Administrative work	4	19				
e. Retired	3	19				
7. Habitat						
a. Urban	34	54	3.406	1	3.84	NS
b. Rural	8	4				
8. Family Income						
a. Rs. 1407-4203	3	0	10.30	5	11.19	NS
b. Rs. 4204-7015	5	2				
c. Rs. 7016-10532	5	3				
d. 10533-14049	9	14				
e. Rs. 14050-28113	12	19				
f. More than Rs. 28114	8	20				
9. Diet type						
a. Vegetarian	7	8	0.158	1	3.84	NS
b. Non-vegetarian	35	50				
10. Life style habits						
a. Smoking	6	6	4.453	6	13.49	NS
b. Smoking and Alcoholism	4	2				
c. Smoking, Alcoholism and exercises	1	2				
d. Smoking and exercises/ physical activity	4	2				
e. Alcoholism and exercises	1	1				
f. Exercises/ physical activity	25	44				
g. Sedentary life style	1	1				
11. Duration of illness						
a. Less than 1 year	18	11	13.958	3	7.82	S
b. 1-5 years	23	31				
c. 5-10 years	1	13				
d. Above 10 years	0	3				
12. Source of information						
a. Print media	3	7	5.356	3	7.82	NS
b. Electronic media	5	1				

c. Person and electronic media	6	12				
d. Person	28	38				

CONCLUSION

Majority(83%) of diabetic clients have inadequate knowledge, 17% have moderately adequate knowledge and none of the diabetic clients are having adequate knowledge on selected diagnostic tests of diabetes. There was a association between knowledge of diabetic clients with their age, education, occupation, and duration of illness, where chi-square value was more than the table value at 0. 05 level of significance. Hence the null hypothesis was rejected for these demographic variables. There was no significant association between knowledge level of diabetic clients with their socio demographic variables like gender, religion, marital status; family monthly income , type of diet, life style habits, and source of information, at 0. 05 level of significance. Hence the null hypothesis was accepted for these demographic variables.

NURSING IMPLICATIONS

The findings of the study have various implications in different areas of nursing that is nursing education, nursing practice, nursing administration and nursing research.

NURSING EDUCATION

Nursing education help the staff and student with adequate knowledge to fulfill their duties and responsibilities in the nursing field. Findings of this study can be used by nurse educators to educate students which help them to gain adequate knowledge on selected diagnostic tests of diabetes thereby they can bring awareness to the clients on impotence of the specific preparations required for undergoing diagnostic tests of diabetes which helps in diagnosing and preventive aspects. Nurse educators can use the findings of the study to understand what different strategies can be adapted for educating diabetic clients.

NURSING PRACTICE

The findings of the study reveal that there is a need to understand the reasons behind the poor knowledge among diabetic clients regarding selected diagnostic tests of diabetes. Most of the diabetic clients do not have adequate knowledge regarding selected diagnostic tests of diabetes. In hospital or community set up, nurses play an important role in providing awareness regarding the selected diagnostic tests of diabetes in order to reduce complications among diabetic clients. The nurse should help in preparing the clients as appropriate to the specific test, how long the test will take specifics of NPO status, dietary restrictions and withholds medications in order to get an accurate diagnostic test results.

NURSING ADMINISTRATION

Nursing administrator should make the public aware of the selected diagnostic tests of diabetes. In the hospital and in the community the nursing administrator should develop a plan to assess the current knowledge of diabetic clients regarding selected diagnostic tests of diabetes. The nurse administrator should take active steps and develop an information booklet regarding selected diagnostic tests of diabetes among diabetic clients in hospital and community. The administrator should organize educational programs for diabetic clients with a view to improve their knowledge on diagnostic tests of diabetes.

NURSING RESEARCH

The nursing researches should find out the strategies in managing the problems on the diagnostic tests of diabetes. The nurse should find out the knowledge of diabetic clients regarding selected diagnostic tests of diabetes in both rural and urban areas through various research studies. Nurse researchers can also conduct researches on different diagnostic tests for other diseases and know their awareness to develop health teaching tools.

LIMITATIONS

- simple random sampling and only diabetic clients who have taken appointment limits the generalization of the study
- only one domain that is knowledge was considered in the present study
- The knowledge of the diabetic clients was assessed only through structured knowledge Questionnaires
- The study was restricted to only pre test after which the information booklet was distributed.

RECOMMENDATIONS

- The study can be replicated in different setting.
- An experimental study can be conducted to assess the effectiveness of information booklet.
- A similar study can be conducted for diabetic clients who are uneducated and cannot read & write English/Kannada.

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