



A STUDY TO ASSESS KNOWLEDGE ON DIABETES MELLITUS AMONG DIABETIC PATIENTS ADMITTED IN A SELECTED PRIVATE HOSPITAL OF WEST BENGAL.

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Abstract: A descriptive study was conducted to assess knowledge on Diabetes Mellitus among diabetic patients admitted in a selected private hospital of West Bengal with the objectives of assessing knowledge among diabetic patients admitted in a selected private hospital on Diabetes Mellitus. A descriptive survey research approach was adopted and data were collected by using purposive sampling technique. A structured interview schedule for assessing the demographic profile and Standard Tool (Diabetes Knowledge Questionnaire – 24) for assessing knowledge on Diabetes Mellitus were used. The population of this study consisted of diabetic patients admitted in the hospital during data collection period. The data obtained were analyzed and interpreted by using descriptive statistics. The study findings revealed that majority (76.66%) of diabetic patients had poor knowledge, 20% patients had moderate knowledge and 3.33% patients had adequate knowledge. An information leaflet regarding Diabetes Mellitus and its prevention was provided to enhance knowledge of the diabetic patients. The study has implications in the field of nursing practice, nursing education, nursing administration and nursing research.

Index Terms – Assessment, knowledge, Diabetes Mellitus

Introduction: Diabetes Mellitus is a group of metabolic diseases whose common feature is an increase in the blood glucose level. It is one of the most common diseases, causing significant mortality and morbidity worldwide. It is a disease with serious complications that has now reached epidemic proportions and the prevalence rate is expected to go even higher in the future. If the current trend continues, more than 170 million people world-wide will have this disease and this burden is projected to more than double by the year 2030. In India, Diabetes Mellitus is a very big growing concern. Significant changes in the life styles of Indians have contributed to the increased incidence of Diabetes Mellitus. Diabetes Mellitus is also associated with long term consequences that include severe complications. Knowledge is essential for adequate Diabetes management. Self management education is the corner stone of the treatment for all people with Diabetes. Patients need the knowledge to facilitate self-directed changes in behaviour and ultimately to reduce the risk of associated complications. Behaviour and life styles changes are the keys to successful self-management of Diabetes.

Problem statement

A study to assess knowledge on Diabetes Mellitus among diabetic patients admitted in a selected private hospital of

West Bengal.

Objectives of the study

1. To assess knowledge on Diabetes Mellitus among diabetic patients.
2. To develop an information leaflet to enhance knowledge of diabetic patients.

Operational definitions

Knowledge: Verbal response of diabetic patients under study to structured interview schedule on Diabetes Mellitus.

Diabetes Mellitus: A disease in which the body's ability to produce or respond to the hormone insulin is impaired resulting in abnormal metabolism of carbohydrates and elevated levels of glucose in blood.

Assumptions

1. Diabetic patients have knowledge on Diabetes Mellitus.
2. Knowledge on Diabetes Mellitus among diabetic patients is measurable.
3. Knowledge on Diabetes Mellitus among diabetic patients can be measured through structured interview schedule.
4. Responses of diabetic patients to structured interview schedule are considered true.

Delimitations

1. Diabetic patients who were admitted during study period in the selected hospital.
2. Diabetic patients who were willing to be subject of this study.

Research methodology:**Research approach**

Quantitative research approach was adopted for the study.

Research design

Descriptive survey research design was adopted for the study.

Setting of the study

The study was conducted at Jagannath Gupta Institute of Medical Sciences & Hospital, K.P.Mondal Road, Buita,

Budge Budge, Kolkata – 700137.

Population

In this study population was diabetic patients admitted in Jagannath Gupta Institute of Medical Sciences & Hospital.

Sample & Sampling technique**Sample**

In this study diabetic patients admitted at Jagannath Gupta Institute of Medical Sciences and Hospital during data

collection period were selected as the sample. Sample size was 30.

Sampling technique

The sample was selected by purposive sampling technique.

Data collection tool and technique

In order to collect data, the investigator used structured interview schedule to collect demographic data and

Standard Tool (Diabetes Knowledge Questionnaire – 24) for assessing knowledge on Diabetes Mellitus to collect

information from the participants. So interviewing in the form of face to face interaction was used. The schematic

representation of data collection tools and techniques are shown in Table – 1.

Table-1 Data collection tool and technique

Tool	Variables	Technique
Tool I – Structured interview schedule	Demographic data	Interviewing
Tool II – Standard Tool (Diabetes Knowledge Questionnaire – 24)	Knowledge on Diabetes Mellitus	Interviewing

Description of data collection tools

Tool I: This tool was composed of 10 items on sample profile. It comprised of demographic variables for diabetic

patients, such as- age (in years), gender, educational status, occupation, monthly income of the family, residence,

duration of illness (in years), Diabetes related co-morbidity, family history of Diabetes & previous knowledge on

Diabetes.

Tool-II: Standard Tool (Diabetes Knowledge Questionnaire – 24): This tool was used to assess knowledge among

diabetic patients on Diabetes Mellitus. Twenty four questions were used. Each question had three options. Each item

had three choices that were Yes, No, I don't know.

Scoring of Tool II:

Poor knowledge: <14

Moderate knowledge: 14 – 19

Adequate knowledge: >19

Data collection procedure

Final data was collected from 07.03.22 to 16.03.22 among 30 diabetic patients admitted at Jagannath Gupta Institute of

Medical Sciences and Hospital.

- ♣ Administrative permission was taken from respective authority.
- ♣ Self-introduction and rapport was established with the diabetic patients.
- ♣ Participants were told about the purpose of the study.
- ♣ Explanation regarding confidentiality and benefits associated with the study was explained.
- ♣ Verbal consent was taken from each participant.
- ♣ Structured interview schedule was administered to collect demographic information.
- ♣ Standard Tool (Diabetes Knowledge Questionnaire – 24) was administered to assess knowledge on Diabetes Mellitus.
- ♣ Thankful wishes were delivered to the participants. No problem was faced during data collection period.

Plan for data analysis

Descriptive statistics was used for analysis of the obtained data.

Results:

- Maximum number of patients (67%) was in the age group 40 – 59.
- Majority of patients (56.66 %) were male and 43.33% were females.
- Majority of them (33.33%) had secondary education.
- Maximum numbers of patients (63.33%) were unemployed.
- Majority of them (63.33 %) had monthly income Rs. 10,001 – Rs. 20,000/-.
- 63.33% of patients lived in rural areas and 36.66% in urban areas.
- 46.66% had duration of illness for 5 – 10 years.
- 6.66% had Diabetic Nephropathy, 53.33% had Diabetic eye complications, 23.33% had Diabetic Foot, 6.66% had Diabetic cardiovascular disease, 3.33% had Diabetic Neuropathy, 3.33% had other complications.
- 66.66% had family history of Diabetes Mellitus.
- Majority of patients (80%) had previous knowledge on Diabetes Mellitus.
- 3.33% had exposure of any health teaching programme, 30% had knowledge from physician, 10% of them had knowledge from mass media, 43.33% from friends, relatives and neighbours.

Table 2 Frequency and Percentage distribution of responses on Diabetes Mellitus of diabetic patients admitted at

Jagannath Gupta Institute of Medical Sciences& Hospital

N = 30

Sl. No.	Items	Responses			
		Correct response		Incorrect response	
		Frequency	Percentage	Frequency	Percentage
1.	Eating too much sugar and other sweet foods is a cause of diabetes. • Yes • No • I don't know	6	20%	24	80%
2.	The usual cause of diabetes is lack of effective insulin in the body. • Yes • No • I don't know	13	43.33%	17	56.66%
3.	Diabetes is caused by failure of the kidneys to keep sugar out of the urine. • Yes • No • I don't know	9	30%	21	70%
4.	Kidneys produce insulin. • Yes • No • I don't know	6	20%	24	80%
5.	In untreated diabetes, the amount of sugar in the blood usually increases. • Yes • No • I don't know	20	66.66%	10	33.33%
6.	If I am diabetic, my children have a higher chance of being diabetic. • Yes • No • I don't know	18	60%	12	40%
7.	Diabetes can be cured. • Yes • No • I don't know	19	63.33%	11	36.66%
8.	A fasting blood sugar level of 210 is too high. • Yes • No • I don't know	17	56.66%	13	43.33%
9.	The best way to check my diabetes is by testing my urine. • Yes • No • I don't know	14	46.66%	16	53.33%
10.	Regular exercise will increase the need for insulin or other diabetic medication. • Yes • No • I don't know	15	50%	15	50%

11.	The are two main types of diabetes: Type 1(insulin-dependent) and Type 2(non-insulin dependent). • Yes • No • I don't know	1	3.33%	29	96.66%
12.	An insulin reaction is caused by too much food. • Yes • No • I don't know	11	36.66%	19	63.33%
13.	Medication is more important than diet and exercise to control my diabetes. • Yes • No • I don't know	11	36.66%	19	63.33%
14.	Diabetes often causes poor circulation. • Yes • No • I don't know	11	36.66%	19	63.33%
15.	Cuts and abrasions on diabetics heal more slowly. • Yes • No • I don't know	25	83.33%	5	16.66%
16.	Diabetics should take extra care when cutting their toenails. • Yes • No • I don't know	25	83.33%	5	16.66%
17.	A person with diabetes should cleanse a cut with iodine and alcohol. • Yes • No • I don't know	6	20%	24	80%
18.	The way I prepare my food is as important as the foods I eat. • Yes • No • I don't know	20	66.66%	10	33.33%
19.	Diabetes can damage my kidneys. • Yes • No • I don't know	22	73.33%	8	26.66%
20.	Diabetes can cause loss of feeling in my hands, fingers, and feet. • Yes • No • I don't know	16	53.33%	14	46.66%
21.	Shaking and sweating are signs of high blood sugar. • Yes • No • I don't know	14	46.66%	16	53.33%

22.	Frequent urination and thirst are signs of low blood sugar. • Yes • No • I don't know	15	50%	15	50%
23.	Tight elastic hose or socks are not bad for diabetics. • Yes • No • I don't know	8	26.66%	22	73.33%
24.	A diabetic diet consists mostly of special foods. • Yes • No • I don't know	13	43.33%	17	56.66%

Data presented in table 2 showed that majority of them responded incorrectly in cases of item nos. 1,2,3,4,9,11,12

13,14,17,21,23,24. Some of the responses were equal in item nos. 10 and 22. Majority of them gave correct responses

in item nos. 5, 6,7,8,15,16,18,19,20.

Scoring of knowledge:

Majority of diabetic patients had poor knowledge (76.66%), 20% patients had moderate knowledge, 3.33% patients

had adequate knowledge.

Conclusion-

The following conclusion was made based on the findings of the study:

- Though diabetic patients in selected private hospital of West Bengal had mild knowledge regarding Diabetes Mellitus, they should have awareness on Diabetes and focus more on their daily care and follow up to prevent complications of diabetes. In this purpose an information leaflet was developed and provided to them in order to enhance knowledge of them.

Implications –

The findings of the study have implications for nursing practice, nursing education, nursing administration and nursing research.

Nursing practice:

Health teaching is the primary function of all nurses and should be carried out routinely. So teaching regarding daily care and prevention of complications of Diabetes Mellitus should be provided routinely to the patients.

Nursing education:

Nursing education must emphasize on prevention rather than cure. A good standard of nursing education on Diabetes

Mellitus and its management plays an important role in reducing the incidence, prevention and management of

Diabetes. Patients with Diabetes must be aware of risk factors associated with diabetes and try to attend awareness

programmes related to diabetes and focus more on their daily care and follow up to prevent complications of diabetes.

Nursing administration:

As a nurse administrator she can initiate the in-service education programmes to increase the knowledge regarding

Diabetes. She can monitor the good nursing practice regarding the assessment of knowledge level of diabetic patients.

She can also promote awareness of nursing staff regarding importance of providing daily care. Hospitals can maintain

some specific guidelines about care of diabetic and organize awareness program related to diabetes which helps to increase the knowledge of diabetes in patients. Records & reports should be maintained for authenticated purpose

which is very much helpful for future planning at local level, state level, national level & international level.

Nursing research:

The above research on assessment of knowledge among diabetic patients helps to develop a positive attitude towards

enhancement of individual knowledge regarding diabetes and in conduction of several awareness programmes at local

level, state level, national level & international level. It also helps to develop models of the health care which is

affordable and accessible.

Limitations –

- The study was conducted in a selected private hospital of West Bengal only, so the study findings may differ in case of other places in outside of West Bengal.
- As the sampling technique was purposive sampling and sample size were small (sample size=30), therefore the study findings could not be generalized broadly.
- The study was also limited to subjectivity with self-report of respondents.

Recommendations –

On the basis of the findings of the study the following recommendations are made:

- A similar research study may be replicated on a large sample; thereby findings can be generalized for a large population.
- Sample can be selected through randomization.
- A similar study may be conducted in other government and private hospitals.

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