A Study to Assess the Knowledge regarding Management of Diabetes among Diabetic Patients of Selected Villages under Varuna PHC, Mysuru District

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ABSTRACT

Diabetes mellitus is commonest disease worldwide. Globally, the incident of diabetes is rising in the form of geometric progression. The global prevalence of diabetes among adults over 18 years of age rose from 4.7% in 1980 to 8.5% in 2014. Between 2000 and 2016, there was a 5% increase in premature mortality from diabetes. Diabetes can be treated and its consequences avoided. **Objectives:** The objectives of the study are to assess the knowledge regarding management of diabetics among diabetic patients in selected area of Varuna PHC, Mysuru. **Methods:** The research design selected for this study was descriptive design. Nonprobability convenience sampling technique was adopted to select 60 rural elders in the selected area under Varuna PHC at Mysuru. **Result:** Result revealed that majority of sample is having average knowledge on management of diabetes among diabetic patients. There was significant association between the level of knowledge regarding the management of diabetes among diabetic patients and their selected personal variables. **Conclusion:** It was concluded that level of knowledge on management of diabetes was adequate and there is a statistical significance association between the knowledge with selected demographic variables.

Keywords: diabetic patients, knowledge, management of diabetes mellitus, PHC

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INTRODUCTION

Many people are unaware that they have diabetes. It can be treated by healthy diet, regular exercise and foot care. So, it is of significant importance to assess the knowledge of the patients to create awareness on diabetes [1]. The aim of this study was to assess the knowledge on management of diabetes among diabetic patients. Diabetes mellitus (DM) is a very common metabolic problem in the world. It is estimated that there are 30 million diabetics worldwide. It is a significant health problem in India. These rates are much higher than the 1.2% in the UK but lower than the 35% among Pima Indians of Arizona [2]. It is suspected that diabetic patients find it difficult to comply with their treatment, especially when dietary measures are involved. This difficulty is reflected in their blood glucose level and body weight; and may in the great part be due to the lack of appropriate perception of the disease and its management resulting in poor compliance and hence suboptimal glycemic control [3], since optimal glycemic control reduces acute and chronic complications of diabetes [4].

Globally, an estimated 422 million adults are living with diabetes mellitus, according to the World Health Organization (WHO) [5]. It occurs throughout the world but is more common in more developed countries. The greatest increase in prevalence is, however, occurring in lowand middle-income countries [6].

NEED FOR THE STUDY

Epidemiologic transition, urbanization, changes in life style and food practice culminates in increasing incidence of metabolic syndrome consisting of diabetes, and hypertension. India is projected to reach pinnacle of world diabetes population in another decade. It is estimated that people with diabetes will be around 70 million in India by 2025. Morbidity and mortality of diabetes is more among South East Asian continent than the rest of the world.

Various factors affect management of diabetes difficult in our population including suboptimal health literacy, hindered health accessibility, poor socioeconomic status, etc. One of the important factors quoted for aforesaid statement is less awareness and practice of self care in diabetes in our population when compared with the West; it carries huge importance in diabetes management as it is an individual tool to control diabetes and achieve good quality of life.

Self care in diabetes includes periodic follow-up, adhering to medicine, foot care

and regular monitoring of patient glycemic level. Owing to widespread media alerts, self monitoring is escalating among urban India for diabetes as well as hypertension.

sectional. observational А cross community based study was conducted to assess the knowledge of self blood glucose monitoring and extent of self titration of anti-diabetic drugs among diabetes mellitus patients. A sample of 153 adult male and female patients with type 2 DM performing self blood glucose monitoring at home was selected randomly. The data collection was conducted between July and October 2015 by interviewing the samples with a validated questionnaire. The result revealed that out of 153 patients surveyed, only 37(24.1%) patients were aware and had been following glycemic control appropriately. About 116(75.8%) (64 males, 52 females) of patients were devoid of adequate knowledge and did not practice self monitoring of blood glucose in a proper way. 98(69.5%) patients accepted that they self titrate their antidiabetic medicines based self on monitoring.

OBJECTIVES

- 1. To assess the level of knowledge regarding management of diabetes among diabetic patients of selected villages under Varuna PHC, Mysuru District.
- To determine the association between level knowledge on management of diabetes among diabetic patients of selected villages, Varuna PHC, Mysuru District, with their selected personal variables.

HYPOTHESIS

H1: There will be significant association between the level of knowledge regarding management of diabetes among diabetic patients of selected villages, Varuna PHC, Mysuru District, with their selected personal variables.

CONCEPTUAL FRAME WORK

The conceptual framework of the study is based on the Pender's Health Promotion Model.

ASSUMPTIONS

Diabetic patients may have some knowledge regarding management of DM.

DELIMITATION

Study is delimited to the patients who are residing in rural community at Varuna PHC.

METHODOLOGY

Research Approach

Descriptive quantitative approach was adopted for the present study.

Research Design

Descriptive design was adopted for present study.

Key Variables of the Study Research Variable

Knowledge regarding management of diabetes.

Other Variables

Selected personal variables viz., age, gender, educational qualification and previous exposure to educational programme on diabetes.

SOURCES OF THE DATA Setting of the Study

The present study was conducted in Mosanabayanahalli village at Mysuru.

Population

Population comprised of diabetic patients selected under Varuna PHC at Mysuru.

Sample and Sampling

Diabetic patients were selected as samples for the present study.

Sampling Technique

Non-probability convenient sampling technique was used in the present study to

select 60 diabetic patients in selected PHC at Mysuru.

SAMPLING CRITERIA Inclusion Criteria

Diabetic patients who are:

- Available during the period of data collection.
- Willing to participate in the study.

Exclusion Criteria

Diabetic patients who were not available at the time of data collection.

DATA COLLECTION TECHNIQUES AND INSTRUMENTS Development of Tool

The tool was developed through following steps:

- 1. Review of research and non-research literature related to diabetic patients.
- 2. Opinion of experts from the nursing department.

Description of Tool

The tool consists of two sections.

Section A: Consists of proforma for selected personal variables of respondents seeking information such as age, gender, educational status, exposure dengue, previous exposure to educational programme.

Section B: Includes 26 items of structured knowledge questionnaire regarding management of diabetes.

Scoring

Section B consists of 26 items (knowledge questionnaires) regarding dengue. Each question carries 4 distracters; out of which, one distracter is the right answer. Answering the right distractor will carry one mark.

For the total score obtained, grades will be assigned as mentioned below:

- <13: Inadequate knowledge.
- 13–20: Average knowledge.
- >20: Adequate knowledge.

Reliability

The reliability was established through split half method by administering it to 60 diabetic patients in Varuna PHC, Mysuru. Coefficient correlation for structured knowledge questionnaire was 0.8. Hence the tool was found to be reliable.

Procedure for the Data Collection

Permission for conducting the study was obtained from consent authority and the data was collected from 20-12-2020 to 27-12-2020. To obtain the free and true response, the subjects were explained about the purpose and usefulness of the study and assurance about the confidentiality of the responses was also provided. An informed consent was obtained from each subject to indicate their willingness to participate in the study. The data collection process was terminated after thanking each respondent for their participation and their cooperation.

RESULTS

Table 1 shows that the majority of the sample 61.66% belongs to age group of 21 to 30, 81.66% samples are female, 78.5% people are Hindus, 60% of the samples are married and 40% of the people are having educational status up to higher secondary, 41.66% people are having monthly income between Rs. 7501 and 100000, 80% of the sample are managing the disease since 1 to 5 years and 88.3% of the people have undergone awareness programme on diabetes management.

Table 1. Frequency and percentage distribution of diabetic patients according to theirselected personal variables (n=60).

| | | | Respondent | | |
|------|--|------------------|-------------------|---------------------|--|
| S.N. | Demography | Categories | Frequency (60) | Percentage (100) | |
| 1. | Age (years) | 21-30 | 37 | 61.66 | |
| | | 31–40 | 13 | 21.66 | |
| | | 41–50 | 8 | 8.33 | |
| | | 51-60 | 2 | 3.33 | |
| 2. | Gender | Male | 11 | 18.3 | |
| | | Female | 49 | 81.66 | |
| 3. | Religion | Hindu | 47 | 78.3 | |
| | | Christian | 9 | 15.0 | |
| | | Muslim | 3 | 5.0 | |
| | | Others specify | 1 | 1.7 | |
| 4. | Marital Status | Unmarried | 24 | 40.00 | |
| | | Married | 36 | 60.00 | |
| | | Widowed | 0 | 0 | |
| | | Divorced | 0 | 0 | |
| 5. | Educational Status | Illiterate | 11 | 18.3 | |
| | | Higher secondary | 24 | 40 | |
| | | PUC | 21 | 35 | |
| | | Degree and Above | 4 | 6.66 | |
| 6. | Income per month (Rs.) | ≤5000 | 16 | 26.66 | |
| | | 5001-7500 | 13 | 21.66 | |
| | | 7501-10000 | 25 | 41.66 | |
| | | 10001 and above | 6 | 10 | |
| 7. | Years of managing the disease | 1–5 | 48 | 80 | |
| | | 6–10 | 9 | 15 | |
| | | 11 and above | 3 | 5 | |
| 8. | Have you undergone diabetes management programme | Yes | 53 | 88.3 | |
| | | No | 7 | 11.66 | |

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Table 2 shows that the majority of the sample has adequate knowledge i.e., 76.66%, followed by 20% people have moderate knowledge. Only 3.33% people have inadequate knowledge on management of Diabetes mellitus.

Table 2. Frequency and percentagedistribution of diabetic patients accordingto their level of knowledge (n=60).

| Lougl of Knowledge | Respondents' Knowledge | | |
|-----------------------------|---------------------------|----------------|--|
| Level of Knowledge | Number | Percentage (%) | |
| Inadequate knowledge (<50%) | 2 | 3.33 | |
| Moderate knowledge (51–75%) | 12 | 20 | |
| Adequate knowledge (>75%) | 46 | 76.66 | |

Table 3 shows that the descriptive measures of knowledge among diabetic patients regarding management of diabetes mellitus in diabetic patients. The range of score was 4–20 with a mean of 12.84, SD of 3.91 and mean percentage of 79.4.

Table 3. Mean, median, standarddeviation, scores of diabetic patients

| (<i>n</i> -00). | | | | | | | | | | |
|------------------|-----------|--------------|-------|-------|------|-------|--|--|--|--|
| S.N. | Aspect of | Max Score | Range | Mean | SD | Mean% | | | | |
| 1 | Knowledge | 34 | 4-20 | 12.84 | 3.91 | 37.9 | | | | |

Association between the levels of knowledge regarding diabetic management among diabetic patients with their selected personal variables:

To find out the association between the levels of knowledge regarding the management of diabetes among diabetic patients with their selected personal variables, Chi square was computed and following null hypothesis is stated.

H01: There will be significant association between the level of knowledge regarding the management of diabetes among diabetic patients with their selected personal variables

Calculated chi square value showed that there was significant association found between the level of knowledge of diabetic patients regarding diabetes with their selected personal variables such as age years of diabetes management, exposure to education programme etc.

Hence, research hypothesis is accepted and the null hypothesis is rejected and it is inferred that there is a significant association between level of knowledge of management of diabetes regarding diabetic patients with their selected personal variables.

DISCUSSION

The demographic data table shows that majority of the sample (61.66%) belongs to age group of 21 to 30. 81.66% samples are females, 785 people are Hindus, 60% of the samples are married and 40% of the people are having educational status up to higher secondary, 41.665 people are having monthly income between Rs. 7501 and 100000, 80% of the sample are managing the disease since 1 to 5 years and 88.3% of the people have undergone programme awareness on diabetes management [7].

The descriptive study measures of knowledge among diabetic patients regarding management of diabetes mellitus in diabetic patients [8]. The range of score was 4–20 with a mean of 12. 84, SD of 3.91 and a mean percentage of 79.4.

To determine the association of knowledge of the diabetic patients on management of diabetes, calculated chi square value showed that there was significant association found between the level of knowledge of diabetic patients regarding diabetes with their selected personal variables such as age, years of diabetic management, exposure to education programme etc. [9].

Hence research hypothesis was accepted the null hypothesis was rejected and it is inferred that there is a significant association between level of knowledge of management of diabetes regarding diabetic patients with their selected personal variables [10].

IMPLICATIONS

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

Nursing Practice

Patients who live in country yard and the staffs who are working in land must have thorough knowledge and skill to manage diabetes. Hence it is important for diabetic patients to update their knowledge regarding diabetes.

Nursing Education

Education is the key component to update and improve the knowledge of patients. The nurse educator can conduct the educational programme in community setting about diabetes management to improve their knowledge to prevent the incidental rate of diabetics.

Nursing Administration

Nursing administrator is the key person to plan, organize and conduct educational programme. Nurse administrators can encourage the staff to participate in educational intervention on diabetes awareness campaign. The nurse administrator can also organize a programme which enables the learner to keep abreast of changes and development in his or her field of specialty.

Nursing Research

The topic has great relevance to the present day in public health. The study stresses on the need for extensive research in the subject and for more implication to improve the awareness on diabetes management to prevent the incidental rate. Nurse researchers have to take initiative on this topic.

RECOMMENDATIONS

- 1. Similar study can be carried out on a large scale to generalize the findings.
- 2. A similar study can be conducted among elderly women.
- 3. A comparative study can be conducted between staff nurses and diabetic patients regarding diabetes management.

CONCLUSION

It was concluded that diabetic patients were having adequate knowledge regarding diabetes management. Study finding also emphasizes that there is a significant association between the level of knowledge and demographic variables such as age, years of diabetes management, exposure to education programme etc.

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