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A Descriptive Study to Assess the Knowledge Regarding Diabetes Mellitus Among Diabetes Mellitus Patients Attending Community Health Center, Durg District, (C.G.) with a View to Develop an Instructional Module

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***Abstract*: A descriptive research approach was adopted to assess knowledge regarding diabetes mellitus who were selected using non-probability convenient sampling till the point of saturation for qualitative analysis. Qualitative findings suggest a knowledge regarding diabetes mellitus among diabetes mellitus patients. In the present study 60 diabetes mellitus patients evaluated, Table 1 Fig. 1, represent that diabetes mellitus patients majority of them i.e. 41 (68.33%) had average knowledge regarding diabetes mellitus, 11 (18.33%) had poor knowledge, and 8 (13.33%) had good knowledge, Table 2 reveals that there was significant association of knowledge of diabetes mellitus patients regarding diabetes mellitus with socio-demographic variables i.e. age in years as chi square value 9.83 greater than the table value 9.49 at 0.05 level of significance.**

***Keywords*: Knowledge, diabetes mellitus, diabetes mellitus patients, community health center, instructional module.**

1. Introduction

Diabetes mellitus is recognized as one of the leading cause of death and disability worldwide, India is in leading position with largest number of diabetics. As per the surveillance of World Health Organization (WHO), it is expected that approximately 60 million people by the year 2017 and 80 million people by 2030 in India and 366 million people in the world by 2030 will be affected by diabetes mellitus. Knowledge about diabetes mellitus is a prerequisite for individuals and communities for its prevention and control.

Diabetes was considered a disease of the wealthy in ancient India, and was known as “MADHMEHA” (sweet urine disease). It was observed that ants were attracted to the urine. The ancient Greek coined the term “Diabetes” meaning excessive urination with dehydration. Diabetes has emerged as a major health care problem everywhere. Currently the number of cases of diabetes worldwide is estimated to be around 150 million. This number is predicted to double by 2025.

According to the national diabetes information clearing house in 2007, the five countries with the largest number of people with diabetes mellitus in India (40.9 Million), China (39.8 Million), the United States (19.2 Million), Russia (9.6 Million) and Germany (7.4 Million). By 2025, largest increases in diabetes prevalence take place in developing countries.

Rapid urbanization and industrialization have produced advancement on the social and economic front in developing countries, such as India which have resulted in dramatic lifestyle related diseases. The transition has occurred in the last 15 years and the prevalence has risen from 2.4% to 6.4%. It is estimated that by 2025, every fifth person with diabetes will be an Indian.

2. Need of the Study

Diabetes mellitus (DM) is recognized as one of the leading cause of death and disability worldwide, India is in leading position with largest number of diabetes. As per the surveillance of World Health Organization (WHO), it is expected that approximately 60 million people by the year 2017 and 80 million people by 2030 in India and 366 million people in the world by 2030 will be affected by diabetes mellitus. Knowledge about diabetes mellitus is a prerequisite for individuals and communities for its prevention and control.

The greatest challenge faced by the modern world is diabetes mellitus. The lifestyle disease known to be restricted to urban population in the country till a few years ago has now invaded rural India as well, with as much as 3% of the total rural population being diagnosed with diabetes. Urban diabetes mellitus patients are estimated to account for nearly 10% to 11% of the total 25 million patients in India. The disease presently affects 10% of the affluent class and nearly 33% of the lower levels of population. The prevalence of diabetes is 16.6% in Hyderabad, followed by Chennai with 13.5%, Bangalore with 12.4%, and Delhi with 11.6%, and Mumbai with 9.3%. By 2025, the number of diabetes patients is expected

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to increase by 41% in developed countries to 72 million from the present level of 51 million. In developing countries, the incidence of the disease would surge to 228 million from 84 million.

In patients with diabetes, physicians are often concerned about increasing functional limitations that may impede a successful self-management. In particular, the correct handling of the insulin injection requires complex self-management abilities. Among these functional limitations, loss of visual acuity, loss of manual abilities and cognitive decline are of most importance.

As per the Annual Health Survey (2013) Chhattisgarh Raipur, nearly 10.25 lakh people in the state suffer from chronic illness like diabetes, over 4,000 people per one lakh population in Chhattisgarh have symptoms of these chronic illnesses with those in urban areas figuring higher on the list. Interestingly, the data reveals that while more male suffer from diabetes, and hypertension affects a large number of women. As compared to 664 males per one lakh population with diabetes, only 414 females were found with its symptoms.

By looking at the statistics it is clear that diabetes is affecting the people in drastic way by reviewing the previous studies it's evident that the diabetes mellitus patients have less knowledge regarding its management. Awareness and knowledge regarding diabetes is still grossly inadequate in India. Massive diabetes education programmes are urgently needed in rural India. Therefore, the investigator felt that there is a need to explore the knowledge of diabetes mellitus patients who are living in rural area Durg district, (C.G.).

3. Objectives of Study

1) To assess the socio demographic variables of the diabetes mellitus patients attending community health center, Durg district, (C.G.).
2) To find the association between knowledge regarding diabetes mellitus and selected socio demographic variables among diabetes mellitus patients attending community health center, Durg district, (C.G.).
3) To develop instructional module and to create awareness among diabetes mellitus patients regarding diabetes mellitus and self-administration of insulin injection.

4. Hypothesis

There will be significant association between knowledge regarding diabetes mellitus with selected socio demographic variables at 0.05 level of significance.

5. Conceptual Framework

The conceptual frame work of this study is based on Imogene King's theory of goal attainment. Conceptual frame work is a cohesive supportive linkage of a selected interrelated concept. Conceptual frame work is a theoretical approach to the study of problems that are scientifically based, which emphasizes the selection, arrangement and clarification of its concepts. Conceptual frame work provides a back ground or foundation of the study and it hypothesized or proposed relationship between concepts.

6. Methodology

A descriptive research approach was adopted where 60 diabetes mellitus patients were selected from that sample till the point of saturation for qualitative analysis was taken by using non probability convenient sampling. A self-structured tool to assess socio demographic variables and self-structured questionnaire was used to assess response (qualitative) regarding assess the knowledge of diabetes mellitus among diabetes mellitus patients. Qualitative data was collected using self-structured questionnaire with 60 diabetes mellitus patients and the responses were recorded. Collected data was analyzed using Descriptive statistics (mean, mean score%, SD), Inferential statistics (chi square, (r) value). Qualitative findings suggest good, average, and poor knowledge of diabetes mellitus among diabetes mellitus patients.

7. Result

In the present study, analysis of socio demographic data depicts that out of 60 diabetes mellitus patients participate in present study. The diabetes mellitus patients 31(51%) were male and 29 (49%) were female. 41(68.33%) majority of the subjects belonged to the age group 61-70 years, 17 (28.33%) belonged to age group 51-60 years, and 2(3.33%) belonged to age group 40-50 years. 22(36.66%) were illiterate, 13 (21.66%) had secondary education, 10 (16.66%) had primary education, 8 (13.33%) had higher secondary education and 7 (11.66%) were graduates. 26 (43.33%) were house wives, 21 (35%) were retired, 7 (11.66%) were self-employed, 6 (10%) were in private job. 56 (93%) were having type II diabetes mellitus, and 4 (6.66%) were having type I diabetes mellitus. 57 (95%) were diabetic for above 6 years, and 3 (5%) were diabetic since 6years.

Table 1
Overall analysis of knowledge of diabetes mellitus patients regarding diabetes mellitus

Knowledge Score	Frequency (F)	Percentage (%)
Good (9-12)	8	13.33
Average (5-8)	41	68.33
Poor (0-4)	11	18.33
Total	60	100

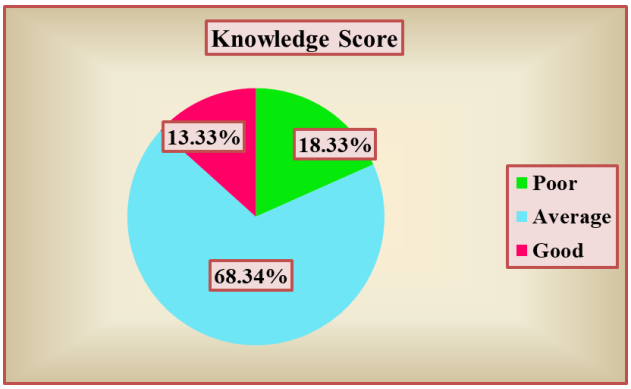

Fig. 1. Percentage distribution of subjects according to knowledge regarding diabetes mellitus

Table 2
Association between knowledge regarding diabetes mellitus and selected socio demographic variables among diabetes mellitus patients

Socio Demographic Variables	Critical Value at 0.05	Chi-Square	df	p value	INFERENCE
Gender	5.99	2.05	2	p>0.05	Not significant
Age (in Years)	9.49	9.83	4	P<0.05	Significant
Education Qualification	15.51	10.76	8	p>0.05	Not significant
Occupational Status	12.59	3.59	6	p>0.05	Not significant
Type of Diabetes Mellitus	5.99	1.98	2	p>0.05	Not significant
Duration of Diabetes Mellitus	5.99	1.53	2	p>0.05	Not significant
Duration of Insulin Administration	5.99	1.53	2	p>0.05	Not significant

Table 1 and Fig. 1, represent that diabetes mellitus patients majority of them i.e. 41 (68.33%) had average knowledge regarding diabetes mellitus, 11 (18.33%) had poor knowledge, and 8 (13.33%) had good knowledge.

Table 2 reveals that there was significant association of knowledge of diabetes mellitus patients regarding diabetes mellitus with socio-demographic variables i.e., age in years as chi square value 9.83 greater than the table value 9.49 at 0.05 level of significance.

Discussion

In the present study 60 diabetes mellitus patients evaluated Table 1 the findings represent that among diabetes mellitus patient's majority of them i.e., 41 (68.33%) had average knowledge regarding diabetes mellitus, 11 (18.33%) had poor knowledge, and 8 (13.33%) had good knowledge.

The above findings can be supported by Shrestha D (2018) carried out a descriptive cross-sectional study design among the diabetes mellitus patients attending the diabetic clinic of BPKIHS. Data were collected using the self-structured questionnaire. Results revealed that mean knowledge of the participants was 57.55 % and practice was 73.98 %. Among them 54% (27) of participants has inadequate knowledge, remaining 46% (23) has adequate knowledge. Similarly, 48% (24) of participants has inadequate practice, and remaining 52% (26) has adequate practice.

Sridhar, et al., (2017) carried out a prospective and observational study among 100 diabetic and 50 non-diabetic subjects. Results revealed that diabetic patients 46% had poor knowledge, 45% had medium knowledge and 9% had good knowledge regarding diabetes mellitus whereas 64% of non-diabetics had poor knowledge, 34% of non-diabetics had medium knowledge and 2% of non-diabetics had good knowledge regarding Diabetes Mellitus.

8. Conclusion

On the basis of the finding of the present study it is concluded that there are good, average, and poor knowledge of diabetes mellitus among diabetes mellitus patients.

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