

Assess the knowledge regarding diabetes self-care management on diabetic patients in selected wards of KGMU, Lucknow UP

Ms. Manisha Anand¹

Mrs. Versha Rani Verma², Ms. Akriti Verma³, Ms. Anamika Bharti⁴, Ms. Anjali Gautam⁵, Ms. Anjali Kumari⁶, Mr. Ankit Sachan⁷, Ms. Anshu Singh⁸, Ms. Archana Gautam⁹, Ms. Arti Singh¹⁰

Clinical Instructor, KGMU College of Nursing
Shah Mina Road, Chowk, Dist. Lucknow, Uttar Pradesh

Abstract

Background: Diabetes remains a major risk for cardiovascular disease improvement in increasing awareness, treatment and control of diabetes. Undiagnosed and uncontrolled diabetes remains a major public health challenge. The study was conducted with objective to assess knowledge regarding diabetes self-care management on diabetic patients in KGMU, Lucknow U.P

Material and Methods: A descriptive study carried out to assess knowledge regarding diabetes self-care management among 62 diabetic patients from selected ward of KGMU, Lucknow U.P. The participants were chosen by non-probability convenient sampling technique with quantitative research approach. Selection of participants was done on the basis of inclusion and exclusion criteria and then informed consent were taken. A DSMQ questionnaire was used to collect the data. The descriptive and inferential statistics was used to analyse data based on objectives and hypotheses.

Results: The study findings have shown that out of 62 patients, the knowledge level of 8(12.90%) patients had good knowledge, 47(75.80%) had average knowledge, 7(11.29%) had poor knowledge. The study findings reveals that out of 13 variables Age, Gender, Education, Occupation, Locality, Family, Co- Morbidity, Duration of diabetes, Medication, Source of information, Weight, Height, Body Mass Index out of these demographic variables duration of diabetes (df=3 p=0.018), any other illness (df=3 and p=0.01), medication for glycemic control (df=3 and p=0.020), BMI (df=2 and p=0.432) have shown a significant association.

Conclusion: In the current study, majority of the samples were having average knowledge about the diabetic self-care management but still peoples have less knowledge regarding, co-morbidity, duration of diabetes, medication and Body Mass Index Thus by giving right knowledge to them they can enhance their knowledge for good self-care management and they can teach others also for the negligence.

Keywords: Knowledge, Diabetes self-care management, Diabetes Mellitus

Introduction

During the last twenty years the prevalence of diabetes has increased dramatically in many parts of the world and the disease is now a worldwide public health problem. The total number of people with diabetes is projected to rise from 171 million in 2000 to 366 million in 2030^[1]. India has now been declared by WHO as the diabetes capital of the world. India is an influential hub for the global diabetes epidemic with the second highest diabetes population in the world (>69 million as of 2015). With this trend, India would be home to 123.5 million people with diabetes by 2040^[2].

Diabetes is an iceberg disease. Diabetes mellitus is a group of metabolic diseases characterized by elevated levels of glucose in the blood (hyperglycemia) resulting from defects in insulin secretion, insulin action, or both^[3]. It has been recognized as a chronic condition that challenges every aspect of personal, emotional, social, physical, psychological and spiritual life of an individual. Commonly classified under four categories: Type 1 diabetes, Type 2 diabetes, Gestational diabetes mellitus (GDM), and Specific types of diabetes^[4].

Diabetes is on the rise across the globe as reported in the most recent 8th edition of the IDF Diabetes Atlas 2017. According to the IDF statistics, presently every seven seconds someone is estimated to die from diabetes or its complications, with 50% of those deaths (4 million in total per year) occurring under the age of 60 years. This is against the background of a global diabetes prevalence of 8.8% (95% confidence interval 7.2-11.3%) of the world population in 2017, standardized for the age group 20-79 years. The prevalence is expected to further increase to 9.9% (95% CI 7.5-12.7%) by the year 2045. In total numbers, this reflects a population of 424.9 million (95% CI 346.4-545.4 million) people with diabetes worldwide in 2017 with an estimate of a 48% increase to 628.6 million people (95% CI 477.0-808.7 million) for the year 2045. Global umbers of diabetes prevalence have continuously risen from 151 million in 2000, when the IDF Diabetes Atlas first was launched, to 285 million in 2009 and to 382 million in 2013. Disturbingly in this context, some 50% of all individuals with diabetes are undiagnosed, especially in developing countries.^[5]

The majority of patients with diabetes can significantly reduce the chances of developing long-term complications by improving self-care activities. Despite this fact, compliance or adherence to these activities has been found to be low, especially when looking at long-term changes. In a study conducted among people with diabetes only 30% were compliant with drug regimens and the non-compliance was higher due to the lack of sufficient motivation for treatment adherence.²⁴ One of the realities about type-2 diabetes is that only being compliant to self-care activities will not lead to good metabolic control. In an American trial, it was found that participants were more likely to make changes when each change was implemented individually. Success, therefore, may vary depending on how the changes are implemented, simultaneously or individually. Some of the researchers have even

suggested that health professionals should tailor their patient self-care support based on the degree of personal responsibility the patient is willing to assume towards their diabetes self-care management^[6]

During the clinical experience and analyzing previous studies, investigators noticed that majority of patients with diabetes mellitus do not take prescribed treatment, neglecting the do's and don'ts of diet and do not know the importance of exercise and foot care etc. which leads them to complications. Thus, the investigators felt the need to assess knowledge regarding diabetes self-care management on diabetic patients, which may contribute in planning and implementing nursing care and education accordingly.^[7]

Materials and Methods

A descriptive study was used to assess the knowledge self-care diabetic management at different wards of KGMU, Lucknow, a total of 62 samples were taken from the different wards by using non probability convenient sampling technique. Patient with gestational diabetes and juvenile diabetes and diabetic patient who are above 70 years of age were excluded for this study. Demographic variables used in this study were age, gender, education, occupation, locality, family history, co-morbidity, duration of diabetes, medication, source of information, weight, height, and body mass index. A DSMQ questionnaire was used to collect the data which consist 16 set of questions, and categorized as very good, good, average and poor knowledge. Reliability was done by using split half method on 6 samples and the r value was 0.92 which indicates tool was reliable.

Pilot study has been done in the Gandhi medicine ward of King George's Medical University. After conducting pilot study it was noted that the study was feasible. The legal and administrative permission was obtained from concerned authorities, and the data was collected from all participants, and required minimum 20 minutes to fill the questionnaire. After filling the questionnaire educative material i.e. information booklet was given to them and it was explained by the researcher directly to the sample for enhancing knowledge. All the collected data was tabulated and analyzed based on objectives by using appropriate statistical methods.

Results

Description of demographic variables: The majority of adults 26 (41.9%) belonged to age group of 31-45 years, 19 (30.6%) belongs to 16-30 years, and 13 (21.0%) belongs to 46-60 years. Highest numbers of adults were male 39 (62.9%), and female were 23 (37.1%). There were 22 (35.5%) of adults had intermediate education, 13 (21.0%) were from primary, 11 (17.7%) had graduate education. In terms of occupation the highest number is 27 (43.5%) from private job, 18 (29.0%) were housewife, 12 (19.4%) were had government job. Majority of adults 42 (67.7%) belong to rural area whereas 20 (32.3 %) belong to urban areas. Higher percent 26 (41.9%) had family history of diabetes, 11 (17.7%) had family history of obesity and hypertension. Duration of diabetes is 30 (48.4%) from 1-5 years, 19(30.6%) less than 1 years, 8(12.9%) more than 10 years. Majority 42(67.7%) had type 2 diabetes and 20 (32.3%) had type 1 diabetes.

Among 30 (48.4%) had other illness, 23(37.1%) had hypertension, 8 (12.9%) had thyroid disorders respectively. Higher percent 30 (48.4%) was consuming oral medication for glycemic control, 20 (32.3%) had insulin injection for glycemic control, and 8 (12.9%) had both oral and insulin medication for glycemic control. Majority 38(61.3%) had overweight, 12(19.4%) had obese and normal BMI respectively, significantly 43(69.4%) had previous knowledge on diabetes mellitus, and 21(48.8%) had knowledge from health personnel, 11(25.6%) had knowledge from neighbors, friend and others.

Awareness on diabetes self-care management: Out of 62 samples 47 (75.0%) had average knowledge, 8 (12.90%) had good knowledge and 7(11.29) had poor knowledge in relation to diabetes self-care management, and the mean score was 48.99 and SD 15.06.

Item analysis of awareness on diabetes self-care management: Around (37.1%) of samples check blood sugar levels with care and attention, (30.6%) of samples eat food which makes easy to achieve optimal blood sugar levels, (29.0%) of samples keep all doctors' appointments recommended for their diabetes treatment, (54.8%) of samples take diabetes medications as prescribed, (35.5%) of samples eat occasionally lots of sweets or other foods rich in carbohydrates, (35.7%) of samples record their blood sugar levels regularly, (33.3%) of samples never avoid diabetes in terms of doctor appointment, (33.9%) of samples do regular physical activity, (33.9%) of samples strictly follow the dietary recommendations given by doctor, (40.3%) of samples agree in somewhere that they do not check their blood sugar levels frequently, (37.1%) of samples disagree that they avoid physical activity, (37.1%) of samples disagree that they tend to forget to take or skip their diabetes medication. (43.5%) of samples disagree that sometimes they have real food binges, (41.9%) of samples agrees regarding their diabetes care, (33.9%) of samples disagree that they tend to skip planned physical activity and (35.5%) of samples agrees that their self-care is poor.

Association of awareness with their selected demographic variables: The below table depicted that the socio demographic variables such as duration of diabetes, any other illness and medication for glycemic control have significant association with knowledge level at 0.05 level. However other variables did not have any association with knowledge level.

Table 1: Association of awareness with their selected demographic variables

Variable	F-value/t-value	Df	p-value
Age	0.14	3	0.939
Gender	0.09	1	0.770
Locality	0.27	1	0.872
Education	0.88	4	0.484
Occupation	1.09	4	0.579
Family history	1.11	3	0.354
Type of diabetes	1.40	1	0.242
Duration of diabetes	3.64	3	0.018*

Any other illness	3.64	3	0.018*
Medication for glyceemic control	3.55	3	0.020*
Body mass index	0.85	2	0.432
Previous knowledge	0.24	1	0.629
Source	2.43	3	0.080

Discussion

Our study reveals that out of 62 patient, most of the patient belonging to the age group of 31-45 years (41.9%) and the age group of 16-30 years (30.6%) and 46-60 years (13%). In the comparative study of karampadmaat et al. in tertiary care hospital and the sample size was 61 in which patient were in the age group of 55 years is 60% and 40-60 years is 32%. In present study, the result reveals that the among all the age group the ratio of diabetic people is less in our study then the comparative study.^[8]

In the present study out of 62 patients, the knowledge level of 8 (12.90%) patients had good knowledge, 47(75.80%) patients had average knowledge and 7(11.29%) patients had poor knowledge, the study done by Gaiker Pradnya et. al where out of 30 client, 14(46.6 %) had good knowledge, 16 (53.33%) client had average knowledge and none of the client had poor knowledge. In present study the result reveals that average knowledge of 47 patients is 75.80% which is more than comparative study^[9]

In our study the socio demographic variables such as duration of diabetes, any other illness and medication for glyceemic control have significant association with knowledge level at 0.05 level one study done by Ms. Pradnya Gaikar et.al shows significant association between Family histories, previous hospitalization with knowledge of self-care management of newly diagnosed diabetic patient. In our study association comes under all the types of diabetic patients and inn this comparative study association restrict at newly diagnosed diabetic patient.¹⁰

Conclusion

In the current study, majority of the samples were having good knowledge regarding diabetic self-care management but still peoples have low knowledge in the areas like how other illness affect diabetes and how to maintain normal BMI for managing diabetic care. Samples still needs to know about self-care management in diabetes so that they can prevent their self from the consequences and other potential complications. So by giving them a right knowledge they can apply in their life and spread the awareness related to how self-care management is important for all the individual who comes under diabetic category so through that they reduce the potential complications.

Reference

1. Dedefo,M.G, EjetaA, B.M, Wakjira, G.B, et al. Self-care practices regarding diabetes among diabetic patients in west Ethiopia, BMC Res Notes. 2019; 12(1):212.
2. Tewahido D, Berhane Y. self- care practices among Diabetes patient in Addis Ababa : A qualitative study .PLOS ONE 2017; 12(1).
3. Shyamsundar Jagdish Raithatha, Singh Uday Shankar, Kumar Dinesh. "Self-Care practices among diabetic patients in anand district of Gujrat". Hindwai Publishing Corporation ISRN Family Medicine.volume 2014;6.
4. Teklewoini ,Mariye et al. "Magnitude of diabetes self-care practices and associated factor among type 2 adult diabetic patients following at public hospitals in central zone, Tigray Region Ethiopia.2017 BMC research notes. 2018; 11,380.
- 5.LM Moodley and V Rambiritch (Associate Professor) (2007) an assessment of the level of knowledge about diabetes mellitus among diabetic patients in a primary healthcare setting. South African family practice. 2007; 49, 10.
6. Mukeshimana Madeleine et.al the knowledge and practices of self care management among patient attending a diabetes clinic on Kigali ,Raunda, rwand journal series F.medicine and health sciences 2015;2;24-30.
7. Kushwaha S. Arvind, Kumari Supriya, Kushwaha Neha. "Self-care in diabetes: a study amongst diabetics in an urban community. International Journal of Community Medicine and Public Health. 2016;3:1.
8. Kakade AA, Mohanty IR, Rai S. Assessment of knowledge, attitude and self-care activities among type-2 diabetic patients attending a tertiary care teaching hospital. Int J Basic Clinharmacol 2016;5:6.
9. GaiKar Ms.Pradnya, Kale Milind et.al. Assess the knowledge regarding self care management among newly diagnosed type 2 diabetic clients attendant out patient department as parshuram hospital ratngiri dist. Maharashtra state.Ms. PradnyaGaiber et.al JMSCR. 2017; 5.
10. Gaikar Pradnya, et.al. Assess the Knowledge Regarding Self-Care Management among Newly Diagnosed Type 2 Diabetic Clients Attended Out Patient Department at Parshuram Hospital, Ghanekhunt-Lote, Ratnagiri Dist. Maharashtra State.2017;(5)145.