

A CROSS SECTIONAL STUDY OF ASSESSMENT OF SELF-CARE PRACTICES AMONG TYPE 2 DIABETES PATIENTS AT A TERTIARY CARE HOSPITAL

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Abstract

Introduction: Diabetes, with a global prevalence of 8.3%, affects about 371 million people around the world leading to around 4.8 million deaths every year. Around 80% of the world's diabetic population lives in developing countries, India, with a diabetic population of around 63 million ranks second in the list of countries affected by diabetes, with China topping the list with an estimated 92.3 million diabetic patients.

Materials and Methods: A cross-sectional questionnaire based study was conducted at Katuri Medical College, Guntur from January 2021 to December 2021 (1 year). Patients fulfilling the inclusion and exclusion criteria were included in the study after explaining the aim of the study. Written informed consent was obtained from each patient. The socio-demographic profile and disease information were filled up on a proforma specifically designed for the study. In addition, the questionnaire developed by Mazenet al and diabetes self-management Questionnaire (DSMQ) was administered to assess participants' knowledge, attitude and current actions relating to diabetes self-care activities associated with glycemic control.

Results: A total of 122 diabetic patients consented and participated in the study of whom 56.66% were male and 43.33% female. Age ranged from 20 years to 66 years in the sample with maximum of the respondents (33.33%) of the age more than 60 years. Socio-economic status was assessed by categorizing the patient into lower, lower middle, upper middle and upper class according to Kuppuswamy classification. Most of the respondents (43.3%) belonged to upper middle class. 21.3% of the participants were obese and majority had duration of disease between 5 to 10 years. Only 30% of the total diabetic patients had achieved good glycemic control.

Conclusion: As evidenced by the study, patients who were regularly involved in self-care practices (especially dietary control and glucose management) achieved better glycemic control. Therefore, interventions to increase diabetic patient self-care behaviour are needed to reduce poor glycemic control.

Key Words: Diabetes, diabetes self-management Questionnaire, Kuppuswamy classification.

INTRODUCTION

Diabetes, with a global prevalence of 8.3%, affects about 371 million people around the world leading to around 4.8 million deaths every year. Around 80% of the world's diabetic population lives in developing countries, India, with a diabetic population of around 63 million ranks second in the list of countries affected by diabetes, with China topping the list with an estimated 92.3 million diabetic patients.¹ Diabetes is a chronic disease, requiring a multipronged approach for its management, wherein the patient has an important role to play. The patients are required to follow certain self-care practices in order to achieve an optimal glycemic control and prevent complications such as neuropathy, nephropathy, and

retinopathy.² These practices include regular physical activity, appropriate dietary practices, daily foot care practice, compliance with the treatment regimen, and tackling complications such as hypoglycaemic episodes.³

Self-care in diabetes is defined as behaviours undertaken by people with or at risk of diabetes in order to successfully manage the disease on their own. It is believed that appropriate patients knowledge of self-care is the key to achieving therapeutic goals in ambulatory care.⁴ because the vast majority of day-to-day care in diabetes is handled by patients and/or families, there is an important need for reliable and valid measures for self-management of diabetes. There have been very few studies addressing self-care practices in diabetics, far fewer in rural areas where people lack knowledge about the disease.⁵

The needs of diabetic patients are not only limited to adequate glycemic control but also correspond with preventing complications, disability limitation and rehabilitation.⁶ Some of the Indian studies revealed very poor adherence to treatment regimens due to poor attitude towards the disease and poor health literacy among the general public.

MATERIALS AND METHODS

Study design: A cross-sectional questionnaire based study.

Study duration: January 2021 to December 2021 (1 year).

Study location: Katuri Medical College, Guntur.

Sample size: 122 patients.

Study participants: The participants of our study included patients with type 2 DM aged 20 years and above with at least one-month duration of illness prior to the study.

Inclusion criteria: Patients aged 20 years and above with at least one month duration of illness prior to study and those who gave consent were included in the study.

Exclusion criteria: Patients with physical disability and mental illness were excluded.

Patients fulfilling the inclusion and exclusion criteria were included in the study after explaining the aim of the study. Written informed consent was obtained from each patient. The socio-demographic profile and disease information were filled up on a proforma specifically designed for the study. In addition, the questionnaire developed by Mazenet al and diabetes self-management Questionnaire (DSMQ) was administered to assess participants' knowledge, attitude and current actions relating to diabetes self-care activities associated with glycemic control.⁴ The Diabetes Self-care Management Questionnaire consisting of four subscales 'Glucose management', 'Dietary control', 'Physical activity' and 'Health Care Use' was administered to the patients.⁴⁻⁵ The data was collected, tabulated and analyzed. The patients were categorized as those who achieve glycemic control and those without glycemic control. The statistically significant differences between knowledge, attitude, Diabetes Self-care Management between the groups were determined.

RESULTS

A total of 122 diabetic patients consented and participated in the study of whom 56.66% were male and 43.33% female. Age ranged from 20 years to 66 years in the sample with maximum of the respondents (33.33%) of the age more than 60 years. Socio-economic status was assessed by categorizing the patient into lower, lower middle, upper middle and upper class according to Kuppaswamy classification. Most of the respondents (43.3%) belonged to upper

middle class. 21.3% of the participants were obese and majority had duration of disease between 5 to 10 years. Only 30% of the total diabetic patients had achieved good glycemic control.

S.No	Baseline characteristics	Glycemic control achieved group (N=36)	Glycemic control not achieved group (N=84)	Total Number (Percentage)
1	Age			
	<40 years	27.82	7.12	13.32
	41-50 years	33.32	28.56	30
	51-60 years	22.24	23.70	23.35
	>60 years	16.66	40.46	33.32
2	Gender			
	Male	55.55	57.14	56.66
	Female	44.44	42.85	43.33
3	Socioeconomic status			
	Upper class	22.22	9.52	13.33
	Upper middle	22.22	52.38	43.33
	Lower middle	33.33	28.57	30
	Lower	22.22	2.38	8.33
4	BMI			
	Normal <25 kg/m ²	33.33	30.9	31.6
	Over Weight: (25-29.5kg/m ²)	44.44	47.6	46.6
	Obese: >30 kg/m ²	22.22	21.4	21.66
5	Antidiabetic therapy			
	OHA Alone	94.44	88.09	90
	Insulin + OHA	5.55	11.90	10
6	Co-Morbidities			
	Hypertension	38.88	33.33	35
	Thyroid			0
	Nephropathy	5.55		6.66
	Glaucoma		2.3	1.6
	Hyperpigmentation		2.3	1.6

Table 1: Baseline characteristics of type II diabetic patients

Variables	Glycemic control achieved group (N=36)	Glycemic control not achieved group (N=84)	P Value
Knowledge	14±3.3	12.03±3.6	0.023
Attitude	7.2±2.46	7.97±2.4	0.006
Diabetes Self-care Sum Scale	1.85±0.7	1.62±0.9	0.006

Table 2: Knowledge, attitude and Diabetes self-care activities scores among diabetic patients with and without glycemic control

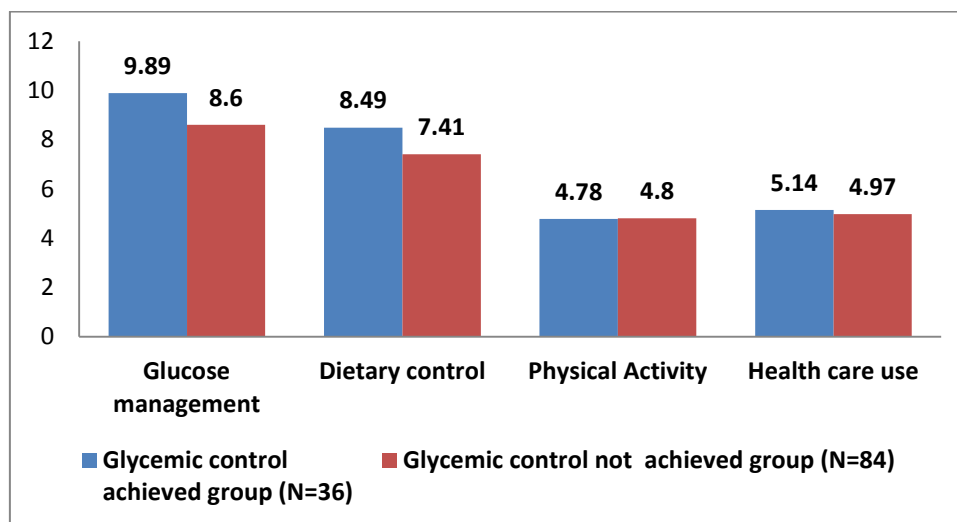


Figure 1: Diabetes Self-care practice scores among diabetic patients with and without glycemic control

Mean Glucose management score in the glycemic control achieved group was found to be 9.59 ± 1.41 as compared to 8.60 ± 2.4 score obtained in the glycemic control not achieved group. Similarly the 'dietary control' mean score in the glycemic control achieved group was found to be 8.49 ± 1.46 compared to 7.61 ± 1.1 in the glycemic control not achieved group. The mean score for physical activity and health care use were found to be 4.78 ± 1.2 and 5.14 ± 0.97 respectively in the good glycemic control group as compared to 4.80 ± 1.17 and 4.97 ± 2.1 respectively among glycemic control not achieved patients. Finally, the sum scale score was found to be 1.85 ± 0.7 in the glycemic control achieved group as compared to 1.62 ± 0.9 obtained in the glycemic control not achieved group (Figure 1).

DISCUSSION

The present study is a hospital based cross sectional study conducted in the diabetes clinic of tertiary care hospital focusing on evaluation of knowledge, attitude, self care practices among diabetes patients and its relation with glycemic control. In the present study majority of the respondents (33.33%) belonged to the age group of more than 60 years.⁷ Elderly group are vulnerable population generally suffering from multiple ailments and may have compromised self-care activities. This observation is supported by the similar studies conducted by Karampadmaat et al and Shah at encountered majority of the patients in the age group of 55 years.⁸

Study findings were majority of the patients with poor glycemic control belonged to this age group. In the present study it was observed that the proportion of male patients were more (56.66%) than female patients. Similar studies conducted by Karampadmaat et al and Shah at encountered majority of the patients in the age group of 55 years.⁹

As evidenced by the study results, among self-care practices, a significant difference ($p < 0.05$) in dietary choices and glucose management practices ($p < 0.05$) were observed between the patients with good and poor glycemic control. However no difference between the physical activity and health care scores was seen between the two groups. There was a significant difference between the patient following a healthy diet, and glucose management with their glycemic control. The finding was consistent with studies in literature with this parameters.¹⁰

CONCLUSION

As evidenced by the study, patients who were regularly involved in self-care practices (especially dietary control and glucose management) achieved superior glycemic control.

Therefore, an initiative for diabetes self- management education among patients is a critical element for good glycemic control. Regular inculcation of health education, making the patient aware regarding the disease and encouraging self-care management during treatment will reduce health care burden and help achieve optimal glycemic control.

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