



Original Research Article

Knowledge on home care management in prevention of complications among the patients with Type II diabetes mellitus in RLJH&RC Kolar, with a view to develop a video clipping

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Abstract

Background: Diabetes mellitus is a metabolic disease, involving inappropriately elevated blood glucose levels. Patients are discharged from hospitals and rehabilitation centers in the continuum of care than ever before. It's been the need of the hour to home care clinicians to find effective ways of transitioning patients from an acute episode of illness to a return to the community. Recognizing the impact of diabetes as an independent risk factor is key to achieving favorable health outcome.

Objective and Aim: To assess the Knowledge on Home Care Management in Prevention of Complications among the Patients with Type II Diabetes Mellitus.

Materials and Methods: A Descriptive survey design was adopted by using purposive sampling technique. A total of 150 patients were included in the study & data collected through a structured knowledge questionnaire. Data was analyzed using descriptive Statistics & Inferential statistics.

Results: 89.4% (134) patients had inadequate knowledge and remaining patients with moderate knowledge is 10.6% (16) and none of them had adequate knowledge. And found no significant association between the knowledge and selected socio-demographic variables.

Conclusion: The study concluded that knowledge regarding Home Care Management in Prevention of Complications among the Patients admitted and Diagnosed with Type II Diabetes Mellitus, was inadequate needs emphasis to enhance the knowledge.

Keywords: Knowledge, Home Care Management, Type II Diabetes Mellitus, Informational Video Clipping.

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1. Introduction

Diabetes mellitus (DM) is probably one of the oldest diseases known to man. It was first reported in Egyptian manuscript about 3000 years ago.¹ Type II Diabetes Mellitus is characterized by chronically elevated blood glucose and elevated blood Insulin.² It is estimated that currently there are 57 million people with Diabetes in India and by 2030 is number will swell to 70 million. This would mean every fifth Diabetic in the world would be an Indian. Diabetes causes 6 deaths every minute and one in 20 deaths in the world is due to diabetes, every year it is estimated that 3.2 million peoples in the world die due to the Diabetes or its related causes.³ Almost 90 to 95% Diabetes is of Type II or majority onset

type, which affects people in their middle age, Type I or juvenile diabetes affects 70,000 children under age of 15 years every year.⁴ The major causes of increase in the incidence of diabetes are a sedentary lifestyle.

Diabetes causes damage to arteries as well as nervous system damage. This artery damage results in medical problems that are both common and serious such as Dizziness when standing, Cardiovascular disease, Amputations. Kidney disease, Eye disease and blindness, Sexual Dysfunction, Diabetic neuropathy, Stomach and bowel problems Dizziness when standing, Localized nerve failures (commonly known as Bell's palsy), where most of the complications is preventable.⁵⁻⁸

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Diabetes is a chronic condition that affects millions worldwide, leading to complications that can significantly impact quality of life.⁹ The disease damages arteries and the nervous system, causing serious medical problems such as dizziness when standing, cardiovascular disease, kidney disease, eye disease, blindness, sexual dysfunction, diabetic neuropathy, stomach and bowel issues, and localized nerve failures like Bell's palsy. In severe cases, it can even result in amputations.¹⁰⁻¹² However, many of these complications are preventable with proper lifestyle management and home care strategies.

The role of home health care nurses is increasingly important as patients are discharged from hospitals and rehabilitation centers early in the course of illness and require more sophisticated nursing management at home. Home care nurses are the liaison among members of the health care team, patients, family members, and caregivers.¹³ Nurses are often the only professional who has a complete overview of a patient's medical regimen and, therefore, responsibility for the coordination of care.¹⁴ Home care nurses also provide emotional and psychological support to patients and their families. Managing diabetes can be overwhelming, and individuals often struggle with lifestyle changes and treatment regimens. By offering guidance, encouragement, and tailored care plans, nurses help patients maintain motivation and adherence to their treatment plans. As patients are often discharged from hospitals and rehabilitation centers early, they require more advanced nursing care at home. Home care nurses serve as a crucial link between patients, families, and healthcare providers.¹⁵ They educate patients on medication use, insulin administration, and symptom management while also addressing potential complications. Moreover, these nurses play a key role in preventing hospital readmissions by identifying early signs of complications and taking prompt action.¹⁶

A well-structured home care plan is essential for managing diabetes effectively. This includes regular monitoring of blood sugar levels, adherence to prescribed medications, and maintaining a healthy diet. Proper nutrition plays a key role in stabilizing blood glucose levels, and individuals with diabetes are encouraged to follow a balanced diet rich in whole grains, lean proteins, and healthy fats while

avoiding excessive sugars and processed foods. Physical activity is equally important, as regular exercise helps improve insulin sensitivity, maintain a healthy weight, and enhance overall cardiovascular health.¹⁷

One of the critical aspects of home-based diabetes care is foot care. Since diabetes can lead to poor circulation and nerve damage, even minor cuts or sores can escalate into serious infections, sometimes requiring amputation. Patients should inspect their feet daily, keep them clean and dry, and wear appropriate footwear to reduce the risk of injury. Additionally, maintaining good hydration and managing stress levels contribute to overall well-being and better blood sugar control.¹⁸

Advancements in technology have further enhanced home diabetes management. Telehealth services and digital glucose monitoring devices allow for real-time tracking of blood sugar levels, providing both patients and healthcare providers with critical data for better decision-making.¹⁹ These tools empower individuals to take a proactive approach to their health while ensuring timely medical intervention when necessary.²⁰

Hence the present study was undertaken to assess the Knowledge regarding Home Care Management in Prevention of Complications among the Patients admitted and Diagnosed with Type II Diabetes Mellitus.

2. Methods and Materials

Based on the objective of the study, A Descriptive Survey design was adopted, and administered structured knowledge questionnaire using purposive sampling technique which was translated in local language of the particular region among 150 Patients. Ethical clearance was obtained from an institutional ethical committee and a written permission was obtained from the medical superintendent RLJH&RC, Tamaka, Kolar. The knowledge among patients was assessed as mentioned in **Table 2. (Figure 1)**

3. Results

3.1. Description of Demographic variables of the Patients. (Ta

Table 1: Frequency and percentage distribution of sample according to socio demographic variables N =150

Sl.no	Variables	Frequency	Percentage (%)
1.	Age in years		
	19-30	67	44.7
	31-40	50	33.3
	41-50	21	14.0
	61 and above	12	08.0
2.	Gender		
	Male	74	49.3
	Female	76	50.7
3.	Religion		

	Christian	69	46.0
	Hindu	57	38.0
	Muslim	24	16.0
4.	Family history of type II DM		
	Yes	55	36.6
	No	67	44.7
	Yes,>2 yrs	28	18.7
5.	Marital status		
	Un married	61	40.7
	Married	67	44.7
	Widowed	22	14.6
6.	Type of family		
	Nuclear	77	51.3
	Joint	73	48.7
7.	Place of residency		
	Urban	75	50.0
	Rural	75	50.0
8.	Education status		
	Primary	57	38.0
	Secondary	57	38.0
	Middle school	00	00.0
	Graduate	00	00.0
	Post graduate	00	00.0
	Illiterate	36	24.0
9.	Type of occupation		
	Government	53	35.3
	Private	71	47.3
	Self-employment	26	17.4
10.	Income for month		
	a.Rs. 6298-10495	74	49.3
	b.Rs.10496-15705	40	26.7
	c.Rs.15706-20991	36	24.0
11.	Type of diet preferred for type II DM patients	67	44.7
	Vegetarian	58	38.7
	Non-vegetarian	25	16.6
	Mixed		
12.	Exposure to information on management of	89	59.5
		04	02.5
	hypertension within 6 months	57	38.0
	Yes		
	No		
	Yes, through mass media		

Table 2: Distribution of sample according to overall level of knowledge Home Care Management of Type II Diabetes patients N-150

Aspect	Grade	Score Range	Frequency	Percentage
Knowledge level	Inadequate (<50%)	0-14score	134	89.4%
	Moderate (51-75%)	15-21score	16	10.6%
	Adequate (>75)	>20	-	-

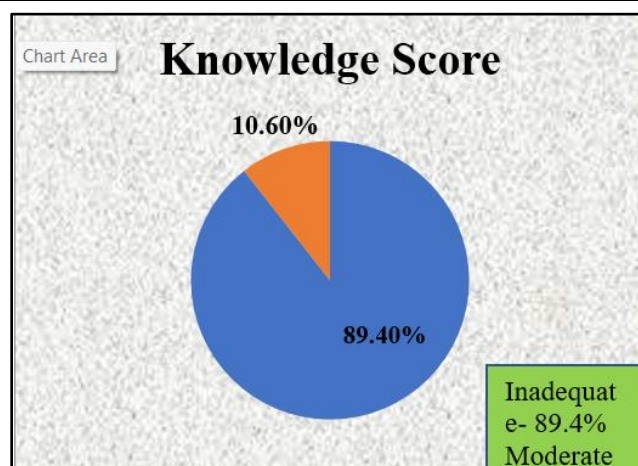


Figure 1: Pie diagram depicts percentage distribution of Knowledge on Home Care Management in Prevention of Complications among diabetes patients.

Table 3: Association of Knowledge scores with socio-demographic variables N-150.

SL. NO	Variables	Below median<11	Above Median>11	df	Inference
1.	Age in years a. 19-40 b. 41-61	71 05	45 29	1	$\chi^2 = 20.92$ p-0.001, SS*
2.	Gender a. Male b. Female	40 36	34 40	1	$\chi^2 = 0.43$ P-0.51, NS
3.	Religion a. Hindu b. Muslim	60 16	66 08	1	$\chi^2 = 2.21$ P-0.13, NS
4.	Family history of DM a. Yes b. No	26 50	32 42	1	$\chi^2 = 0.93$ P-0.33, NS
5.	Marital status a. Married b. Un married	42 34	32 42	1	$\chi^2 = 1.71$ P-0.19, NS
6.	Type of family a. Nuclear b. Joint	39 37	38 36	1	$\chi^2 = 0.00$ P-0.99, NS
7	Place of residence a. Urban b. Rural	36 40	39 35	1	$\chi^2 = 0.21$ P-0.62, NS
8	Education status a. Literate b. Illiterate	67 09	74 00	1	$\chi^2 = 7.34$ P-0.006 SS*
9	Type of occupation a. Government b. Private, Self-employment	38 38	41 33	1	$\chi^2 = 0.24$ P-0.61 NS
10	Income a. 6298-10496 b. 15706-20991	64 12	50 24	1	$\chi^2 = 4.81$ P-0.02, SS*
11	Type of diet a. Vegetarian b. Non vegetarian	42 34	40 34	1	$\chi^2 = 0.02$ P-0.08, NS

12	Exposure to media within 6 months a.Yes b.No	74 2	72 2	1	$\chi^2 = 0.01$ P-0.97, NS
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Note: - P<0.05, NS- Not Significant, SS- Statistically Significant, df- degree of freedom, 1(3.38), df-2(5.99),df-4(9.48)

4. Discussion

As per the objectives of the study knowledge regarding home care management in prevention of complications among type II diabetes patients of results revealed that , as mentioned in **Table 2** Majority 89.4% of the study participants had inadequate knowledge and remaining 10.6% of participant had moderate knowledge and none of them are having adequate knowledge. **Table 3** depicts the Association between knowledge and socio-demographic variable like, Age, educational status & Income found to be statistically significant. Similarly, a systematic review studies were conducted and found to have inadequate knowledge among the diabetes patients.

5. Conclusion

The study findings indicate that the majority (89.4%) of patients with Type II Diabetes Mellitus had inadequate knowledge regarding home care management for preventing complications, while only 10.6% demonstrated moderate knowledge, and none had adequate knowledge. This highlights a significant gap in patient education and awareness, emphasizing the need for targeted interventions. As no significant association was found between knowledge and socio-demographic variables, educational strategies should be universally implemented.

6. Implications of the Study

6.1. Nursing practice

Nursing professional working in the hospital as well as in the community setup should educate and provide awareness to the Type II Diabetes Mellitus patients regarding management which includes diet, excesses, and stress reduction.

6.2. Nursing education

The study emphasizes on significance of short term in-service, Education program for nursed, peripheral health workers and for students to educate the family members regarding management and prevention of complication among Type II Diabetes patients.

6.3. Nursing administration

Nursing administrator can take part in developing protocols, standing orders regarding the health education program for the family members regarding management of patients with Type II Diabetes Mellitus.

6.4. Nursing research

The study helps nursing researcher to develop appropriate health education tools for educating the patients regarding management of Type II Diabetes Mellitus.

7. Recommendations

A comparative study can be conducted to assess the knowledge regarding home care management in prevention of selected complications and patients regarding home care management of Type II Diabetes Mellitus.

8. Source of Funding

None.

9. Conflict of Interest

None.

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