ASSESSMENT OF AN INSTRUCTIONAL MODULE ON KNOWLEDGE CONCERNING THE MANAGEMENT OF DIABETES IN ELDERLY DIABETES MELLITUS PATIENTS IN A SELECTED HOSPITAL IN PUNE, INDIA

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Abstract

International Diabetes Foundation (IDF) research and World Population Review show globally 500+ million people between the age of 19 to 80 are suffering from diabetes mellitus, of which 400+ million are identified as Type2 Diabetes mellitus patients. It's one of the reasons for mortality and morbidity among the masses. However, not much is known concerning the knowledge necessary for these patients to manage their ailment and prevent its complications. The self-care practices improve the quality of life. This study focuses on evaluating an instructional module on knowledge concerning the management of Diabetes mellitus among elderly Type II Diabetes patients. This study was done to check the knowledge of diabetes management among 50 Diabetes patients (27female, 23 males) aged between 50 to 82 years, in Chellaram Multispecialty & Diabetes Hospital, Pune. A self-instructional module was given to the patients and a validated knowledge-based questionnaire was used to evaluate their knowledge regarding the management of diabetes.

Results

The results illustrated that the self-instructional module on management of Diabetes mellitus had a major distinction between the pre & post-test knowledge levels concerning the management of Diabetes in elderly Diabetes patients. 't' value (26.52) was greater than the value in the table at a 0.05 level of significance. Awareness is required to prevent diabetes mellitus complications. In the process of managing diabetes, healthcare providers should emphasize more on promoting self-care activities. Lifestyle changes ought to improve the quality of life for diabetes patients.

Keywords: Self-instructional module, Knowledge, Type II Diabetes mellitus

Introduction

Diabetes prevalence has been steadily rising in developing countries. Worldwide about 422 million people have Diabetes, and they belong to low and middle-income countries. In Asia itself, the prevalence is distressing with increased occurrence of health complications among the elderly as it hampers the quality of life and put an economical burden on Society. Effects

of Urbanization and lifestyle disorders are recognized for the high prevalence of Diabetes. However, with the high incidence of Diabetes, emphasis should be given to awareness and self-care. In addition to those psychological problems are common in Diabetic patients which leads to poor self-care & it impacts Diabetes management. Fewer studies have been done to check the effectiveness of an instructional module on Knowledge concerning the management of Diabetes in elderly diabetes patients. Hence, this study evaluates a SIM on knowledge related to the management of Diabetes in elderly patients with Type II Diabetes.

Objectives
1. To evaluate the pre-test knowledge level concerning the management of Diabetes in elderly diabetes mellitus patients.
2. To assess the effectiveness of the SIM on knowledge related to the management of diabetes.
3. To rule out the correlation among the pre-test knowledge levels of elderly diabetes patients with the selected demographic variables

Methodology
1. Research design: Pre & Post-test design
2. Sampling technique: the technique used is a non-probability sampling
3. Sample: 50 (The patient above 50 years of age)
4. Sampling criteria:
   a. Inclusive criteria
      i. Diagnosed with Diabetes mellitus for over a year
      ii. Above 50 years of age
   b. Exclusive criteria
      i. Non–Diabetes mellitus patients, Type 1, and Pre-Diabetics
      ii. Not available at the time of study

Data collection procedure
Section A: Deals with demographic variables like age, gender, diets, habits of the sample, education, and informational source.
Section B: A structured questionnaire to check the knowledge level of diabetes patients. It contains 30 multiple-choice questions.
1. It consists of knowledge-based questions related to diabetes mellitus.
2. It contains questions related to the management of diabetes mellitus.

Scoring Method:
Out of four options, one was the correct answer and the three were incorrect. The score of 'one' was assigned to each correct answer and 'zero' was given for the wrong answer Thus, there was thirty most available score. The knowledge level was based on the percentage of correct responses given.
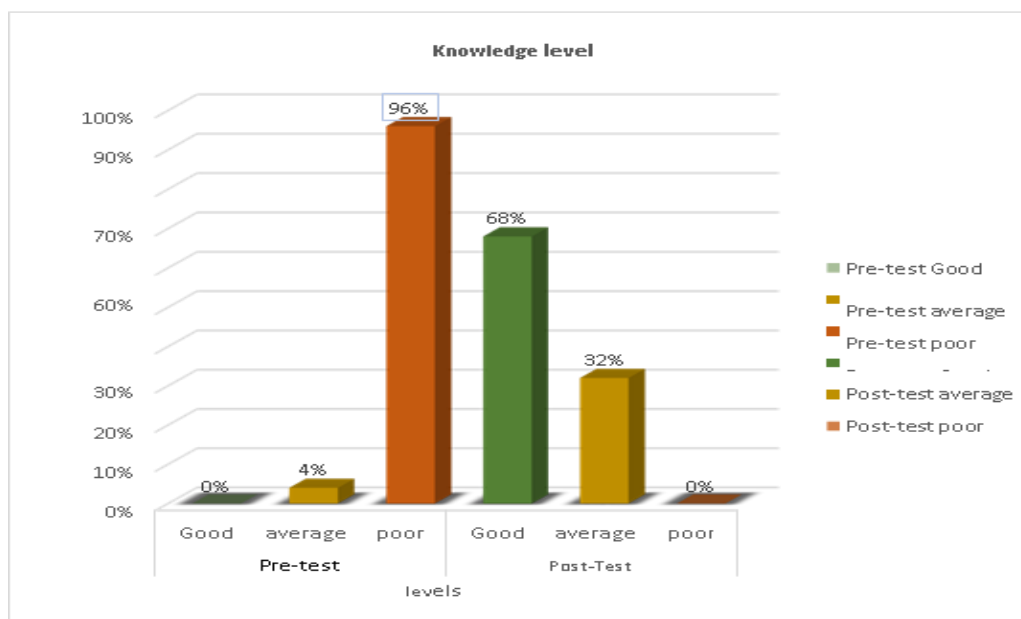
Knowledge level

- Good > 76%
- Average between 51-75%
- Poor < 50%

Results

Table 1: Shows the knowledge level regarding Diabetes management in elderly Diabetes patients

Sr. no.	Knowledge level	Pre-test			Post-test		
		Difference	Mean	Percentage	Difference	Mean	Percentage
1	Good (>76%)	0	0	0%	34	28.20%	68%
2	Average (51%-75%)	2	20	4%	16	18.20%	32%
3	Poor (< 50%)	48	5	96%	0	0	0%

Table 2: Shows collation of mean of pre & post-test knowledge on the management of diabetes in elderly diabetes patients.

Sr. no.	Knowledge	Mean	Difference Mean	Std deviation	't'
1	Pre-test	5.64	19.36	5.18	26.52
2	Post-test	25			
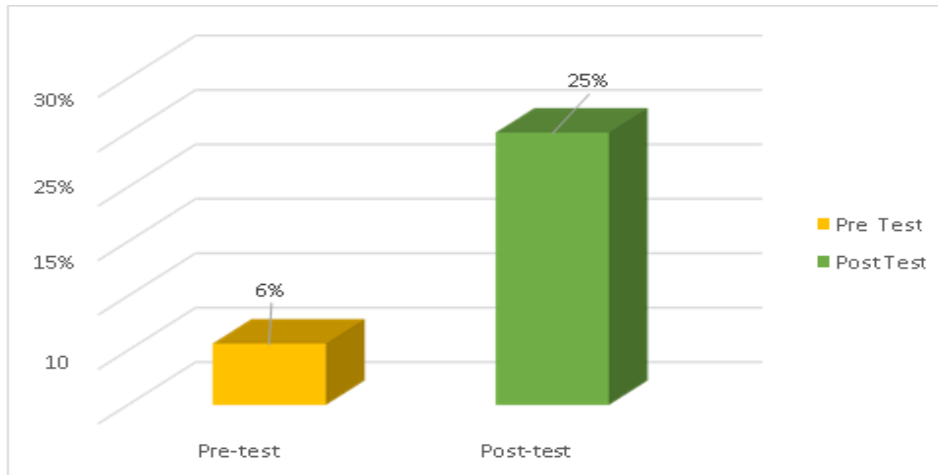
Table 3: Shows the correlation among the pre-knowledge level of the patients related to the management of diabetes mellitus with their demographic variables

Sr.no	Demographic variable	Knowledge level			x 2	Table value	Significance(S) / Not significance (n/s)
		Good	Average	Poor			
1	**Age in years**						
	50-60	0	2	25	1.771	9.49	(n/s)
	61-70	0	0	18			
	71-82	0	0	5			
2	**Gender**						
	Female	0	1	26	0.013	5.99	(n/s)
	Male	0	1	22			
3	**Religions**						
	Hindu	0	2	32	1.17	9.49	(n/s)
	Muslim	0	0	3			
	Christian	0	0	13			
4	**Occupation**						
	Government	0	2	3	18.73	12.59	(S)
	Freelancer	0	0	20			
	Homemaker	0	0	21			
	Unemployed	0	0	4			
5	**Diet**						
	Vegetarian	0	1	7	36.75	5.99	(S)
	Non-vegetarian	0	1	4			
6	**Education**						
	Illiterate	0	0	2	25.11	12.59	(S)
	Primary	0	0	30			
	Higher Secondary	0	0	10			
	Graduation	0	2	6			
7	**Habits**						
	Smoking	0	0	8	1.29	12.59	(n/s)
	Alcoholism	0	0	1			
	Smoking & Alcoholism	0	0	10			
	No such habits	0	2	29			
8	**Information Source**						
	Relatives	0	0	0	26.12	12.59	(S)
	Medical Professionals	0	1	0			
	Advertisement	0	1	11			
	Others	0	0	37			

Results

Lastly, the correlation between the pre-knowledge level of the patients related to the management of diabetes mellitus with their demographic variables.

In terms of occupation, the value of chi-square (18.73) was greater than the value in the table. So, the occupation had an important correlation with the pre-test knowledge level. For diet, the value of chi-square (36.75) was greater than the table value. Diet has a notable correlation with the pre-test knowledge level. In terms of education, the number of chi-squares (25.11) was greater than the value in the table. Education had a remarkable correlation with the pre-test knowledge level. Regarding the informational source, the calculation of chi-squares was (26.12) which was greater than the table value. The informational source had a notable correlation with the pretest knowledge level. Lastly, in terms of age, habits, and gender, the calculated number of chi-square (18.73) was below the value in the table. So, it can be

concluded as a no correlation between age, gender, personal habits, diet, and religion with their pretest knowledge level

Conclusion

The study was designed to check the effectiveness of an instructional module on knowledge related to the management of Diabetes among elderly diabetes patients in Pune. Overall, Patients had insufficient knowledge related to Diabetes, its sign & symptoms, prevention and complications, and how to manage their Diabetes. In conclusion, the study shows an average knowledge level related to the management of Diabetes in the majority of the patients. They're usually relying on medications for controlling blood sugar levels while less on self-care practices. This recommends the necessity for self-instructional modules for the management of diabetes among patients so that they can take active participation in their diabetes management and prevention of its complications.

Ethical clearance: Given by the Institutional Research Committee of Symbiosis College of Nursing, Pune

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