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A Study to Assess the Effectiveness of Structured Teaching Programme on Knowledge Regarding Self Care Management of Diabetes Mellitus among Elderly People in a Selected Rural Community Center at Barabanki District, Uttar Pradesh

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ABSTRACT

Diabetes, a silent epidemic sweeping across the globe, affects millions of lives and poses a significant challenge to public health. It is a highly prevalent health condition in the aging population. Over one-quarter of people over the age of 60 years have diabetes, and one-half of older adults have prediabetes, and the number of older adults living with these conditions is expected to increase rapidly in the coming decades. Objectives;.To evaluate the effectiveness of a structured teaching program on self care management of Diabetes mellitus among elderly people in selected rural area after intervention. Methodology- pre-experimental design with one group (experimental group) having pre-test, post-test with intervention. Conclusion- The study suggest that structured teaching programme regarding self care management of diabetes mellitus patient is effective and can enhance the knowledge of elderly people.

KEYWORDS: *Structured teaching programme*

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INTRODUCTION

Diabetes, a silent epidemic sweeping across the globe, affects millions of lives and poses a significant challenge to public health. It is a highly prevalent health condition in the aging population. Over one-quarter of people over the age of 60 years have diabetes, and one-half of older adults have prediabetes, and the number of older adults living with these conditions is expected to increase rapidly in the coming decades. [1] In 2014, 8.5% of adults aged 18 years and older had diabetes. In 2019, diabetes was the direct cause of 1.5 million deaths and 48% of all deaths due to diabetes occurred before the age of 70 years. Another 460 000 kidney disease deaths were caused by diabetes, and raised blood glucose causes around 20% of cardiovascular deaths. Between 2000 and 2019, there was a 3% increase in age-standardized mortality rates from diabetes. In lower-middle-income countries, the mortality rate due to

diabetes increased 13%.[4]The reports given by Indian Diabetes Federation in 2019,estimates the top three countries with the highest number of individuals with diabetes namely China (116.4 million), India (77.0 million), and the United States of America (31.0 million). This trend is expected to continue in 2030 and 2045, with China (140.5 and 147.2 million) and India (101.0 and 134.2 million) continuing to have the highest burden of diabetes.

Need of the study

Diabetes is a major health issue that has reached alarming levels. Diabetes of all types can lead to complications in many parts of the body. It's possible complications include heart attack, stroke, kidney failure, leg amputation, vision loss and nerve damage.[11] Diabetes is the 9th leading cause of mortality globally in 2020, attributing to over 2 million deaths annually due to diabetes directly and kidney disease due to diabetes. The primary causes of type 2 diabetes is diet and physical activity, which can contribute to increased BMI, poor nutrition, hypertension, alcohol use and smoking, while genetics is also a factor.[13]

As we can see the prevalence of diabetes continues to rise, it has become increasingly important to explore effective strategies for its management. Previous studies have primarily focused on medical interventions, pharmaceutical treatments, and healthcare professional-led interventions, often overlooking the crucial aspect of patient self-care. Self care management empowers individuals with diabetes to actively participate in their own treatment and adopt healthy behaviors.

Population and Sample

Target Population

The target population of the study included all the elderly people of diabetic in rural community area.

Accessible Population

The accessible population of the study included all the elderly people in rural community area.

Sample

The elderly people in rural community area, who satisfied the inclusion criteria and were available in the selected setting at the time of data collection, were samples of the study.

Tools of Data Collection

The tool constructed for the study consist of two part:
Part1: Data collection tool
Part 2: Intervention tool

DESCRIPTION OF THE TOOL

The tool consists of two sections.

PART I: DATA COLLECTION TOOL

SECTION A:

Personal data sheet on the demographic characteristics of students which includes Age, sex, education, occupation, religion, marital status, type of family, monthly income, family history, duration of type2 diabetes mellitus, previous knowledge, presence of co-morbid disease.

SECTION B:

It consists of 24 open-ended questions.

S.NO	COMPONENTS	ITEM
1	Basic knowledge	5
2	type2 diabetes mellitus risk, cause, sign and symptom	8
3	Prevention and selfcare management	11
	TOTAL	24

Scoring and interpretation:
The overall score is 60 with a minimum score of 0, and maximum is 24.

1. Correct answer was a score of (1) one.
2. Wrong answer was scored as (0) zero

SCORE	TOTAL	INTERPRETATION
0-8	<33%	Poor
9-16	34-66%	Average
17-24	67-100%	Good

Part II: Intervention Tool

The intervention tool was prepared by the investigator, including power point preparation for teaching methods which include 15 slides, containing teaching contents with pictures.

Conceptual and theoretical framework

A concept is an abstract idea or mental images of phenomena or reality (Kozier1989).[18]

The conceptual framework of the study is based on the **Ludwig von Bertalanffy's (1968) General System Theory.**

Result and Discussion

Analysis of data presented in following sections.

Section A : Description of sample characteristics of elderly people

TAB: 4.1 Distribution of sample characteristics in term of frequency and percentage.

DEMO GRAPHIC VARIABLES	FREQUENCY	PERCENTAGE
AGE IN YEAR		
60-65 Years	25	41.6%
66-70Years	16	26.6%
71-75 Years	13	21.6%
76 and above	6	10%
Male	39	65%
Female	21	35%
EDUCATION		
Primary school	21	35%
High school	11	18.33%
Graduate	4	6.66%
Illiterate	24	40%
OCCUPATION		
Unemployed	14	23.33%
Government Job	4	6.66%
House Wife	20	33.33%
Agriculture	22	36.66%
RELIGION		
Hindu	45	75%
Muslim	15	25%
Other	0	0%
MARITAL STATUS		
Married	53	88.33%
Widower	3	5%
Divorced	2	3.33%
TYPE OF FAMILY		
Joint Family	19	31.66%
Nuclear Family	41	68.33%
Others	00	00%
MONTHLY INCOME		
Less than 5000	6	10%
5001-10000	18	30%
10001 and above	36	60%
FAMILY HISTORY		
Yes	15	25%
No	45	75%
DURATION		
Below One Year	7	11.66%
Above One Year	53	88.33%
PREVIOUS KNOWLEDGE		
Newspaper	13	21.66%
TV	21	35%
Internet	2	3.33%
Educational Program	24	40%

COMORBID DISEASE		
Hypertension	24	40%
Obesity	13	21.66%
Heart Disease	2	3.33%
Others	21	35%

SECTION B

TABLE 4.2.1: FREQUENCY AND PERCENTAGE DISTRIBUTION ON KNOWLEDGE REGARDING SELF CARE MANAGEMENT ON TYPE2 DIABETES MELLITUS AMONG ELDERLY PEOPLE.

N (n1+n2) = 60

Observation	Category	Good		Average		Poor	
		f	%	f	%	f	%
Pre-test	Pre-experimental	0	0%	12	20%	48	80%
Post-test	Pre-experimental	17	28.33%	41	68.33%	2	3.33%

SECTION – C

TABLE – 4.3.1: COMPARISON OF MEAN PRE – TEST AND POST – TEST KNOWLEDGE SCORE AMONG PRE- EXPERIMENTAL GROUP.

(N=60)

	Paired Difference					t	df	Sig (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Pair 1 Pre test-Post test	-6.1333	1.48970	.19232	-6.51816	-5.74850	-31.89	59	.000

SECTION-D

TABLE – 4.4.1: ASSOCITION OF PRE-TEST LEVEL OF KNOWLEGDE WITH DEMOGRPHIC OF PRE-EXPERIMENTAL GROUP. N= 60

ASSOCIATION BETWEEN PRETEST LEVEL OF KNOWLEDGE WITH THEIR SELECTED DEMOGRAPHIC VARIABLE										
Variable		Level of knowledge						Chi Square	df	Sig
		Inadequate		Moderate		Adequate				
		F	%	F	%	F	%			
Age in year	60-65 Year	12	20%	13	21.6%	0	0%	3.882	3	.274 NS
	66-70 Year	9	15%	7	11.6%	0	0%			
	71-75 Year	4	6.6%	9	15%	0	0%			
	76& above	1	1.6	5	8.3%					
Sex	Male	17	28.3%	22	36.6%	0	0%	0.003	1	.956 NS
	Female	9	15%	12	20%	0	0%			
Education	Primary school	10	16.6%	11	18.3%	0	0%	6.922	3	.074 NS
	High school	7	11.6%	4	6.6%	0	0%			
	Graduate	3	5%	1	1.6%	0	0%			
	Illiterate	6	10%	18	30%	0	0%			
Occupation	Unemployed	7	11.6%	7	11.6%	0	0%	2.413	3	.491 NS
	Govt. job	3	5%	1	1.6%		0%			
	House wife	8	13.3%	12	20%	0	0%			
	Agriculture	8	13.3%	14	23.3%	0	0%			
Religion	Hindu	18	30%	27	45%	0	0%	.814	1	.367 NS
	Muslim	8	13.3%	7	11.6%	0	0%			
Marital Status	Married	24	40%	29	48.3%	0	0%	2.499	2	.294 NS
	Widower	0	0%	3	5%	0	0%			
	Divorced	2	3.3%	2	3.3%	0	0%			
Type of	Joint family	7	22%	12	20%	0	0%	.477	1	.490

Family	Nuclear family	19	36%	22	36.6%	0	0%			NS
Monthly Income	<5000	2	3.3%	4	6.6%	0	0%	.611	2	.737 NS
	5001-10000	9	15%	9	15%	0	0%			
	>10000	15	25%	21	35%	0	0%			
Family History	Yes	9	15%	7	11.6%	0	0%	1.482	1	.223 NS
	No	17	28.3%	27	45%	0	0%			
Duration	Below 1 year	4	6.6%	3	5%	0	0%	.615	1	.433 NS
	Above 1 year	22	36.6%	31	51.6%	0	0%			
Previous Knowledge	Newspaper	6	10%	7	11.6%	0	0%	1.368	3	.713 NS
	TV	7	11.6%	14	23.3%	0	0%			
	Internet	1	1.6%	1	1.6%	0	0%			
	Educational program	12	20%	12	20%	0	0%			
Co-morbid disease	Hypertension	11	18.3%	13	21.6%	0	0%	7.691	3	0.053 NS
	Obesity	8	13.3%	5	8.3%	0	0%			
	Heart disease	2	3.3%	0	0%	0	0%			
	Others	5	8.3%	16	26.6%	0	0%			

DISCUSSION

The analysis results revealed that there is no statistically significant association between pre-test knowledge scores of pre- experimental group regarding self care management of type2 diabetes mellitus among elderly people with their demographic characteristics.

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