

A Study to Assess the Effectiveness of Self-Instructional Module on Knowledge Regarding Life Style Modification among the Diabetes Mellitus Patients Residing in Selected Urban Areas at Kanpur, Uttar Pradesh Variables

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ABSTRACT

This present study was done under the topic “A study to assess the effectiveness of self- instructional module on knowledge regarding life style modification among the diabetes mellitus patients residing in selected urban areas at Kanpur, Uttar Pradesh. Objectives: -To assess the pretest knowledge regarding life style modification among the diabetic patients. To assess the effectiveness of self-instructional module on knowledge regarding life style modification among the diabetic patient, to find out an association between pretest knowledge regarding life style modification with their selected demographic variables. The research approach adopted for this study is quantitative research approach. The research design adopted for this study was one group pretest post-test design. The data was collected through the tool which is prepared by the investigator. The sample consists of 30 diabetic patients at selected rural areas of Kanpur. The tool has two parts. Section – I: Socio Demographic data, Section – II: Questionnaire on knowledge regarding life style modification on diabetes mellitus. The Findings of the study revealed that Most of the participants belongs to the age group of 31-40 years and above 43.5%, most of the samples are Muslims 36.7%, most of the participant had primary education 43%, 40% clients obtained information regarding life style modification regarding diabetes mellitus from friends and peers and 63.3% had diabetes mellitus from less than 5 years. Study revealed that in pretest mean score was 15.38, standard deviation 6.49 and range 19, in post-test mean score was 20.97, standard deviation 5.3 and range 17. Study revealed that in pretest most of the participant had good knowledge regarding life style modification on diabetes mellitus 12 participants, 10 samples had poor knowledge and 08 samples had average knowledge. and after administering self-instructional module on life style modification on diabetes mellitus most of the sample obtained average knowledge 16 and 14 sample obtained good knowledge and nobody had poor knowledge regarding life style modification on diabetes mellitus. Since the obtained value of t test is 17.59 is greater than the table value of 1.68, self-instructional module was effective. Chi square test used to find out the association between selected demographic variables of participants with pretest knowledge regarding life style modification on diabetes mellitus. The calculated chi square value revealed that among the participant there was a significant association between pretest knowledge regarding life style modification for diabetes mellitus with selected demographic variables such as age in years, educational status, occupational status, sources of information regarding life style modification, number of years since affected with diabetes mellitus. Hence hypotheses 2 was accepted. There was a significant association between pretest score regarding knowledge regarding life style modification on diabetes mellitus with selected demographic variables.

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KEYWORDS: Style Modification of Diabetes Mellitus, Demographic Variables

Need for the study

India has an estimated 100 million people formally diagnosed with diabetes, making it the second most affected country in the world after China. Over 74 million Indians were diagnosed with diabetes in 2021, and this number is expected to rise to over 124 million by 2045. Type-2 diabetes has rapidly developed into a major public health problem in India. Furthermore, due to their South Asian ethnicity, Indians are at an increased risk of developing diabetes in comparison to other ethnic groups, with a much more aggressive natural history and a higher degree of complications. In 2019 an estimated 77 million Indians were living with diabetes, with an estimated prevalence of 8.9% among adults according to the International Diabetes Federation (IDF). India has become the country with the 2nd largest diabetes population, with 1 in 6 adults with diabetes in the world coming from India. India currently has a population of 1.37 billion (17.5% of the world's population). Furthermore, India has a large diaspora population, spread across 146 countries. Thus, diabetes among the Indian population is likely to have a wider impact on global health, economy, and society.

STATEMENT OF THE PROBLEM

A study to assess the effectiveness of self-instructional module on knowledge regarding life style modification among the diabetes mellitus patients residing in selected urban areas at Kanpur, Uttar Pradesh. variables.

OBJECTIVE OF THE STUDY

1. To assess the pretest knowledge regarding life style modification among the diabetic patients.
2. To assess the effectiveness of self-instructional module on knowledge regarding life style modification among the diabetic patient
3. To find out an association between pretest knowledge regarding life style modification with their selected demographic

HYPOTHESES

H0:- There is no significant difference between pretest and post-test knowledge score among diabetic mellitus patient regarding life style modifications.

H1:- There is a significant difference between pretest and post-test knowledge score among diabetic mellitus patient regarding life style modifications.

H0:- There is no significant association between pretest knowledge level regarding life style modification on diabetes mellitus with selected demographic variables.

H2:- There is a significant association between pretest knowledge level regarding life style

modification on diabetes mellitus with selected demographic variables.

Material and method: -

Research approach and design:- Quantitative approach with one group pretest post-test experimental design.

Setting of the study:- Rural areas of Kanpur, U.P.

Study population: diabetic mellitus patient of Kanpur.

Accessible population:- Diabetic patient residing at selected Rural areas of Kanpur

Sample size:- 30

Sampling technique:- non-probability sampling, convenient sampling technique.

INCLUSIVE CRITERIA:**INCLUSION CRITERIA**

Diabetic mellitus patient who are willing to participate in the study.

1. Diabetic mellitus patient residing in selected rural areas of Kanpur.
2. Diabetic mellitus client those who can understand Hindi.

EXCLUSION CRITERIA

1. Diabetic mellitus patient who are not willing to participate in the study.
2. Diabetic mellitus client who are not available at the time of study.

Variable under the study:

Independent variables:- In this study the self-instructional module on knowledge regarding lifestyle modification for diabetic mellitus among diabetic patient was the independent variables.

Dependent variable - In this study the dependent variables are knowledge regarding life style modification for diabetic mellitus among diabetic patient.

Demographic variables - The demographic variables are age, in years, religion, educational status, occupational status, sources of information and years since affected with diabetes mellitus.

Description of Tools

The tool is divided into section A and B, **Section A:** Socio-demographic variable, **Section B:** Structured knowledge questionnaire regarding life style modification on diabetic mellitus. **Section A:** This part consists of 6 items necessary to obtain demographic data of the research samples such as age, in years, religion, educational status, occupational status, sources of information and years since affected with diabetes mellitus. **Section B:** This

part consists of 30 knowledge questionnaires to assess the knowledge regarding life style modification on diabetic mellitus among diabetic patient.

Data collection procedure: -

Primarily permission was obtained from selected rural areas of Kanpur After getting permission, written consent was obtained from the diabetic patient, to participate in the study. The data was collected on 15/8/2024 to 30/9/2024. Prior to data collection consent was obtained from the respondent and confidentiality was assured. The responses from the

Analysis and interpretation of data

Section I:- Base line characteristics of participants.

Table 1:- Baseline characteristics of the participants

Section I:- Categorization of patient based on demographic variables

Table no 2:- Distribution of samples based on their demographic variables

Sl. No	Demographic Variables	Frequency	Percentage
1	Age in year		
	Less than 30	8	26.6
	31-40	13	43.3
	41 and above	9	30
2	Religion		
	Hindu	7	23.3
	Muslim	11	36.7
	Christian	8	26.7
	Jain	2	6.7
	Others	2	6.7
3	Educational status		
	No formal education	9	30
	Primary education	13	43
	Secondary education	5	16.7
	Graduation and above	3	1.0
4	Occupational status		
	Labour	20	66.66
	Self employed	5	16.7
	business	4	13.3
	Other	1	3.3
5	Source of information regarding life style modification for diabetes mellitus		
	No such information	9	30
	Physician	9	30
	Family and friends	12	40
	Mass media	0	0
6	No of Years of diabetic mellitus affected		
	Less than 5 year	19	63.3
	5-10 years	11	36.7
	11 years and above	0	0

Section II:- Mean, standard deviation and Range of data of participants

Table no 2:- Mean, standard deviation and range of participant based on pretest and post-test knowledge score regarding life style modification on diabetes mellitus.

Knowledge regarding life style modification on diabetes mellitus	Mean	Standard deviation	Range
Pretest	15.38	6.49	19
Post test	20.97	5.3	17

Section III:- Analyze the effectiveness of Self-instructional module on life style modification on diabetes mellitus**To analyze the effectiveness of self-instructional module on life style modification on diabetes mellitus**

H0:- There is no significant difference between pretest and post-test knowledge score among diabetic patient regarding life style modification on diabetes mellitus.

H1:- There is a significant difference between pretest and post-test knowledge score among diabetic patient regarding life style modification on diabetes mellitus.

Table no 3:- Knowledge level of participant based on the category

Knowledge level	Poor knowledge	Average knowledge	Good knowledge	t test value
Pretest	10	8	12	17.59
Post-test	00	16	14	

t test used to find out the effectiveness of self-instructional module on life style modification on diabetes mellitus.

Since the obtained t test value is 17.59, is greater than the table value of 1.68, self-instructional module was effective. I.e. hypotheses 1 was accepted.

Section IV:- Chi-square test to find out the association between selected demographic variables of participants with pretest knowledge regarding life style modification on diabetes mellitus.

H0:- There is no significant association between pretest knowledge level regarding life style modification on diabetes mellitus with selected demographic variables.

H2:- There is a significant association between pretest knowledge level regarding life style modification on diabetes mellitus with selected demographic variables.

Table no 4:- Chi square test used to find out the association between pretest knowledge level regarding life style modification on diabetes mellitus with selected demographic variables.

Sl. no	Demographic variables	Pretest knowledge score			Obtained value	Table value	Interferences
		Poor	Average	Good			
1	Age in year				21.95	9.49	S
	Less than 30	6	1	1			
	31-40	3	3	7			
	41 and above	1	4	4			
2	Religion				13.57	15.51	NS
	Hindu	2	1	4			
	Muslim	4	3	4			
	Christian	4	3	1			
	Jain	0	1	1			
	Others	0	0	2			
3	Educational status				20.96	12.59	S
	No formal education	6	1	2			
	Primary education	3	4	6			
	Secondary education	1	3	1			
	Graduation and above	0	0	3			
4	Occupational status				14.69	12.59	S
	Labour	4	5	11			
	Self employed	3	1	1			
	business	2	2	0			
	Other	1	0	0			
5	Sources of information regarding life style modification on diabetes mellitus				52.77	12.59	S
	No such information	7	2	0			
	Physician	3	5	1			
	Family and friends	0	1	11			
	Mass media	0	0	0			

6	Number of years since diabetes affected				44.65	9.49	S
	Less than 5 year	10	7	2			
	5-10 years	0	1	10			
	11 years and above	0	0	0			

S=Significant, NS = Not Significant 4=9.49, 6= 12.59. 8= 15.51.

The calculated chi square value revealed that among the participant there was a significant association between pretest knowledge regarding life style modification for diabetes mellitus with selected demographic variables such as age in years, educational status, occupational status, sources of information regarding life style modification, number of years since affected with diabetes mellitus. Hence hypotheses 2 was accepted. There was a significant association between pretest score regarding knowledge regarding life style modification on diabetes mellitus with selected demographic variables.

Conclusion: -

The findings of the study recommended for the further approaches to assess and improve the knowledge regarding life style modification on diabetes mellitus among diabetic patient. The present study proved the necessity of the education program in providing knowledge, attitude, and practice regarding life style modification on diabetic mellitus among diabetes patient.

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