INTERNATIONAL JOURNAL FOR INNOVATIVE RESEARCH IN MULTIDISCIPLINARY FIELD
ISSN(O): 2455-0620 [Impact Factor: 9.47]
Monthly, Peer-Reviewed, Refereed, Indexed Journal with IC Value : 86.87
Volume - 11, Issue - 04, April - 2025

DOIs:10.2015/IJIRMF/202504030 --:-- Research Paper / Article / Review

Effectiveness of Structured Teaching Programme on Knowledge Regarding Lifestyle Modification among Diabetic Patients

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Abstract: *Diabetes is becoming more common in world. Every day, every 21 seconds someone is diagnosed with diabetes. Around 40-70% of population is affected by foot ulcer. Many serious complications such as kidney failure or blindness, can affected individual with diabetes. Patient with diabetes cannot be cured, but they can control it, with regular exercise, diet, and drugs. Regular and proper administration of drugs can provide desired outcome, control diabetes, and prevent its complications. Undiagnosed or inadequately treated diabetes mellitus patients developed multiple complications leading to hospital admission. The life style modification of diabetes mellitus patient is important aspect which in under taken to improve the existing management. It includes diabetes self- management support, nutrition therapy, physical activity, smoking cessation counselling, and psychosocial care.* ***Methods:*** *The research method adopted for this study is an interventional study of quasi experimental one group pre-test post-test design. The study conducted at T. S. Misra Medical College and Hospital, Lucknow. The study group consists of 50 diabetic patients selected by convenient sampling technique.* ***Results:*** *The study results show that the pre interventions mean knowledge score of study population was 13.71±4.16. This after intervention was found to be 27.62±1.92. A change of 13.91in knowledge mean score was observed which was found to be statistically significant. The calculated "t" value 4.61 is more than table value 0.05 is significant level at $p<0.05$ level.* ***Conclusion:*** *The study revealed that the structured teaching programme was effective in improving the knowledge on life style modification among the diabetic patients.*

Key Words: *Lifestyle modification, diabetic patient, Knowledge, Effectiveness, Structured Teaching Programme.*

1. INTRODUCTION :

"Diabetes mellitus is a group of metabolic disorder characterized by elevated level of glucose in the blood (hyperglycaemia), resulting from defects in insulin secretion, insulin action or both."

The main under line causes of the disease are genetic and environmental factors, such as urbanization and industrialization, as well as increased longevity and changes in lifestyle and a traditional healthy active life, sedentary, stressful life and overconsumption of energy dense foods. The prevalence of diabetes mellitus varies among populations due to differences in genetic susceptibility and social risk factors such as change in diet, obesity, physical inactivity and possibly, factors relating to intrauterine development.

Diabetes is becoming more common in world. Every day, every 21 seconds someone is diagnosed with diabetes. Around 40-70% of population is affected by foot ulcer. Many serious complications such as kidney failure or blindness, can affected individual with diabetes.

Patient with diabetes cannot be cured, but they can control it, with regular exercise, diet, and drugs. Regular and proper administration of drugs can provide desired outcome, control diabetes, and prevent its complications. Undiagnosed or inadequately treated diabetes mellitus patients developed multiple complications leading to hospital admission.

The assessment of lifestyle modification among diabetic patient is clearly emphasizes the need to increase physical activity as a sedentary life style increases the risk of diabetes. This assertion is also supported by another study which revealed that by increasing every 500k-cal energy expenditure, the risk of diabetes mellitus can be reduced by 6%.

The life style modification of diabetes mellitus patient is important aspect which in under taken to improve the existing management. It includes diabetes self- management support, nutrition therapy, physical activity, smoking cessation counselling, and psychosocial care.

There is growing need for intervention that improve patient's knowledge and awareness of diabetes. Diabetes management requires knowledge on daily self-management practices that must be followed to achieve desired outcome.

2. OBJECTIVES OF THE STUDY:

- To assess the existing level of knowledge regarding lifestyle modification among diabetic patients.
- To evaluate the effectiveness of Structured Teaching Programme on knowledge regarding lifestyle modification among diabetic patients.
- To find the association between pre test knowledge score with selected demographic variables of diabetic patients.

2.1 HYPOTHESIS

H_1: The mean post test knowledge scores will be significantly higher than the mean pre test knowledge scores.
H_2: There is significant association between pre test knowledge scores with their selected socio- demographic variables.

Dependent Variable

The dependent variable in the present study was knowledge regarding lifestyle modification among diabetic patients.

Independent Variable

The independent variable for the present study was structured teaching programme on lifestyle modification among diabetic patients.

3. MATERIALS AND METHODS:

A quantitative research approach was used to assess the knowledge regarding lifestyle modification among diabetic patients. The research design selected was quasi experiment one group pre-test post-test design, non- probability convenient sampling technique was used to select 50 samples. The study was conducted at T. Misra Medical College and Hospital, Lucknow. The data was collected by using structured questionnaire. Each sample was explained about the purpose of the study and the process of the study. Written informed consent from all the samples was taken before administering tool. The sample took an average of 20 minutes to complete the pre-test. Then 45 minutes structured teaching programme was conducted. Post test was given on 7th day of pre-test. The collected data was analyzed and interpreted by using descriptive and inferential statistics by the help of SPSS software.

CRITERIA FOR SAMPLE SELECTION

Inclusion Criteria

- Newly diagnosed diabetic patient.
- Patient available during the period of data collection.
- Patient who can read or write Hindi.

Exclusion Criteria

- Patient who are not willing to participate in the study.
- Critically ill patients.
- Patient with other co-morbidity.

DESCRIPTION OF TOOLS

Section I – Demographic Data

Demographic variables which include age, sex, religion, marital status, educational qualification, income per month, occupation, type of food, lifestyle pattern, previous information and source of knowledge.

Section II – Structured Knowledge questionnaire

The knowledge questionnaire developed by the investigator consists of 30 multiple choice questions regarding lifestyle modification of diabetic patients.

Section III- Structured Teaching Programme

4. RESULT:

Table -1 Frequency distribution of subjects based on Socio demographic variables

Variables	Category	Frequency	Percentage (%)
Age in years	21-30 years	4	8
	31-40 years	6	12
	41- 50Years	16	32
	>50 years	24	48
Gender	Male	31	62
	Female	19	38
Religion	Hindu	38	76
	Muslim	10	20
	Christian	2	4
	Others	0	0
Marital status	Single	4	8
	Married	38	76
	Separated/ widow	3	6
	Divorced	5	10
Education	No formal education	3	6
	High School	12	24
	Higher Secondary	24	48
	Graduate & above	11	22
occupation	Unemployed	8	16
	Housewife	13	26
	Agriculture	10	20
	Business/ self employed	11	22
	Private Job	6	12
	Government Job	2	4
Family Monthly Income	< Rs. 5000	9	18
	Rs. 5001- 10000	12	24
	Rs. 10001- 15000	20	40
	Rs. 15001 & above	9	18
Dietary pattern	Vegetarian	32	64
	Non- vegetarian	18	36
Lifestyle pattern	Sedentary worker	22	44
	Moderate worker	25	50
	Heavy worker	3	6
Previous knowledge on lifestyle modification	Yes	33	66
	No	17	34
Source of Information	Friends & Family	14	28
	Social media	10	20
	TV & News Paper	4	8
	Health Workers	22	44

Table 1 shows that majority of the samples 24 (48%) were above 50 years, 31 (62%) were male, 38 (76%) were Hindus, 38 (76%) were married, 24 (48%) did their higher secondary education, 13 (26%) were housewife, 32 (64%) were vegetarians, 25 (50%) were moderate workers and 33 (66%) have previous knowledge on lifestyle modification of diabetes.

Table -2: Assess the existing level of knowledge regarding lifestyle modification of diabetic patients.

S.N.	LEVEL OF KNOWLEDGE	NUMBER OF RESPONDENTS	PERCENTAGE (%)
1	Inadequate Knowledge (< 50%)	24	48%
2	Moderate Knowledge (51-75%)	22	44%
3	Adequate Knowledge (> 75%)	4	8%

Table 2 reveals that majority of the diabetic patients had inadequate knowledge (24) 48%, (22) 44% had moderate knowledge and (4) 8% had adequate knowledge regarding lifestyle modification of diabetic patients.

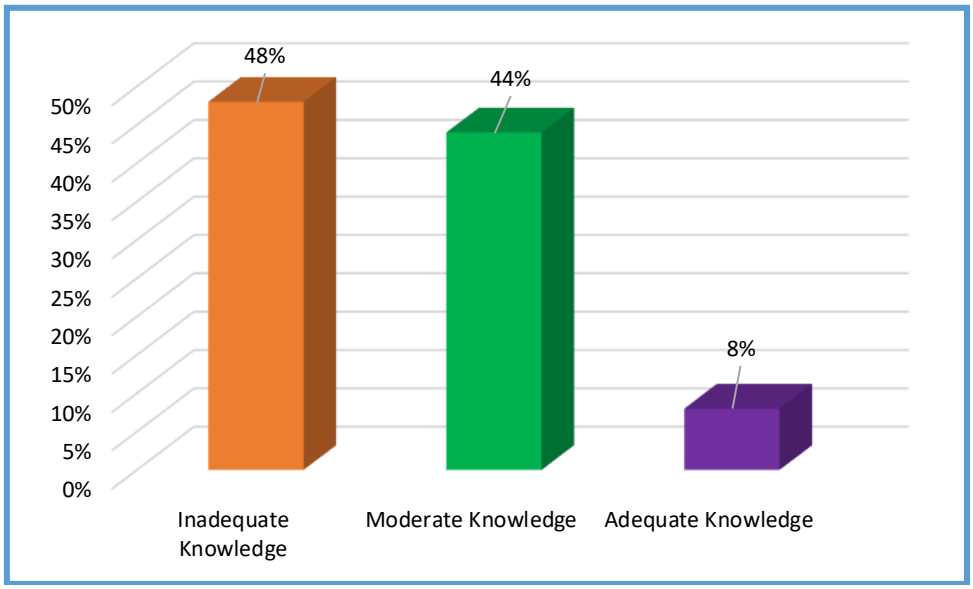


Table- 3: Evaluate the effectiveness of Structured Teaching Program on Knowledge regarding lifestyle modification of diabetic patients

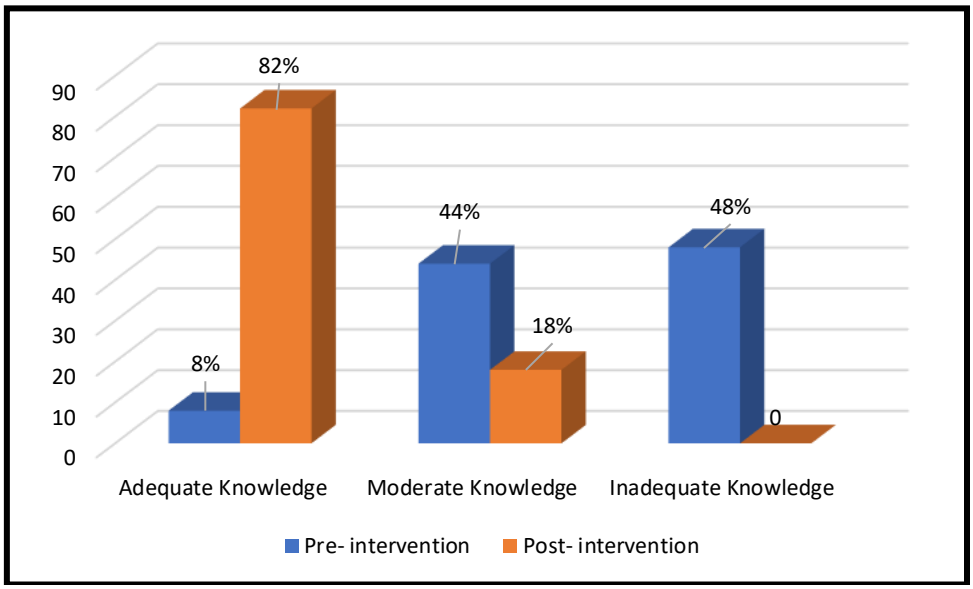
N=50

	Adequate Knowledge		Moderate Knowledge		Inadequate Knowledge		Mean ±SD	Mean difference	't' value	'p' value
	N	%	N	%	N	%				
Pre-intervention	4	8	22	44	24	48	13.71±4.16	13.91	4.61	0.05
Post-intervention	41	82	9	18	0	0	27.62±1.92			

***Significant at 0.05 level of significance.**

Table 3 shows that the pre interventions mean knowledge score of study population was 13.71±4.16. This after intervention was found to be 27.62±1.92. A change of 13.91in knowledge mean score was observed which was found to be statistically significant. The calculated "t" value 4.61 is more than table value 0.05 is significant level at $p<0.05$

level. These findings clearly infer that that Structured Teaching Programme regarding lifestyle modification of diabetic patients was effective.



To determine the association between the pretest score and selected demographic variables, chi-square analysis was done. The result showed that there was no significant association between the knowledge score and the demographic variables like age, sex, religion, marital status, educational qualification, income per month, occupation, type of food, lifestyle pattern, previous information and source of knowledge.

5. DISCUSSION:

In the present study the research observed that in pre-test of the diabetic patients had inadequate knowledge (24) 48%, (22) 44% had moderate knowledge and (4) 8% had adequate knowledge regarding lifestyle modification of diabetic patients. In post test 41 (82%) had adequate knowledge and 9 (18%) had moderate knowledge. the pre interventions mean knowledge score of study population was 13.71±4.16. This after intervention was found to be 27.62±1.92. A change of 13.91in knowledge mean score was observed which was found to be statistically significant. The calculated "t" value 4.61 is more than table value 0.05 is significant level at $p<0.05$ level. These findings clearly infer that that Structured Teaching Programme regarding lifestyle modification of diabetic patients was effective.

This study was supported by a study conducted by **Ranijeyasudha M., Archana, Jeenath Justin Doss. K. (2020)** conducted a study on Effectiveness of Structured Teaching Programme on Knowledge regarding Life Style Modification of Diabetic Mellitus among Rural Population in selected areas at Rajkot. Total samples were 40. Non probability convenient sampling techniques were used. The mean score before and after planned teaching programme on diabetes and life style in terms of knowledge was 7.12 and 14.18, the mean difference was 7.06 and the standard deviation for pre and post-test was 3.763 and 4.997, obtained t value is 7.127* with degrees of freedom 39 at 0.00001 level of significance, it was concluded that the structured teaching programme on knowledge regarding life style modification of diabetic mellitus was effective among rural population in selected areas at Rajkot.

6. CONCLUSION:

The study revealed that the structured teaching programme was effective in improving the knowledge regarding lifestyle modification among the diabetic patients.

Declaration by Authors

Ethical Approval: Approved
Acknowledgement: None
Source of Funding: None
Conflict of Interest: The authors declare no conflict of interest.

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