Prevalence of Pre-Diabetes and Level of Knowledge Regarding Diabetes Mellitus among Adults at Lembalakudi, Pudukkottai

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ABSTRACT

Introduction: Diabetes is one of major types of noncommunicable diseases. It is a chronic condition that occurs when the body either does not produce enough insulin or cannot effectively use the insulin it does produce and which effect early age of life and lack of knowledge regarding diabetes mellitus. The main purpose of the study was to assess the prevalence of pre-diabetes and level of knowledge regarding diabetes mellitus among adults at Lembalakuti, Pudukkottai.

Methods: Quantitative experimental posttest-only design was adopted for this study. The tool used for the study was Indian diabetic risk score and structured questionnaire to assess the level of knowledge upon diabetes mellitus. Sample for the study was recognized based on inclusion criteria selected by non-probability of purposive sampling. A total of 60 adult data's were collected to find out the prevalence of pre-diabetes and from this 60 sample only 30 samples were participated in planned teaching programme and gave their post-test. Conducted the planned teaching program regarding diabetes mellitus and post-test knowledge was assessed.

Result: Regarding prevalence of pre- diabetic show that majority of adult had a moderate level of risk 50% and towards level of knowledge in post-test had 6.66% had inadequate knowledge and 30% had moderate level of knowledge and 63.3% adequate level of knowledge regarding diabetes mellitus.

Conclusion: This study concludes that the planned teaching program plays a vital role in increasing the knowledge among adults on diabetes mellitus. The investigator assures that, every participant who have been taken part in this study will perform a greater part in promoting health and preventing illness.

Keywords: prevalence, knowledge, diabetes mellitus

INTRODUCTION

Diabetes is one of major types of noncommunicable diseases It is a chronic condition that occurs when the body either does not produce enough insulin or cannot effectively use the insulin it does produce. Insulin is a hormone that regulates the blood sugar (glucose) formed from the food consumed by a person. Diabetes therefore results in raised blood sugar levels which, if not controlled, over time lead to serious damage to many of the body's systems.

The World Health Organization (WHO) estimated the global prevalence of diabetes among adults over 18 years of age as 8.5% in 2014. in India 72.96 million cases of diabetes in adult population. 10.9% - 14.2% diabetic prevalence ranges in urban area. and 3.0-7.8% in rural area. 20 years and above with reported higher prevalence among individuals aged over 50 years (INDIAB Study). in India diabetes prevalence report maintained at 11.8% in the last four years, according to the National Diabetes and Diabetic Retinopathy Survey

report released by the health and family welfare ministry. During 2015-2019 conducted survey in AIIMS New Delhi and Centre for Ophthalmic Sciences by Rajendra Prasad result revealed that the prevalence of diabetes cases was 8.0% and new diabetes cases was 3.8%.

Statement of the problem

A study to assess the prevalence of pre-diabetes and level of knowledge regarding diabetes mellitus among adults at Lembalakuti, Pudukkottai

Objectives

1. 1.To find out the prevalence of pre-diabetic status among adults.
2. 2.To assess the effectiveness of level of knowledge regarding diabetic mellitus

METHODS

Quantitative experimental posttest-only design was adopted for this study. The study was conducted at Lembalakudi, Pudukottai. The tool was developed by the investigator with the guidance of the expert's opinion, various resource and review of literature. The tool used for the study was Indian diabetic risk score and structured questionnaire to assess the level of knowledge upon diabetes mellitus. Section A Structured questionnaires to elicit socio demographic data of an adult group. Section B is about the prevalence of pre-diabetic, was assessed according to Indian diabetic risk score. The scoring details of the tool described as Low risk below 30. Moderate risk 30-50. High risk above 60.Section C. It consists of 15 structured multiple-choice questionnaires. Each question has responses with one right answer on knowledge regarding diabetes mellitus on the basis of introduction, meaning, causes, signs symptoms, diagnosis, treatment, prevention and complication along with demographic variables. The multiple-choice question has 4 answer each with one right answer, which is accorded a score of I and every wrong answer was a given a score of the knowledge questionnaire was 15. The total score was converted in to percentage and resulting score was ranged as follows. If the score was 10-15-adequate knowledge.6-10 moderately adequate knowledge. Below 5 inadequate knowledge. The data was collected among adult who ware living at Lembalakudi oral consent was sought and obtained from the village authorities and from the ethical committee. Sample for the study was recognized based on inclusion criteria selected by non-probability of purposive sampling. A total of 60 adult data's were collected to find out the prevalence of pre-diabetes and from this 60 sample only 30 samples were participated in planned teaching programme and gave their post-test. Conducted the planned teaching program regarding diabetes mellitus and post-test knowledge was assessed. The entire adult was populating and investigators expressed their gratitude for their population. The collected data were tabulated, analyzed and interpreted by using descriptive and inferential statistics

RESULT

The findings of the study were organized and presented under the following heading:

Table: 1 Frequency and percentage distribution of the adults based on demographic variables for pre-diabetes status n-60

S.no	Elements	Frequency	Percentage
1	**Age**		
	(a) 21-30	17	28.3%
	(b) 31-40	14	23.3%
	(c) 41-50	15	25%
	(d) 51-60	14	23.3%
2	**Gender**		
	(a)Male	18	38%
	(b)female	42	70%
3	**Religion**		
	Hindu	60	100%
	Muslim	-	0
	Christian	-	0
	Others	-	0

	Continued Table no 1….			
4	**Education**			
	(a)no formal education	11	18.3%	
	(b)primary education	11	18.3%	
	(c)high school education	23	38.3%	
	(d)higher secondary education	3	5%	
	(e)graduated	12	20%	
5	**Marital status**			
	(a)married	58	97%	
	(b)unmarried	2	3%	
	(c)divorce	-		
	(d)separate	-		
6	**Income**			
	(a)<10,000	52	87%	
	(b)10,000-20,000	2	3%	
	(c)20,000-30,000	1	2%	
	(d)>30,000	5	8%	
7	**Dietary**			
	(a)vegetarian	1	2%	
	(b)non vegetarian	59	98%	

TABLE 1: Reveals the most of the adults were between 21-30yrs (28.3%), males were (30) and females (70%), of Hindu religion (100%) with high school education (38.3%) significant percentage of adult belong to married (97%), socio economic background and income (87%), dietary habit of adults in non-vegetarian (98%).

Table: 2 Prevalence of pre diabetes status

S.No	Status	frequency	Percentage
1.	High risk	19	31.66%
2.	Moderate risk	30	50%
3.	Low risk	11	18.33%

TABLE 2: reveals the percentage of prevalence of pre- diabetes status majority in moderate risk of (50%) among adults in Lembalakudi.
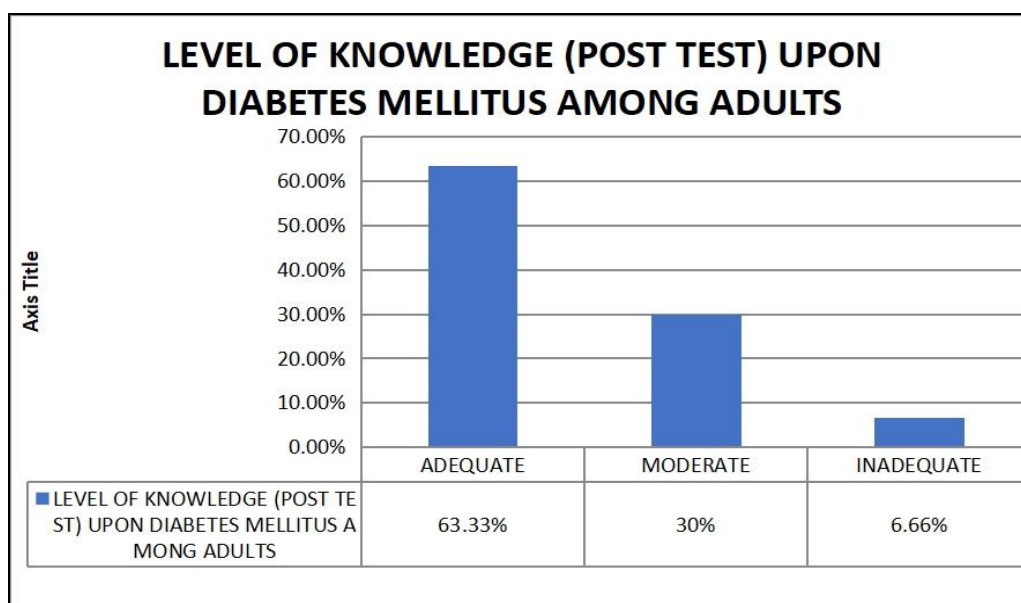

FIGURE:1 level of knowledge (post test) upon diabetes mellitus among adults

FIGURE:1 reveal the percentage of level of knowledge upon diabetes mellitus majority of the percentage on adequate level of knowledge 63.33
Major Findings regarding prevalence of pre-diabetic show that majority of adult had a moderate level of risk 50% and towards level of knowledge in post-test had 6.66% had inadequate knowledge and 30% had moderate level of knowledge and 63.3% adequate level of knowledge regarding diabetes mellitus.

DISCUSSION

In this study only 60 were participated in the study to find out the prevalence group to determine the pre-diabetes status in high risk 19(311.66%), moderate risk 30 (50%) and low risk 11 (18.33%) In relation to this finding of the study, Cho EH (2017) was conducted prevalence and management of diabetes and pre diabetes among Korean teenage and young adults. There we used Korea national health and nutrition examination survey (KNHANES). The overall prevalence of diabetes and pre diabetes among adults. Were 0.2% and 11.9%. About the level of knowledge regarding diabetes mellitus among adults after implementation of the planned teaching program. Regarding post test level of knowledge revealed 2 (6.66%) had inadequate knowledge, 9(30%) had moderate knowledge and 19(63.33%) had adequate knowledge. This indicates that most of the subjects were under adequate level of knowledge. In relation to this study finding of the study, the level of knowledge about diabetes mellitus among diabetes patients in a primary health care setting. A total of 121 of the 181 patient (66.9%) passed the diabetes knowledge test (p<o.o5). There was a higher pass in the female group then in the male group with 69.8% of the female population passing compare to 60% of the male.

CONCLUSION

This study concludes that the planned teaching program plays a vital role in increasing the knowledge among adults on diabetes mellitus. The investigator assures that, every participant who have been taken part in this study will perform a greater part in promoting health and preventing illness.

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Conflict of Interest: None

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