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DIABETES COGNIZANCE AMONG ADULTS IN SELECTED RURAL VILLAGE IN THIRUVALLUR DISTRICT

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Abstract

India has experienced a large increase in non-communicable diseases in (NCDs) the past several decades. It has become important to assess the knowledge and aware of diabetes among the adults in order for early prevention of the disease and risk factors. The present study was conducted among 200 adults in selected rural area using Michigan diabetes knowledge test (MDKT). 55.5% of the adults had acceptable cognizance on diabetes. There was no significant association between the background variables of the adults and the diabetes cognizance.

Keywords: diabetes, cognizance, adults, Michigan diabetes knowledge test (MDKT)

Introduction

Diabetes is one of the largest global public health concerns, daunting a heavy global burden on public health as well as socio-economic development. Diabetes is a serious, long-term condition with a major impact on the lives and well-being of individuals, families, and societies worldwide. It is among the top 10 causes of death in adults, and was estimated to have caused four million deaths globally in 2017. India has experienced a large increase in non-communicable diseases in (NCDs) the past several decades. Many studies have shown that diabetes is an increasing concern in South India, and especially in the state of Tamil Nadu. Diabetes affects approximately 4.8 million individuals in Tamil Nadu, with a current age-standardized prevalence of 10.8%. The low and lack of awareness on diabetes and prediabetes in India has been highlighted in several studies. Low awareness can lead to high prevalence of undiagnosed diabetes, which is a serious public health concern; indeed, estimates suggest that approximately half of diabetes cases are undiagnosed in India. Based on this background the study was formulated to assess the awareness of diabetes among adults.

METHODOLOGY

Research design and setting: Descriptive study design was used to conduct the study at selected rural villages under rural health and training center & Research Institute, SRIHER (DU).

Study population: Both male and female in the age group of 20 to 40 years from the selected rural villages under RHTC & RI of SRIHER, Vayalanallur in Thiruvallur district

Sample & Sampling technique: 200 samples were taken by convenient sampling technique based on inclusion and exclusion criteria.

Informed consent

Explained the complete detail of the study to the participants and obtained informed consent. Confidentiality was maintained throughout the study.

Description of the tool

Part I: Background variable that includes age, gender, education, occupation, marital status, type of diet, family history of diabetes and type of exercise.

Part II: Diabetes cognizance was assessed by Michigan diabetes knowledge test (MDKT). This includes 24 questions compiled by Michigan diabetes research and training centre. It comprises basic diabetes information (10) questions, glycemic control (7 questions) and diabetic complication (7 questions). Each question carries three options; yes, no and don't know. One mark was given for the right answer and zero for wrong or don't know. Levels of cognizance were classified as having low cognizance (0-60%), medium cognizance (61 – 80%) and high cognizance (> 80 %). The cut-off for sufficient diabetes cognizance was labeled at >60% score.

Findings of the Study

Table 1: Distribution of background variables among adults (N=200)

BACKGROUND VARIABLES	n	%
Age in years		
21 – 30	75	37.5
31- 40	125	62.5
Gender		
Male	62	31
Female	138	69
Marital Status		
Single	33	16.5
Married	164	82
Widow	03	01.5
Education		
No formal education	5	2.5
Primary	56	28
High School	41	20.5
Higher Secondary	35	17.5
Undergraduate	48	24
Post Graduate	15	12.5

Occupation		
Government Employee	04	02
Private Employee	62	31
Self-employee	43	21.5
House wife	91	45.5
Family history of Diabetes Mellitus		
Yes	50	25
No	150	75
Dietary Habit		
Vegetarian	18	09
Mixed	182	91
Exercise		
Walking	188	94
Cycling	11	05.5
Jogging	01	0.5

Table 1 shows that among 200 adults majority of them 62.5% were in the age group of 31-40 years, 37.5% were in the age group of 21-30years.The data regarding gender among adults were 69% were female whereas 31% were male. Regarding marital status among adults reveals that 82% were married, 16.5% were single and 1.5% are widow. The data regarding educational status reveals that 28% had primary education, 24% of them were undergraduates and 20.5% of them had high school education whereas 2.5% among them had no formal education. Occupational status among adult shows that most (45.5%) of the participants were housewives, 31% were private employed, 21.5% were self- employed and 2% were in government employment. The family history of diabetes among adults reveals that majority (75%) of the participants were not having any family history of diabetes. Dietary life style of the adults showed that 91% were taking mixed type diet and of 9% were vegetarian. Regarding exercise history majority (94%) of them was having regular walking habit and only 1% has jogging habit.

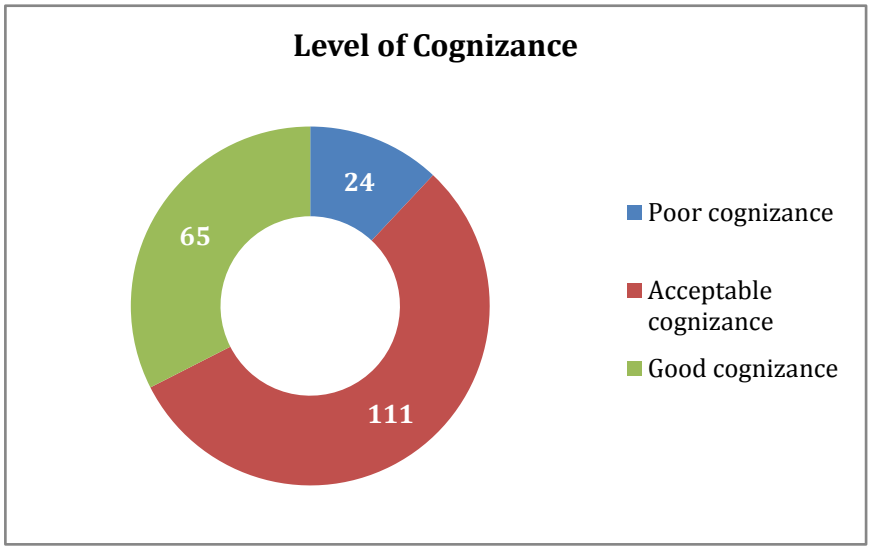

Figure 1 : Distribution of cognizance on diabetes among adult (N=200)

Table 3: Mean and standard deviation of diabetes cognizance among adults.

Level of cognizance	Mean	Standard deviation
	14.03	3.75

Table 3 depicts the mean and standard deviation of diabetes cognizance among adults which is 14.03 and 3.75 respectively

Table 4: Association between the cognizances with selected background variables

Background variables	Cognizance on diabetes			Chi- square	Table value
	Poor	Acceptable	Good		
Age in years					
20 – 30	09	44	22	0.587	0.745
31- 40	15	67	43		
Gender					
Male	08	33	21	0.1968	0.905
Female	16	78	44		
Marital Status Single	04	20	09	-	
Married	19	90	55		
Widow	01	01	01		
Education					
No formal education	01	03	01	8.070	0.622
Primary	07	34	15		
High School	07	20	14		
Higher Secondary	06	18	11		
Under Graduate	02	26	20		
Post Graduate	01	10	04		
Occupation					
Government Employee	01	03	00	3.91	0.687
Private Company	06	32	24		
Self-employee	05	26	12		
House wife	12	50	29		
Family history of Diabetes Mellitus				4.109	0.128
Yes	02	31	17		
No	22	80	48		
Dietary Habit				2.822	0.243
Vegetarian	00	12	06		
Mixed	24	99	59		
Exercise				7.391	0.116
Walking	20	106	62		
Cycling	04	04	03		
Jogging	00	01	00		

Above table implies that there is no association between the cognizances with the background data of the

adults

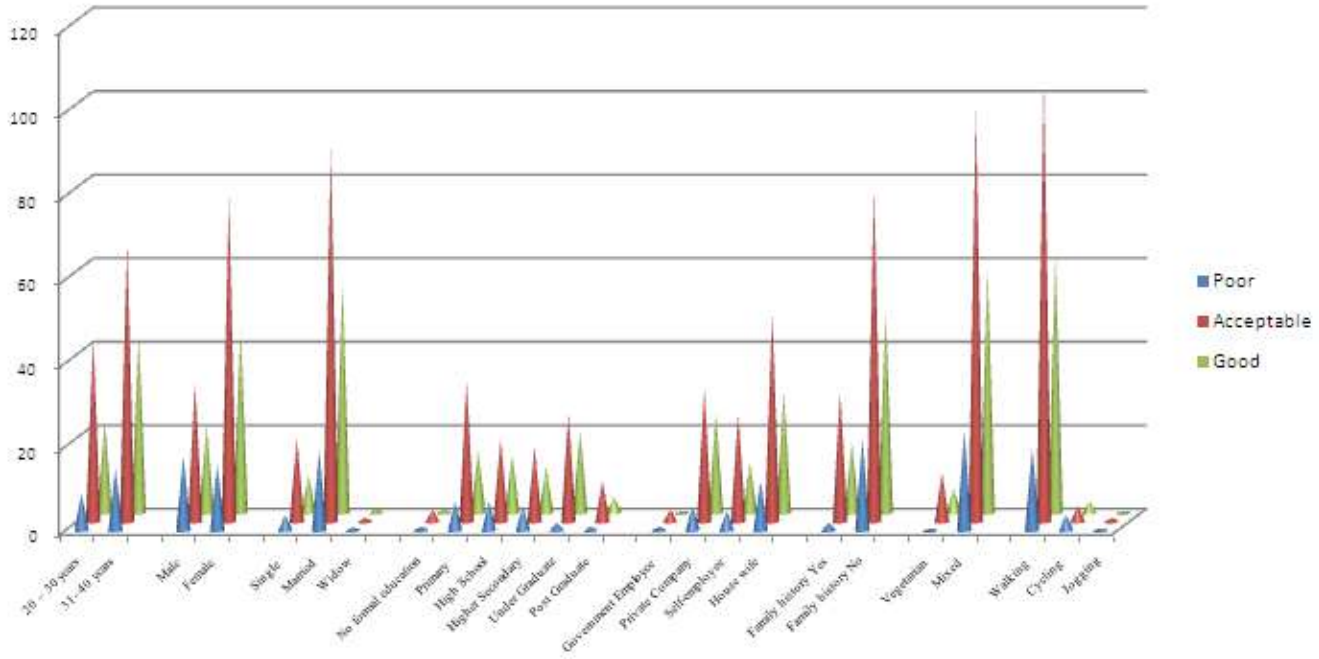

Figure 2: Distribution of diabetes cognizance among the background variables

Summary and conclusion of the study

The present study shows that among 200 adults majority of them 62% were in the age group of 31-40 years, 38% were in the age group of 21-30years. The data regarding gender among adults were 69% were female, whereas 31% were comes under male. This study was supported with a study conducted by Raja Subramani, et al.(2010) on the risk for type II diabetes among rural population in Tamil Nadu, India by using Indian Diabetes Risk score among 505 subjects above 20 years of age which showed that 55.2% (272 adults) were males and least 44.8% (226 adults) were females.

Regarding marital status among adults reveals that 82% were married, the data regarding educational status 28% had primary education and 2.5% among them had n formal education. This study was supported a study conducted by Muhammed Shihabudheen K et al(2010) on assessment of the risk factors among type II diabetes population in south Malabar region of Kerala, India among 206 subjects which revealed that majority 40.29 % had primary educational status and the least 1.94 % has post graduation. Regarding occupational status among adult shows that 45.5% were house wives, 31% were private employed, 21.5% were self-employed and 2% were in government employment. In family history of diabetes among adults reveals that 75% had no significant history of diabetes and 25% were having family history.

The overall cognizance about diabetes mellitus is fair in this study but their practice in order to control blood sugar levels and to prevent the complications of diabetes still needs to be improved. Because, diabetic patients should possess good cognizance about their illness in order to do life style modifications and improve their self-management skills and thereby to prevent the complications of

diabetes. Preventive measures can be under taken to prevent the occurrence of diabetes mellitus in adults such as awareness programs and screening camps can be conducted to detect the diabetes mellitus.

Recommendations

As this is a baseline study the following recommendations are suggested

- A detailed study with larger population.
- It could be done as a case control study with an educational module on diabetes.
- Adults practice on diabetes risk prevention and management could be assessed.

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