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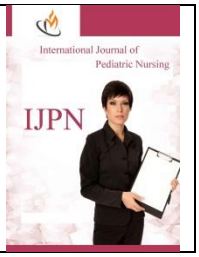

A STUDY TO ASSESS THE DIABETIC RISK FACTOR IDENTIFICATION AMONG THE FACULTY MEMBERS OF GRT GROUP OF INSTITUTION AT TIRUTTANI

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ABSTRACT

Introduction: Diabetes mellitus is a metabolic disorder characterized by chronic hyperglycemia that cause carbohydrate, protein, fat metabolism disorder. It is resulting from and absolute or relative deficiency of insulin. Individuals with prediabetes are indicating a relatively high risk of future diabetes development. Additionally, people with pre diabetic are at risk for the development of diabetes complications and cardiovascular diseases. According to the International Diabetes Federation (IDF) Atlas guideline report, currently, there are 352 million adults with impaired glucose tolerance who are at high risk of developing diabetes in the future. In 2017, it was estimated that 425 million people (20–79 years of age) suffered from DM, and the number is expected to rise to 629 million by 2045.Diabetes meletus is becoming an epidemic public health problem in developing countries such as India. As the international Diabetes federation indicates the number of adults living with diabetes globally has been increasing from time to time. If early screening and follow up are done diabetes is a manageable disease. However, diabetes study at the community level in India is limited and scarce. Therefore, the present study was conducted to assess the current prevalence of DM, prediabetes and its associated factors in GRT group of institution. Tiruthani. Objectives: To assess the Diabetic risk factor Identification among the faculty members of GRT Group of institution at Thirutani. To find out the association between the level of diabetic risk score with the selected demographic variables. Methodology: Quantitative research design was used for this study.166 samples who fulfilled the sample selection criteria were selected as sample by using non probability purposive sampling technique and assessed through Indian Diabetic risk assessment score scale. Results: The Study finding with regard to the level of diabetic risk score among 166 faculty members <30 (56) low risk, 30-50 (95) had medium risk score, ≥50 (15) had high risk score. Conclusion: The study concluded that there was a higher prevalence of diabetes mellitus and prediabetes. In addition, the prevalence of undiagnosed DM was high in our study. Therefore, targeting the control and prevention strategy to such modifiable risk factors associated with diabetes. a prediabetes may contribute to the reduction of the prevalence and further complication of DM. Also, there was no significant association between knowledge and practice with their selected demographic variables. Hence the present study aimed to assess the prevalence identification of Diabetic risk factors to control and prevent Diabetes Mellitus.

INTRODUCTION

Food Diabetes meletus is becoming an epidemic public health problem in developing countries such as India. As the international Diabetes federation indicates the number of adults living with diabetes globally has been increasing from time to time. If early screening and follow up are done diabetes is a manageable disease. However, diabetes study at the community level in India is limited and scarce. Therefore, the present study was conducted to assess the current prevalence of DM, prediabetes and its associated factors in GRT group of institution. Tiruthani.

Diabetes mellitus, a lifelong disease is achieving pandemic proportions. The prevalence of diabetes is on the rise and is expected to be worlds 7th leading cause of death by 2030. Studies have associated a number of risk factors like obesity, lack of physical activity, sedentary work, diet, and stress to diabetes mellitus.Diabetes mellitus (DM) is a metabolic disorder resulting from a defect in insulin secretion, insulin action, or both. Insulin deficiency in turn leads to chronic hyperglycemia with disturbances of carbohydrate, fat, and protein metabolism [1]. It is one of the chronic noncommunicable diseases (CNCDs) which have emerged as a leading global health problem. It is also a known risk factor for blindness, vascular brain diseases, renal failure, and limb amputations.

Objectives:

1. To assess the Diabetic risk factor Identification among the faculty members of GRT Group of institution at Thirutani.
2. To find out the association between the level of diabetic risk score with the selected demographic variables.

RESEARCH METHOIDOLOGY:

Quantitative research design was used for this study.166 samples who fulfilled the sample selection criteria were selected as sample by using non probability purposive sampling technique and assessed through Indian Diabetic risk assessment score scale. The study was conducted to assessthe Diabetic risk factor Identification among the faculty members of GRT Group of institution at Thirutani. The target populationselected for this study was all the faculty Members residing in Tamilnadu. Sample consist of 166 Faculty Members. The sample selected for this study by using a convenient sampling technique. The research develops tool necessary for the present study as per expert's opinion. It consists of Part-I: Demographic Variables. Part – II: Indian Diabetic risk assessment score scale.

The demographic variables were analysed by using descriptive statistics (mean, SD), Association between the knowledge on students with the selected demographic variables were analyzed by using inferential statistics (Chi-square).

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Description of the Tool:

The tool consist of 3 section

SECTION-A: It consist of demographic data which includes Age, Waist circumference-male, Waist circumference-female, Physical activity, Family history, Body mass index, Blood pressure –systolic, Blood pressure –diastolic Normal. The table1 indicates that with respect of age, majority 85(51%) of faculty members were aged between 35-49 yrs,75(45 %) were aged below 35 yrs, and 6(0.3%) were aged alone or equal to 50 yrs of age. With regards to waist circumference for male, majority 34(20%) were below 90 cm, 25(15%) of them of were between 90-99 cm and 17(10%) of them were more than or equal to 100cm. With respectto waist circumference for female, majority 36(25%) were between 90 - 99cm, 41(19%) were more than or equal to 100 cm and 17(10%) were below 90cm. Considering the physical activity 116(70%) were moderate workers, 34(20%) were strenuous workers,12(7%) were mild workers and 4(2%) were no exercise category. With respect to family history 123(74%) were no DM in parents, 36(22%) were DM in one parent and 7(4%) were DM with both parent. Considering body mass index 41(25%) were class II obesity, 38(23%) were normal BMI, 34(20%) were overweight ,22(13%) were class III obesity ,10(6%) were under weight and 7(4%) were class IV obesity. Regarding systolic blood pressure 86(51%) of them were with normal systolic blood pressure, 38(23%) were elevated, 27(16%) were stage I, 9(5%) were stage II and 6(4%) were stage III systolic blood pressure. With regard to diastolic blood pressure 71(43%) of them with normal diastolic blood pressure, 43(26%) were elevated, 35 (21%), were stage I, 11(6%) were stage II and 6(4%) were stage III Diastolic Blood Pressure.

SECTION – B:

Frequency and percentage distribution of level of diabetic risk score among faculty members was assessed using the following domains. Considering waist circumference of male. Majority 47(28%). were in medium risk, 16(10%) were in low risk and 13(8%) of them were in high risk. With respect to waist circumference of female majority 38 (23%) were in medium risk, 36(22%) were in low risk and 16(10%) of them were in high risk. With regard to physical activity majority 94(57%) of them were in medium risk, 53(32%) of them were in low risk and 9(11%) of them were in high risk. Considering family history 95 (57%) of them were in medium risk, 51(31%) of them were in low risk and 20(12%) of them were in high risk. With respect to body mass index 78(47%) of them were in medium

risk,47 (28%) of them were in low risk and 37(22%) of them were in high risk. With regard to systolic blood pressure majority 91(55%) of them were in low risk, 59(36%) of them were in medium risk and 16 (10%) of them were in high risk. With respect to diastolic blood pressure majority 83(50%) of them were in low risk, 59(36%) of them were in medium risk and 24(14%) of them were in high risk. It was evident that majority 97(58%) of faculty members were in medium risk, 55(33%) were in low risk and 14(8%) were in high risk with respect to age.

SECTION – C:

Frequency and percentage distribution of Final risk score revealed that the majority of the faculty members 95 (57%) had medium risk, 56 (34%) had low risk.15 (9%) of them had High risk.

SECTION – D:

Association of level of risk score of faculty members with selected demographic variables revealed that there was statistically high significant association of final risk score with the variables like Age χ^2 49. 40, waist circumference male $\chi^2$13.10, waist circumference female $\chi^2$20.414, Physical activity $\chi^2$20.392, Family history $\chi^2$26.086, BMI $\chi^2$40.616, Systolic Blood pressure $\chi^2$17.30, Diastolic Blood Pressure $\chi^2$25.02 at P<0.001 level.

Table 1: Frequency and percentage distribution of demographic variables.

Demographic variables	Numbers	Percentage%
Age of faculty members		
Below 35	75	45
35-49	85	51
>50	6	4
Waist circumference-male		
Below 90	34	20
90-99	25	15
>100	17	10
Waist circumference-female		
Below 90	17	10
90-99	32	25
>100	41	19
Physical activity		
Strenuous	34	20
Moderate	116	70
Mild	12	7
No exercise	4	2
Family history		
No diabetes in parents	123	74
One parent is diabetic	36	22
Both	7	4
Body mass index		
Under weight	10	6
Normal	38	23
Over weight	34	20
Obese	14	8
Class 1	41	25
Class 11	22	13
Class 111	7	4
Blood pressure –systolic		
Normal	86	51
Elevated	38	23
Stage I	27	16
Stage II	9	5
Stage III	6	4
Stage IV	--	--

Blood pressure –diastolic		
Normal	71	43
Elevated	43	26
Stage I	35	21
Stage II	11	6
Stage III	6	4
Stage IV	--	--

Table 2: Frequency and percentage distribution of level of diabetic risk score among faculty members

Domain	Level of risk score					
	<30		30-50		≥50	
	No	%	No	%	No	%
Age	55	33	97	58	14	8
Waist circumference (male)	16	10	47	28	13	8
Waist circumference (female)	36	22	38	23	16	10
Physical activity	53	32	94	57	19	11
Family history	51	31	95	57	20	1
Body mass index	47	28	78	47	37	22
Blood pressure (systolic)	91	55	59	36	16	10
Blood pressure (diastolic)	83	50	59	36	24	14

Table 3: Frequency and percentage distribution of Final risk score

LEVEL OF RISK SCORE	LOW RISK		MEDIUM RISK		HIGH RISK	
	No	%	No	%	No	%
Less <30	56	34	-	-	-	-
30-50	-	-	95	57	-	-
≥50	-	-	-	-	15	9

Table 4: association of level of risk score of faculty members with selected demographic variables

Demographic variables	<30		30-50		≥50		Chi –square value
	No	%	No	%	No	%	
Age <35 35-49 ≥50	47 8 -		28 66 3		- 11 3		χ^2=49.40 S ***
Waist circumference (Male) <90 cm 90-99cm >100cm	12 4 -		22 20 5		- 1 12		χ^2=13.10 S ***
Waist circumference (Female) <80	15		1		1		

80-89 >90	13 8		8 29		11 4		χ^2=20.414 S ***
Physical Activity Strenuous Moderate Mild No exercise	 21 29 2 1		 12 73 8 1		 1 14 2 2		χ^2=20.392 S ***
Family History No DM for parents Single parent Both parent	 44 7 -		 73 19 3		 6 10 4		χ^2=26.086 S ***
Body Mass Index Under weight Normal Over weight Obese Class 1 Class 11 Class 111							χ^2=40.616 S ***
Systolic blood pressure Normal Elevated Stage 1 Stage 11 Stage 111 Stage 1V	 58 20 7 3 3 -		 21 13 16 6 3 -		 7 5 4 - - -		17.30
Diastolic Blood Pressure Normal Elevated Stage 1 Stage 11 Stage 111 Stage1V	 49 15 - 12 4 3		 18 15 - 16 7 3		 4 13 - 7 - -		25.02

CONCLUSION:

The study concluded that there was a higher prevalence of diabetes mellitus and prediabetes. In addition, the prevalence of undiagnosed DM was high in our study. Therefore, targeting the control and prevention strategy to such modifiable risk factors associated with diabetes. a prediabetes may contribute to the reduction of the prevalence and further complication of DM. Also, there was no significant association between knowledge and practice with their selected demographic variables.Hence the present study aimed to assess the prevalence identification of Diabetic risk factors to control and prevent Diabetes Mellitus.

RECOMMENTATIONS

- The study can be conducted in larger sample.
- The knowledge assessment study can be done.
- This study can be conducted at various sections setting.

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