



KNOWLEDGE, ATTITUDE AND PRACTICE ON DIABETES MELLITUS AMONG COLLEGE GOING GIRLS

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ABSTRACT

Diabetes, an international public health problem, is an on-going disease and is now emerging as a virus in all developed and growing countries. It is an extreme disease because the pancreas organ in our body can no longer provide the hormone insulin, which is important for the carbohydrate metabolism. If insulin is not available, the body is not always able to metabolize carbohydrates; ends up in too much sugar in the blood. The study was conducted among a total number of 200 college girls studying first year in undergraduate programme in Jamal Mohamed College, Tiruchirappalli. The overall objective of the study is to evaluate the impact of nutrition education intervention on knowledge, attitude and practice among college girls. A pretest was conducted among the 200 girls through a questionnaire to assess their Knowledge, Attitude and Practice on Diabetes. Based on the scores 100 girls were chosen as the Experimental Group and Nutrition Education intervention on Diabetes was given to them. The other 100 girls served as the Control Group. Intervention was not given to the Control Group. The results of the study proved that there was a good impact after intervention on the knowledge, attitude and practice among the Experimental group and no specific difference was noticed among the Control group.

Keywords: Diabetes, Knowledge, attitude, practice

INTRODUCTION

Diabetes Mellitus could be a combination of 2 words, "diabetes" derived from the Greek word means that uptake off, and therefore the Latin word "mellitus" means honeyed or sweet (**Waqas et al., 2017**).

Diabetes mellitus (DM) is a major public health problem characterized by alterations in carbohydrate, protein and lipid metabolism due to transient insulin secretion, insulin-resistant secretion, or both (**Masoud et al., 2020**).

The number of people with diabetes mellitus worldwide has increased significantly from 108 million in 1980 to 422 million in 2014, while the prevalence of diabetes in adults over 18 years of age has increased from 4.7 per cent in 1980 to 8.5 per cent in 2014. The number of people with diabetes is expected to increase to 700 million (10.9%) by 2045 (**Dong et al., 2022**).

Main risk factors for diabetes in Indian women are positive history of diabetes, age over 35 years, overweight, obesity, presence of hypertension, recent weight gain, inactive lifestyle, gestational diabetes (**Ambady, 2014**).

High blood sugar leads to the classic symptoms of polyuria (frequent urination), polydipsia (increased thirst) and polyphagia (increased hunger) (**Mukhtar et al., 2020**).

Microvascular complications affect the inner part of the eye, the retina called diabetic retinopathy, the kidney called diabetic nephropathy and the peripheral nerves called diabetic neuropathy. Macrovascular complications affect the heart, brain and peripheral arteries, known as cardiovascular disease, cerebrovascular disease and peripheral vascular disease, respectively (**Pradeepa et al., 2017**).

Diabetes education is an important part after diagnosis because diabetes management requires self-management such as diet and exercise along with medication and because education can build knowledge, skills and abilities (**Ga Kim et al., 2020**).

Hence, the investigator made an attempt to inculcate nutrition education on diabetes among college going girls.

SELECTION OF THE AREA FOR THE STUDY

Jamal Mohamed College in Tiruchirappalli was chosen as the area of the study. The investigator selected three departments in Jamal Mohamed College namely Commerce, English and Computer Science.

SELECTION OF THE SAMPLES

The investigator selected a total number of 200 college girls were from the first year undergraduate degree. The selected college girls were from the first year of Bachelor of Commerce (B.com), Bachelor of English (B.A) and Bachelor of Computer Science (B.Sc (CS)). The college girls were selected on the basis of their willingness to participate in the study.

TABLE - 1

NUMBER OF COLLEGE GIRLS

DEPARTMENT	NUMBER OF COLLEGE GIRLS
Commerce	65
English	70
Computer Science	65
Total	200

COLLECTION OF SOCIO ECONOMIC PROFILE OF THE SELECTED COLLEGE GIRLS

To collect the details on the socio economic profile of the selected college girls, a questionnaire was prepared, pretested and finalized. The finalized questionnaire was administered to all the selected college girls from each department. It took around 10 minutes for the investigator to explain the entire questionnaire to the selected college girls of each department. After the explanation, each college girl took 10 to 15 minutes to fill the entire questionnaire.

ANTHROPOMETRIC MEASUREMENTS OF THE SELECTED COLLEGE GIRLS

Anthropometric measurements such as height, weight and Body Mass Index were calculated for all selected college girls. The heights of the girls were measured using stadiometer. The body weight of the girls were measured using weighing scale. The Body Mass Index was calculated by using a formula, $BMI = \text{Weight in kg} / \text{Height in m}^2$.

ASSESSMENT OF KNOWLEDGE, ATTITUDE, PRACTICE ON DIABETES AMONG THE SELECTED COLLEGE GIRLS

The knowledge, attitude and practice on diabetes were assessed by administering a set of 55 questions related to diabetes and its management such as prevalence, characteristics, diagnosis, normal blood glucose levels, types, etiological factors, symptoms, complications and management. To assess the knowledge, attitude and practice on diabetes among the college girls the scores were given.

PREPARATION OF THE EDUCATION MODULE

The analysis of the pre assessment on knowledge, attitude and practice on diabetes mellitus indicated the need for education intervention programme.

ASSESSMENT OF THE IMPACT OF INTERVENTION ON KNOWLEDGE, ATTITUDE AND PRACTICE ON DIABETES MELLITUS AMONG COLLEGE GIRLS

The post assessment was carried out after 1 month using the same questionnaire among the selected 200 college girls. Nutrition education on diabetes was planned and executed as power point presentation. Based on the scores, the experimental group of 100 college girls were selected for the intervention. The other group was kept as a control group consisting of 100 college girls. Nutrition education was not given to the control group. The scores of the pre assessment was compared with the post scores among both the groups.

ANALYSIS AND INTERPRETATION OF DATA

For the analysis of data, the data was coded, edited, tabulated and analysed statistically. Percentage, frequency and the mean for representing the tables.

RESULTS AND DISCUSSION:

TABLE -II
BODY MASS INDEX OF THE SELECTED COLLEGE GIRLS

N=200

AGE (YEARS)	MEAN HEIGHT (cms)	MEAN WEIGHT (kg)	MEAN BODY MASS INDEX
18	152	53	23
19	157	56	24

It was found that among the college girls of the age 18, the mean height was 152 and the mean weight was 53. The mean height and weight were 157 and 56 respectively for the age group of 19 years.

The mean body mass index was 23 for the selected college girls of the age 18 and 24 for the age group of 19 years. The mean body mass index was found to be normal among all age groups in the study.

TABLE -III

PRE ASSESSMENT ON DIABETES KNOWLEDGE SCORES OF THE COLLEGE GIRLS

KNOWLEDGE SCORES	COLLEGE GIRLS (N=200)	
	No.	%
1-10 (very poor)	102	51
11-20 (poor)	60	30
21-30 (fair)	32	16
31-40 (good)	6	3
≥ 40 (very good)	-	-
Total	200	100

More than half (51%) of the college girls obtained very poor scores. Thirty per cent of the college girls obtained poor scores. Sixteen per cent of the college girls obtained fair scores. Only 3 per cent of the college girls obtained good scores. None of the girls scored above forty. This indicates their poor knowledge on diabetes mellitus. Based on their individual score, 65 girls from B.Com and 35 girls from B.Sc (CS) were chosen as Experimental group and the rest of the others were kept as a Control group.

TABLE IV

PRE AND POST ASSESSMENT ON DIABETES KNOWLEDGE SCORES OF THE COLLEGE GIRLS

KNOWLEDGE SCORES	COLLEGE GIRLS			
	(N=200)			
	Experimental group (N= 100)		Control group (N = 100)	
	Pre test	Post test	Pre test	Post test
1-10 (very poor)	52	-	50	48
11-20 (poor)	29	-	31	30
21-30 (fair)	16	25	16	12
31-40 (good)	3	26	3	10
≥ 40 (very good)	-	49	-	-
Total	100	100	100	100

The above table shows the impact of diabetes education intervention on knowledge on diabetes among the college girls. The knowledge level of the college girls was assessed before and after intervention programme. The scores of the Experimental group was higher than that of the control group in the post test.

CONCLUSION:

Diabetes Mellitus is the metabolic disorder. Nutrition education is the need of the hour. The study proved that nutrition education had a good impact on knowledge, attitude and practice of college girls.

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