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Research Article

Incorporation of diabetic education and dietary advice to type 2 diabetes mellitus patients and its outcome

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ABSTRACT

Background: Diabetes is a significant global health challenge and is the leading causes of global mortality. It affects millions worldwide and poses substantial economic and healthcare burdens. Type 2 DM, in particular, accounts for most diabetes cases globally and is associated with numerous complications if not adequately managed. For effective diabetes management, patients must understand the importance of diet, medication adherence, and adjustments according to their exercise regimen. Diabetes educational programs have been recommended to enhance patients quality of life, hence this study was undertaken to show the effect of diabetes education on quality of life of study group

Materials and method:- 100 individuals diagnosed with type 2 DM in the age group of 30-50 years of both sex with less than 5 years duration were included in the study. And study group's knowledge, skill and attitude, random blood glucose level, level of HbA1C were measured before and after the impartment of diabetic education

Result:- There was a decrease in the mean RBS, HbA1C level and body weight after 3 months of diabetic education. There was also an increase in knowledge, skill and attitude of the study group after 3 months education

Conclusion:- The study demonstrated the quality of life can be increase with diabetes education

Keywords: *diabetes mellitus, diabetic education,HbA1C,quality of life*.

INTRODUCTION:-

Diabetes is a chronic metabolic disorder caused by defects in insulin secretion and action. Education is considered to be fundamental part of diabetes care. People with diabetes, ,whether they are using insulin or other means of achieving glycaemic control have to assume responsibility for the day to day control of their condition, which will not only decrease the economic burden of rural population but also decreases the work days lost. As it is now known that the potentially serious complication of type-2 diabetes can be prevented by good glycaemic control (DCCT research group, 1993[1]), it has become vital that culturally acceptable, good quality health education techniques are developed that will extend to all sections 'hard to reach' population (Nolde & Smillie1987[2]). It is recommended that structured patient education is made available to all people with diabetes at the time of initial diagnosis and then as required on an ongoing basis, based on a formal, regular assessment of need.

MATERIALS AND METHOD:

100 individuals diagnosed with type 2 DM in the age group of 30-50 years of both sex with less than 5 years duration. Female, who are pregnant or patients who had systemic diseases such as cancer or other cardiovascular diseases were excluded from the study. Diabetes education and dietary advice was given by discussion and in the form of leaflets written in assamese (local dialect). Before delivering the education, patients was given a questionnaire of MCQ type for testing their knowledge, attitude, skill towards diabetes. Illiterate patients were helped either by their relatives or by authours in understanding the questions. Patients body weight and HbA1C results were also recorded. In the months following, continuing education were given in each visit covering elements essential to live with diabetes according to ADA[3] such as:

1. Ensuring optimal and appropriate use of therapy, whether tablets or insulin.
2. Managing effectively nutrition and physical activity.
3. Being able to detect and manage hypoglycaemia.
4. Being aware of late complications preventing, detecting and treating them, and of the need for regular assessment.
5. Dealing with special situations, eg. travelling, illness.
6. Making appropriate lifestyle changes (eg. smoking, alcohol, drugs) and dealing adequately with stress.
7. Dealing with psychological aspects of living with diabetes.
8. Being aware of pre-conception care and implications of pregnancy.

After three months of continual education, the same questionnaire was given. The performance (scores) of the patients were compared. Similarly the body weight and HbA1C levels were also compared. Topics discussed during diabetes education were- the pathophysiology of diabetes, the techniques of insulin injection, blood glucose monitoring, urine testing, the prevention of hypoglycemia, foot care and meal planning.

RESULT:

The study consist of 100 diabetic individuals.Table 1 shows the age distribution of the study group. Majority of patients were in the age group of 40-50 years.Figure 1 shows the sex distribution of the study group.It shows that 71% of the study group was male and rest were female.Table 3 shows the outcome measures of patients during the Diabetes Education programme.There was a decrease in the mean RbS,HbA1C Level and body weight after 3 months of diabetic education.There was also an increase in knowledge ,skill and attitude of the study group after b3 months education

Table 1: shows the age distribution of the study group

sno	Age (years)	Number of individuals
1	30-40	37
2	40-50	63

Figure 1:-sex distribution of the study group

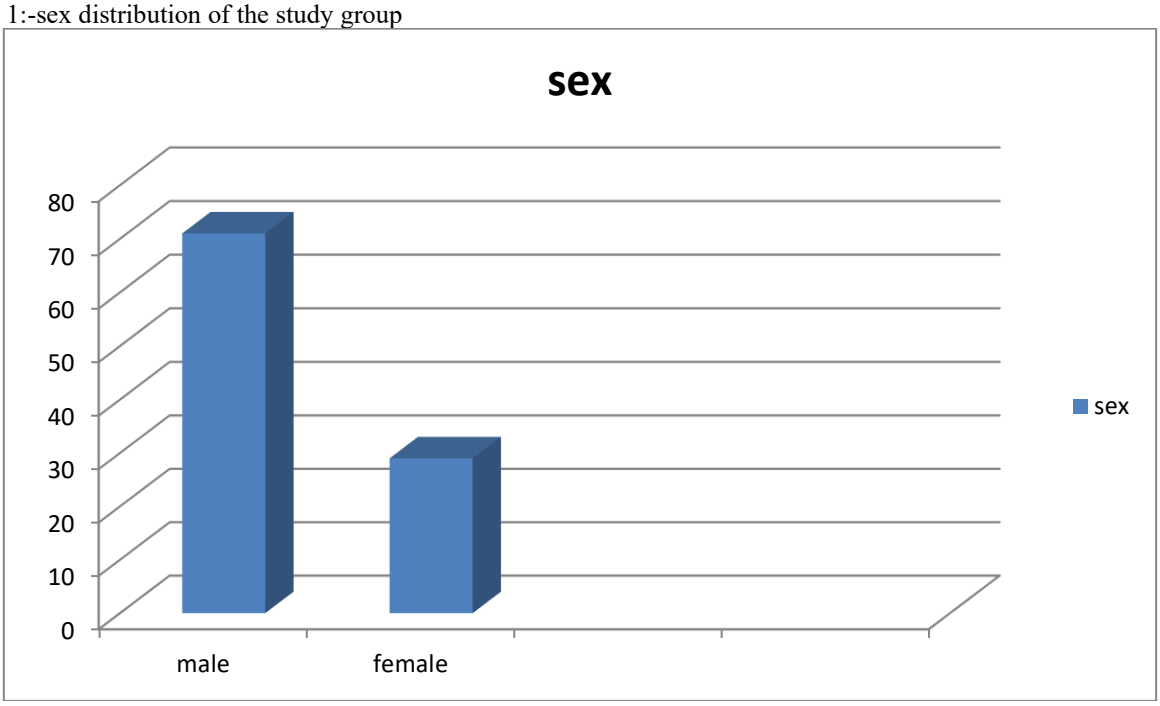

Table 3:-Showing the outcome measures of patients during the Diabetes Education programme

Variables	Pretest score	Post-test score after 3 months education	% change
Knowledge(mean score)	4.23	6.34	+49.8
Skill(mean score)	4	5.58	+39.5
attitude(mean score)	3.88	6.89	+77.5
Mean weight in kg	79.32	76.46	-3.6
Mean RBS(mg/dl)	174.2	150.6	-15.6
Mean Hb A1C	8.06	**7.8**	-3.33

[% change=(at follow up score- pretest score)/ pretest score]

DISCUSSION:-

The present study showed a decrease in level of HbA1C after diabetic education which was in consistence with the findings of Didarloo A et al [4],whose study determined that interactive instructional interventions can effectively change behavior, lower HbA1c levels, and improve QoL for patients with diabetes. These findings align with previous research showing a direct relationship between structured education and improved HbA1c levels.[5,6].

CONCLUSION:-

Health literacy, the ability to access, understand, and apply health information to make informed decisions, is crucial in promoting self-management behaviors and achieving optimal health outcomes in chronic diseases like diabetes .[7,8].

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