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A STUDY TO ASSESS THE EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME REGARDING KNOWLEDGE ON GESTATIONAL DIABETES MELLITUS AMONG GESTATIONAL DIABETIC WOMEN AT SELECTED HOSPITAL IN DELHI.

Nursing Science

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ABSTRACT

OBJECTIVES- A study to assess the effectiveness of structured teaching programme regarding knowledge on gestational diabetes mellitus among gestational diabetic women at selected hospital in Delhi.

MATERIAL AND METHOD -A pre-experimental design was used to assess the effectiveness of a structured teaching programme on knowledge of gestational diabetes mellitus among gestational diabetic women at selected hospital in Delhi. The non-probability convenient sampling technique was used to select 50 diabetic women for the study. A structured questionnaire was administered to assess the knowledge for the awareness and prevention of gestational diabetes mellitus.

RESULT-Revealed that 74% of diabetic women had inadequate knowledge about gestational diabetes mellitus, 26% of diabetic women had moderate knowledge and no diabetic women had adequate knowledge on gestational diabetes mellitus. Hence, it was concluded that the majority of women had inadequate knowledge about gestational diabetes mellitus in the pre-test.

No significant association was found between pre-test score and age, education, residential area, type of family, occupation, dietary pattern, gestational age, duration of gestational diabetes mellitus, family history of diabetes and blood sugar level among diabetic women.

CONCLUSION-Out of 50 respondents, in the pre-test, majority 37 (74%) had inadequate knowledge and 13 (26%) had moderate knowledge. In post-test, majority 36 (72%) had moderate knowledge and 14 (28%) had adequate knowledge. The calculated t value was 1.98 which was greater than the table value. It concluded that there were significance differences between post-test and pre-test knowledge score on gestational diabetes mellitus which indicated that the structured teaching programme as very effective. There was no significant association between pre-test knowledge regarding gestational diabetes mellitus with selected demographic variables such as age, education, residential area, type of family, occupation, dietary pattern, gestational age, duration of gestational diabetes mellitus, family history of diabetes and blood sugar level. The investigator concluded that the majority of the people were not much aware of gestational diabetes mellitus and this study showed the effectiveness of the structured knowledge programme on the basis of knowledge about gestational diabetes mellitus. Hence, awareness programme in a regular period will help in gaining knowledge regarding the gestational diabetes mellitus among high-risk people to have a healthy society.

KEYWORDS

assess, effectiveness, structured teaching programme, gestational diabetes mellitus.

INTRODUCTION

"Diabetes mellitus is a chronic systemic illness that either has an insulin shortage or decreases the body's capacity to utilise insulin. Diabetes mellitus is often referred to by clients and carers as "high sugar.". Gestational diabetes Mellitus (GDM) is a type of diabetes that occurs during pregnancy that may result in unfavourable events for mothers and infants in the short and long term. GDM is carbohydrate intolerance that leads to development or early detection of hyperglycaemia during pregnancy. Diabetes leads to an increase in blood glucose over typical levels of physiology. GDM is linked with a variety of unfavourable maternal and new-born outcomes. Untreated, this may harm numerous systems, including cardiovascular and renal systems, and may increase perinatal morbidity and death. Pregnancy raises insulin resistance; this means an increased insulin need for women with pre-gestational diabetes. Gestational diabetes usually results in few symptoms but increases the risk of preeclampsia, depression and a Caesarean section. Babies delivered to moms with poorly managed gestational diabetes are at a higher risk of being overly big, low blood sugar and jaundice after delivery. If untreated, it may potentially lead to a mortality. Gestational diabetes is believed to develop because the many changes (hormonal and other), that occur during pregnancy, lead certain women to be resistant to insulin. Insulin is a hormone produced by specialised pancreatic cells which enables the body to digest glucose efficiently for future use as fuel (energy).

MATERIALS AND METHODS

The research design selected for this present study was pre-experimental design of "one group pre-test post-test design". (01-x-02) In this present study, base measures were knowledge and the treatment is a structured teaching program on gestational diabetes mellitus.

Group	Pre-test	Treatment	Post test
Experimental group	01	X	02

The design adopted for the study can be represented as

01- pre-test knowledge.

x- administration of structured teaching programme gestational diabetes mellitus.

02- post-test knowledge

Group	Day 1 (pre-test)	Day 2 Treatment	Day 7 (post-test)
Gestational diabetes women attending antenatal clinics and/or admitted in hospital	Knowledge test	Introduction of structured teaching program on gestational diabetes mellitus.	Knowledge test

The design indicates that on day one, pretest of knowledge was taken followed by structured teaching program on the second day. On the seventh day, post-test of knowledge was administered.

Variables Under Study

In the present study the variables were:

Independent variable:

The variable that is believed to cause or influence the dependent variable. It is a condition or characteristics manipulated by researcher. Here the independent variable is structured teaching program for gestational diabetes mellitus women.

Dependent variable:

It is the behavior, characteristics or outcome that the researcher is interested in understanding, explaining, predicting or effecting.

It is the presumed effects of the independent variable.
This is based on knowledge.

Selected variable:

Demographic variable in the study are – age, education, residential area, type of family, occupation, dietary pattern, gestational age, duration of gestational diabetes mellitus, family history of diabetes and blood sugar level among diabetic women.

Sampling Technique-

The sample comprised of the patient with gestational diabetes mellitus. In the present study, convenient non- probability sampling technique was used to select the sample for the study. Convenient sampling

techniques entails the use of the most conveniently available people or object for use case subjects in a study.

Inclusion Criteria:
The study includes all gestational diabetes mellitus women who are
- Admitted in hospital or come for regular antenatal checkup.
- Diagnosed with gestational diabetes mellitus.
- Willing to participate in the study.
- Available at the time of data collection.

Exclusion Criteria:
The study excluded the gestational diabetic patients who are
- Not available at the time of data collection.
- Not willing to participate in the study.

Sample Size-
Depending on the nature of the present study 50 gestational diabetes mellitus women were taken from: Safdarjung hospital, New Delhi; Guru Gobind Singh hospital and goodwill maternity clinic, New Delhi.

Data Analysis And Interpretation
The data was analyzed using descriptive and inferential statistics.
- **Descriptive statistics:** frequency and percentage distribution to present the demographic variables.
- **Mean, range and standard deviation** were used to describe the knowledge regarding gestational diabetes mellitus.
- **Inferential statistics:** appropriate statistical test **chi square and t-test** were used to analyzed the data.

RESULT-
Pre-test scores revealed that 74% of diabetic women had inadequate knowledge about gestational diabetes mellitus, 26% of diabetic women had moderate knowledge and no diabetic women had adequate knowledge on gestational diabetes mellitus. Hence, it was concluded that the majority of women had inadequate knowledge about gestational diabetes mellitus on the pre-test.

- Post-test scores revealed that no diabetic women had inadequate knowledge about the gestational diabetes mellitus, 72% of diabetic women had moderate knowledge and 28% had adequate knowledge score about the gestational diabetes mellitus. Hence, it was concluded that the majority of diabetic women had moderate knowledge about the gestational diabetes women in post-test.

Table 4.1- Frequency And Percentage Distribution Of Demographic Characteristics And General Relevant Information Related To Gestational Diabetes Mellitus. N-50

Age Group	Frequency (F)	Percentage %
18 - 21 years	9	18
22 - 25 years	17	34
26 - 30 years	16	32
Above 30 years	8	16
Education Level		
No formal education	5	10
Primary	13	26
Secondary	7	14
Degree/Diploma	15	30
Residential area		
Rural	33	66
Urban	17	34
Type of family		
Nuclear	37	74
Joint	13	26
Occupation		
House wife	29	58
Self employed	2	4
Private employee/daily wages	13	26
Government employee	6	12
Dietary pattern		
Vegetarian	28	56
Non-vegetarian	9	18
Mix diet	13	26
Gestational age		
20 - 23 weeks	11	22
24 - 27 weeks	19	38
28 - 30 weeks	13	26
31 - 34 weeks	7	14
Duration of gestational diabetes mellitus		
1 Month	4	8
2 Months	11	22
3 Months	23	46
4 Months	12	24
Family history of diabetes		
Yes	33	66
No	17	34
Blood sugar level		
< 100	27	54
140 – 150	7	14
150 – 160	15	30
>160	1	2

Table- 4.2 Frequency And Percentage Distribution Of Knowledge Levels On Gestational Diabetes Mellitus Among Gestational Diabetes Women. N-50

S. NO	KNOWLEDGE SCORE	PRE-TEST FREQUENCY	PRE-TEST PERCENTAGE	POST TEST FREQUENCY	POST TEST PERCENTAGE
1.	INADEQUATE KNOWLEDGE <8 (32%)	37	74		
2.	MODERATE KNOWLEDGE 8-16 (32-60%)	13	26	36	72
3.	ADEQUATE KNOWLEDGE >16 (>60%)			14	28

TABLE-4.3 Mean and standard deviation of pre-test and post-test knowledge scores on gestational diabetes mellitus among gestational diabetic women. N-50

Knowledge Score	Mean	S.D.
Pre-test	6.18	2.767818
Post-test	14.42	4.0962402

Effectiveness of structured teaching programme on gestational diabetes mellitus among gestational diabetic women pre-test and post-test.

The effectiveness of STP on knowledge regarding gestational diabetes mellitus among diabetic women at selected hospital in Delhi. As per the given data, P value is greater than the table value at P=0.05, we reject the null hypothesis.

Therefore, there is an effectiveness of structured teaching programme regarding knowledge on gestational diabetes mellitus among diabetic women.

Paired t value of knowledge on gestational diabetes mellitus among gestational diabetic women in both pre-test and post-test N-50

S. no	Knowledge on gestational diabetes mellitus	Mean	Standard Deviation	Paired t value
1	Pre-test	6.18	2.767818	1.98
2	Post test	14.42	4.0962402	

CONCLUSION
Out of 50 respondents, in the pre-test, majority 37 (74%) had inadequate knowledge and 13 (26%) had moderate knowledge. In post-test, majority 36 (72%) had moderate knowledge and 14 (28%) had adequate knowledge. The calculated t value was 1.98 which greater than the table value. It concluded that there were significance differences between post-test and pre-test knowledge score on gestational diabetes mellitus indicated that the structured teaching programme as very effective. Hence, with an increase in knowledge. There was no significant association between pre-test knowledge regarding gestational diabetes mellitus with selected demographic variables such as age, education, residential area, type of family, occupation, dietary pattern, gestational age, duration of gestational

diabetes mellitus, family history of diabetes and blood sugar level. The investigator concluded that the majority of the people were not much aware of gestational diabetes mellitus and this study showed the effectiveness of the structured knowledge programme on the basis of knowledge about gestational diabetes mellitus. Hence, awareness programme in a regular period will help in gaining knowledge regarding the gestational diabetes mellitus among high-risk people to have a healthy society.