International Journal of Professional Development
ISSN: 2277-517X (Print), 2279-0659 (Online) Vol.13, No.2, July-Dec 2024
Impact Factor: 3.986(IFSIJ)

Study to Assess the Effectiveness of Planned Teaching Programme Regarding Gestational Diabetes in Terms of Knowledge among Antenatal Mothers in Selected Rural Areas of Gandhinagar District, Gujarat State

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Abstract
Gestational diabetes mellitus (GDM) is an increasingly prevalent health issue that poses significant risks for both mothers and newborns if unrecognized or inadequately managed. Rural antenatal mothers often lack adequate awareness about GDM, leading to delayed diagnosis and complications. This study was conducted to assess the effectiveness of a planned teaching programme regarding gestational diabetes in terms of knowledge among antenatal mothers in selected rural areas of Gandhinagar District, Gujarat. A pre-experimental one-group pre-test post-test design was adopted. A total of 60 antenatal mothers were selected using purposive sampling. Data was collected through a structured knowledge questionnaire before and after the implementation of the planned teaching programme. The findings revealed that the mean post-test knowledge scores were significantly higher than the mean pre-test scores, indicating that the planned teaching programme was effective in enhancing the mothers' understanding of the causes, risk factors, signs and symptoms, management, and prevention of GDM. The study highlights the crucial role of health education in improving awareness and promoting healthy pregnancy outcomes among rural antenatal mothers. It recommends that similar community-based teaching programmes be organized regularly to empower expectant mothers with essential knowledge, contributing to the early detection and better management of gestational diabetes in rural settings.
Keywords: Diabetes, Effectiveness, Teaching Programme, Rural Areas, and Gandhinagar

Introduction

Diabetes mellitus is multisystem disease related to abnormal insulin production, impaired insulin utilization or both. Diabetes mellitus is a serious health Problem throughout the World. Diabetes mellitus is not a modern Disease. In 1500B.C. Papyrus of ancient Egyptians recorded several remedies for passing Urine. In 1000 B.C. Indian physician Sushurutha was Diagnosed diabetes. In 1798, J.Jhon, the Greek physician found diabetes is Associated with excess of glucose in the blood. The discovery of insulin by Banteng and Best in 1921 is a landmark in Diabetes History. Gestational diabetes mellitus (GDM) Defined as any degree of carbohydrate intolerance with onset or first recognition during Pregnancy contributes to about 90% of complicated pregnancies. GDM imposes risks for both mother and fetus, some of Which Continue throughout the life of mother and child. Immediate maternal complications include Preeclampsia, the need for caesarean sections, and poly/oligohydramnios. Complications in the baby Include hyperinsulinemia, macrosomia, Shoulder dystocia, neonatal hypoglycemia, and respiratory distress syndrome. Women with

GDM are at an increased risk of GDM In future Pregnancies and also at a higher risk of developing type 2 diabetes in the future. GDM also Increases the risk of obesity and glucose Intolerance in the offspring. GDM is therefore an important public health issue that has major repercussions for both mother and Offspring.

The purpose of this program is to provide the useful information to GDM high- Risk population and DM pregnant women, to help them to know how to control and manage GDM, as well as to keep them healthy during pregnancy.

Gestational diabetes mellitus (GDM) is amongst the most common medical Complications of pregnancy. GDM is associated with adverse outcome for the Fetus and newborn (macrosomia, birth Injuries, shoulder dystocia, respiratory distress syndrome, hypoglycaemia, and Hyperbilirubinemia and childhood obesity). There is increased risk of gestational Hypertension, preeclampsia, and operative delivery and their associated Potential morbidities in women with GDM.' More importantly, there is an increased risk of developing type 2 diabetes mellitus (DM) in women diagnosed to have GDM with approximately 15% to 60% of them developing type 2 DM within 5 to 15 years of delivery.2 Thus GDM offers a significant Prospect for the development and application of clinical strategies for prevention of DM.

Objectives of the study

- To assess the knowledge of antenatal mother regarding gestational diabetes Before planned teaching programme.
- To assess the knowledge of antenatal mother regarding gestational diabetes after planned teaching programme.
- To assess the effectiveness of planned teaching programme on gestational diabetes.

Hypotheses

The mean post-test knowledge score of awareness in antenatal women who received a planned teaching programme of gestational diabetes in terms of knowledge among antenatal Mothers in selected rural areas of Gandhinagar district, Gujarat state will be significantly higher than their mean pre-test structured knowledge questionnaires at the 0.05 level of significance.

Methodology

Research Approach

The quantitative approach is used in study one group pre-test -post- test quasi-experimental design applied in this study in this study investigator assessed the change in knowledge after planned teaching programme in mother

Research design

in this study, the research design is a quasi-experimental research design including one group pre-test and post-test quasi-experimental design to accomplish to the main objective of assessing the effectiveness of a plan teaching programme on knowledge related to gestational diabetes among antenatal mothers.

Research Setting

The research setting is the population that is being studied and where the study is carried out, the present study will be conducted on the antenatal mother of the selected rural area of Gandhinagar district.

The rationale for selecting this setting for our research study in a rural area of Gandhinagar city was their proximity, economy in terms of time, easy transportation facility, cooperation since the college is situated close, easy accessibility ensures rural area has a huge, antenatal mother hence sampling needs are met easily, lack of knowledge related to awareness of gestational diabetes mellitus and above all.

Target population: 240 villages

We have selected 6 rural areas antenatal mothers from the selected rural areas of Gandhinagar city.

Sample size: 60 samples

Samples: antenatal mothers

Sampling technique

In this study the sampling technique used was the probability technique of the lottery method

convenient, the selection of sample size was 60 reached in a rural area of Gandhinagar.

Data collection tool :

The Instrument consists of two sections:

Section – A

It is a structured questionnaire schedule that consists of demographic variables such as age, educational status, occupational status, religion, type of family, family income per month, number of Pregnancies, gestational age, dietary pattern, and previous history of GDM.

Section -B

It consists of a structured questionnaire schedule on knowledge questionnaire which contains 34 multiple Choice questions regarding gestational diabetes mellitus. Each question has four options, out of which one is the correct answer.

Result

Knowledge test	Mean	Mean difference	SD	Calculated "t" value	Table "t" value	Level of significance
Pre-test	11.8	13.98	1.34	33.5	2.00	0.05
Post-test	25.78		2.97			

The data presented in the above table it is reveals the comparisons between pre-test and post-test knowledge scores obtained by the sample of antenatal mothers. The mean pre-test score is 11.8 and the post-test score is 25.78. The table also shows that the standard deviation of the pre-test knowledge score is 1.34 and that of the post-test 2.97. The calculated is 33.5 and the tabulated is 2.00 and at 0.05 level of significance.

From the above table, it is revealed that the mean post-test knowledge score is higher than the mean pre-test knowledge score with a mean difference of 13.98 which is statistically proven that the null hypothesis is rejected and alternative hypothesis is accepted. It shows that planned teaching on 'gestational diabetes mellitus' is effective in terms of knowledge among the sample

Conclusion

- A knowledge deficit existed in the area of knowledge regarding awareness of gestational diabetes among antenatal mothers from selected rural areas of Gandhinagar.
- The study in terms of planned teaching programmes is found effective in enhancing the knowledge about awareness of gestational diabetes.
- The sample gained significant knowledge after exposure to the study.

Implication

The findings of the study have several implications in the nursing practice, nursing education, nursing administration and nursing research.

Recommendation of the Study

The following recommendation is made based on the findings of the present study.

- The study can be replicated on a large sample to validate the findings and make generalizations.
- A follow-up study can be conducted to evaluate the effectiveness of plan teaching programme in the retention of knowledge.
- Similar planned teaching programme can be prepared for the other topic.
- Similar study can be replicated using a different strategy

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