

Effectiveness of Structured Teaching Program on Self-Care Management of Antenatal Mothers with Gestational Diabetes Mellitus in Terms of Knowledge and Practice in Safdarjung Hospital: A Quasi Experimental Study

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DOI: <http://doi.org/10.5281/zenodo.3234418>

Abstract

A study to evaluate the effectiveness of structured teaching program on self-care management of antenatal mothers with gestational diabetes mellitus in terms of knowledge and practice in selected hospital of Delhi. The conceptual framework of the present study was based on the Orem's Self care model. Research approach adopted for the study was quasi-experimental approach with pre-test post-test control group design. The sample consists of the 60 antenatal mothers with GDM from 24 weeks to 39 weeks POG. The tools used for the study were structured knowledge interview schedule, structured expressed practice checklist. The content validity of the tool was established by giving it to 9 experts. The internal consistency method by using Kuder Richardson-20 was used to establish reliability of structured knowledge interview schedule and structured expressed practice checklist. The final study was conducted at Safdarjung Hospital, New Delhi after obtaining formal administrative approval. The data obtained were organized and analyzed using both descriptive and inferential statistics according to objectives and hypothesis of the study. The findings of the study revealed that, the mean post-test knowledge and practice scores were higher than their mean pre-test knowledge and practice scores. The structured teaching program on self-care management of gestational diabetes mellitus (GDM) was found to be effective in enhancing the knowledge and practice of antenatal mothers with GDM.

Keywords: Antenatal mothers, gestational diabetes mellitus, knowledge, practice, structured teaching program, self-care management

INTRODUCTION

The pregnancy constitutes a unique period in the life of the woman and her family [1]. This phase, in general, is marked by the need for adjustments, especially with regard to identity, the definition of roles and the information and educational practices for better understanding of changes in pregnancy and puerperium cycles [2]. Pregnancy is indisputably the most exciting time in a woman's life. It is a state of natural insulin resistance, which is due to placental production of human placental lactogen [3], an insulin antagonizing hormone, leading to a remarkable increase of insulin requirement in pregnant diabetics in the second and

third trimester [4].

Diabetes mellitus is chronic metabolic disorders due to either insulin deficiency or due to peripheral tissue resistance to the action of insulin and it is most common medical condition to affect pregnancy [5-7]. According to WHO the gestational diabetes is defined as carbohydrate intolerance resulting in hyperglycemia of variable severity with its onset of first recognition during pregnancy. In developed countries, estimated 13 million peoples are affects with diabetes, in that 5.2 millions are women and the gestational diabetes in approximately 4 per 1000 pregnancy [8]. Lowy highlighted on

gestational diabetics mellitus and expressed the incidence in different ethnic groups (in cacession it is 1 to 2%, in afocaribbens 2 to 3%, in Asians 4 to 5%) [9]. The UK task force and the St. Vincent declaration of the European association set the aims to achieve a pregnancy outcome for the diabetic mother equal to that of non-diabetic mother [10].

Nursing and medical management in gestational diabetes includes to regulate carbohydrate intake and restrict fat and sugars [11-13]. The midwife should advice regarding exercise, regular blood glucose monitoring for hypoglycemia and recommended oral glucose tolerance test for 6 weeks of postnatal period [14-16]. The way a person responds to an illness will depend to a large extent in the personality of that individual [17]. Each person is unique so also his response to a crisis. It is nurse's responsibility to identify the consequences of the person to provide the knowledge and care to patients[18].

Objectives

The objectives of the study were to (1) develop a teaching program on self-care management of gestational diabetes mellitus for antenatal mothers with GDM. (2) Assess and evaluate the knowledge of antenatal mothers regarding self care management of gestational diabetes mellitus before and after administration of structured teaching program. (3) Assess and evaluate the practices of antenatal mothers regarding self care management of gestational diabetes mellitus before and after administration of structured teaching program. (4) Determine the relationship between knowledge and practices of antenatal mothers after the administration of structured teaching program on self-care management of gestational diabetes mellitus. (5) determine the association between post-test knowledge scores of antenatal mothers with gestational diabetes mellitus and selected factors in terms of:

age, education, income, duration of pregnancy, family history of diabetes mellitus, parity, previous knowledge on gestational diabetes mellitus (6) determine the association between post-test practice scores of antenatal mothers with gestational diabetes mellitus and selected factors in terms of: Age, Education, Income, Duration of pregnancy, Family history of diabetes mellitus, Parity, Previous knowledge on gestational diabetes mellitus.

Operational Definitions

- **Evaluate:** It refers to the extent to which structured teaching program on self-care management for GDM has achieved the desirable outcomes in terms of gain in knowledge and improvement in practices [18].
- **Effectiveness:** It donates enhancement of knowledge and improvement of practices on self care management of gestational diabetes mellitus after administration of structured teaching program [19].
- **Structured Teaching Program:** It refers to systemic well organized instructions designed to enhance the knowledge and improve the practices of antenatal mothers with Gestational Diabetes Mellitus on Self Care Management of GDM. It consists of structural teaching program, flash cards, power point presentation and information booklet with snake and ladder chart game on the self care management of Gestational Diabetes mellitus [20].
- **Knowledge:** It refers to the ability of antenatal mothers to respond to the knowledge items will be given in knowledge interview schedule before and after administration of structured teaching program on self-care management of gestational diabetes mellitus as evident from knowledge scores of structured knowledge interview schedule interpreted as poor

(0-10), fair (11-20) and good (21-30) knowledge level [21].

- **Practices:** it refers to one's ability to perform an activity proficiently. It denotes the action of antenatal mothers before and after administration of structured teaching programme on self-care management of gestational diabetes mellitus as evident from practice scores of structured practice questionnaire interpreted as poor (1-7), fair (8-13) and good (14-20) practices.
- **Gestational Diabetes Mellitus:** Gestational diabetes mellitus is defined as carbohydrate intolerance with onset or recognition during pregnancy and when glucose intolerance goes beyond 24-28 weeks of gestation [22].
- **Self-Care Management:** It refers to the knowledge and practices of activities to be carried out by antenatal mothers with gestational diabetes mellitus with regard to diet, exercise, skin care, hands and feet care, self blood sugar monitoring, complications, counting fetal movements, preparation for confinement and follow ups [23].
- **Antenatal Mothers:** It refers to pregnant women between 24-39 weeks of gestation with diagnosis of gestational diabetes mellitus were attending selected hospitals for antenatal care.

CONCEPTUAL FRAMEWORK

The researcher adopted Orem's Self care model as a basis for the conceptual framework, which was aimed to evaluate the effectiveness of structured teaching program on self-care management of gestational diabetes mellitus in terms of knowledge and practice of antenatal mothers with GDM of selected hospitals.

METHODOLOGY

Research approach adopted for the study was quasi-experimental approach with pre-test post-test control group design. The population comprises of antenatal mothers

with GDM (24-39 Weeks POG) of selected hospital of Delhi. The sample consists of the 60 antenatal mothers with GDM (24-39 Weeks POG) of Safdarjung hospital and fulfilling the criteria were selected by purposive sampling technique by conveniently assigning to the experimental and control group. The independent variable in the study was structured teaching program on self-care management of Gestational diabetes mellitus and dependent variables were knowledge and practice scores of the antenatal mothers with GDM. The tools used for the study were structured knowledge interview schedule, structured expressed practice checklist. The tool was validated by 9 experts and found to be valid. The internal consistency method by using Kuder Richardson-20 was used to compute the reliability of the structured knowledge interview schedule (0.82) and for the reliability of the structured expressed practice checklist (0.74). Pilot study was conducted to check the feasibility of the study and establish the reliability of the tool in B.R. Ambedkar Hospital, New Delhi. The final study was conducted at Safdarjung hospital, New Delhi after obtaining formal administrative approval. The sample consisted of 60 antenatal mothers with GDM. The data obtained were organized and analyzed using both descriptive and inferential statistics according to objectives and hypothesis of the study.

Ethical Consideration

After obtaining the initial administrative approval from the research committee of Rajkumari Amrit Kaur College of Nursing, the ethical permission was applied in hospital of Delhi. The pilot study was conducted in B.R Ambedkar hospital, New Delhi after obtaining the written administrative approval from Medical Superintendent. The final study was conducted in Safdarjung hospital after obtaining the initial administrative

approval from ethical committee and Medical Superintendent.

RESULTS

The findings of the study revealed that, the mean post-test knowledge (23.2) and practice scores (15.3) were higher than their mean pre-test knowledge (14.7) and practice scores (9.3). The structured teaching program on self-care management of gestational diabetes mellitus was found to be effective in enhancing the knowledge and practice of antenatal mothers with GDM. There was a significant positive correlation (0.107) found between post-test knowledge scores and post-test expressed practice scores of the antenatal mothers with GDM in of experimental group. There was no significant association between post test knowledge scores and post test practice scores of antenatal mothers with GDM and selected factors like age, education, parity, income, family history of DM, previous information about GDM and duration of pregnancy.

CONCLUSION

On the basis of the finding conclusions were drawn-

- The present study identified deficit knowledge and practices on self care management of gestational diabetes mellitus.
- Education was necessary for improving the knowledge and practice of the antenatal mothers with gestational diabetes mellitus.
- The Structured teaching program was effective in improving the knowledge of antenatal mothers with GDM on self care management of gestational diabetes mellitus.
- The Structured teaching program was effective in improving the practice of antenatal mothers with GDM on self care management of gestational diabetes mellitus.

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Cite this Article as:

Ms. Savita, Dr. Mrs. Sharda Rastogi, & Mrs. Sarita Shokhanda. (2019). Effectiveness of Structured Teaching Program on Self-Care Management of Antenatal Mothers with Gestational Diabetes Mellitus in Terms of Knowledge and Practice in Safdarjung Hospital: A Quasi Experimental Study. *Journal of Nursing Research, Education and Management*, 1(2), 7–11. <http://doi.org/10.5281/zenodo.3234418>