



# **Assessment of Health Seeking Behavior of Gestational Diabetes in Pregnancy among Elderly Primi Mother**

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## **Authors' contributions**

*This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.*

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## **ABSTRACT**

**Introduction:** Gestational diabetes mellitus (GDM) is diagnosed by elevated blood glucose in pregnancy though the definition has changed repeatedly since its first description in the 1960's. The most frequently reported perinatal consequence of GDM is macrosomia (usually defined as a neonate weighing over 4 kg) which can increase the risk of caesarean section and shoulder dystocia. For the mother, there are also potential longer-term consequences including an increased risk of type 2 diabetes post-pregnancy and/or in later life. The investigators of a large international Hyperglycemia and Adverse Pregnancy Outcome (HAPO) study aimed to identify a cut-point in the continuum to decide the blood glucose level (BGL) thresholds that should be used to define GDM.

**Objective:** To assess the incidence rate of gestational diabetes in pregnancy among the elderly primi mother. To assess the health seeking behavior of gestational diabetes in elderlyprimimothers. To associate the demographic variables of gestational diabetes in elderly primi mothers.

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**Materials and Methods:** A Descriptive research study was to assess the incidence and Health seeking behavior of gestational diabetes in pregnancy among the elderly primi mother. The target population for the study includes all antenatal women (12-36 weeks of gestation) who attend the antenatal clinics of AVBRH Out Patient Department. Sample consists of sub set of units that compose accessible population. In this study sample size was 100 elderly primi mother of selected area of community of Wardha. A tool is an instrument or equipment used for collection of data. A blue print was prepared prior to the construction of knowledge questionnaire based on which items were developed.

**Results:** A finding shows that (41%) were having good, (40%) were having very good, (17%) were having average and (2%) were having excellent knowledge score. The minimum score was 05 and maximum score was 14, the mean score for the test was  $8.93 \pm 2.23$  and mean percentage of knowledge was 59.54%. There was no significant association in relation to age, education, occupation, No.of gravida, income etc.

*Keywords: Gestational diabetes; health seeking behaviour; elderly primi mother; incidence rate.*

## 1. INTRODUCTION

Gestational diabetes mellitus (GDM) is a perfect window of opportunity for the prevention of DM in two generations, and its incidence is increasing in our country. Awareness of the condition among antenatal women will translate into prevention and early diagnosis of the disease. This study was done to determine the awareness of GDM among all the antenatal women who attend a Rural Hospital in Sawangi, Wardha for antenatal care.

Gestational diabetes mellitus (GDM) is a of the major public health issues. The present study aimed to determine the incidence rate and health seeking behaviour of gestational diabetes in pregnancy among the elderly primi mother.

Gestational diabetes mellitus (GDM) is defined as any degree of dysglycaemia that occurs for the first time or is first detected during pregnancy. It has become a global public health burden. GDM is one of the leading causes of mortality and morbidity for both the mother and the infant worldwide [1-4]. Mothers with GDM are at risk of developing gestational hypertension, preeclampsia and caesarean section. Apart from this, women with a history of GDM are also at significantly higher risk of developing subsequent type 2 diabetes mellitus (T2DM) and cardiovascular diseases. Babies born from GDM women are at risk of being macrosomic, may suffer from more congenital abnormalities and have a greater propensity of developing neonatal hypoglycaemia, and T2DM later in life [5,6]. As such, it is important for healthcare policy makers to understand the burden of GDM for early detection and further intervention.

Gestational diabetes mellitus (GDM) is one of the most common medical complications of pregnancy. The disease has important health implications for mother and child<sup>1</sup>. In 1958, the council of "International Federation of Obstetrics and Gynaecology" adopted a definitive specifying age of 35 yrs or more for elderly primigravida.<sup>1</sup> Due to rising education level in women, widespread use of birth control methods and increasing trends of working women in the society, number of advanced age women turning motherhood has considerably increased in the population<sup>2</sup>. Pregnancy induces progressive changes in maternal carbohydrate metabolism. As pregnancy advances insulin resistance and diabetogenic stress due to placental hormones necessitate compensatory increase in insulin secretion. When this compensation is inadequate GDM develops. Magnitude of complications are equal in GDM than in women with pre GDM [7-10].

Elevated blood glucose in pregnancy is used to diagnose gestational diabetes mellitus (GDM), albeit the definition has changed several times since it was first described in the 1960s. The most common neonatal complication of GDM is macrosomia (a neonate weighing more than 4 kg), which increases the risk of caesarean delivery and shoulder dystocia. There are also possible long-term effects for the mother, such as an increased risk of type 2 diabetes after the pregnancy and/or later in life [11-13]. The goal of the Hyperglycemia and Adverse Pregnancy Outcome (HAPO) study was to find a cut-point in the continuum that could be utilised to determine the blood glucose level (BGL) levels that should be used to characterise GDM. However, because no conclusive cut-point was found, the International Association of Diabetes

and Pregnancy Study Groups (IADSPG) consensus panel recommended a BGL threshold linked to the risk of bad baby outcomes based on the HAPO data (such as risk of macrosomia, excess infant adiposity and neonatal hyperinsulinemia). This modification was divisive, and there is currently a scarcity of information about it.

The incidence of elderly primi mother was 2.51%. But majority (84.76%) though married early most of them are belongs to high socioeconomic group (62.86%). WHO estimates that each year 51,500 women die, from maternal health causes. The country with highest estimated number of maternal death is India, which is said to be 1, 36,000 per year. A woman in India runs a 100 time greater risk of dying in pregnancy and child birth, when compared to a woman, in the developed world". Moreover, millions of mothers and newborns are affected by pregnancy and birth-related illnesses. As a result, pregnancy-related mortality continues to have a significant impact on Indian women's and newborns' lives. The justification for prenatal care is that "it is critical to screen a mostly healthy population for early symptoms of disease risk factors and deliver timely therapies in a predominantly healthy population." Knowledge and awareness associated with pregnancy can help the women to seek, maternal care services, at the right time and thus reduce maternal morbidity and mortality.

One advantage of the new method is that the fasting and 1 h OGTT data may be used to identify the vast majority of patients. 4 This finding implies that in many situations, a single-step strategy using a 75 g OGTT can be utilised to detect GDM. However, in some places or ethnic groups, the OGTT 2 h value may be very important. Several papers have described the debates Concerns have been raised about the extensive use of the IADPSG technique for the diagnosis of GDM. 6–8 Some professional organisations have agreed to the amended GDM criteria, while others are waiting for proof of the treatment's effectiveness in a broader patient population before recommending any modifications to practitioners. A category for overt diabetes in pregnancy should also be introduced, according to the IADPSG consensus panel. This diagnosis is given to a woman whose glucose levels meet the criteria for diabetes mellitus outside of pregnancy. This isn't a made-up distinction. Women with this

level of hyperglycemia are more likely to have infants with birth defects. In GDM with lower glucose levels, this is not the case. Women with diabetes mellitus who are pregnant are more likely to have chronic diabetic issues, which raise the risk of hypertension and eyesight loss. As a result, these women should be treated as if they had diabetes, which is a subject beyond the scope of this Review

### 1.1 Objective

1. To assess the incidence rate of gestational diabetes in pregnancy among the elderly primi mother.
2. To assess the health seeking behaviour of gestational diabetes in elderly primi mothers.
3. To associate the demographic variables of gestational diabetes in elderly primi mothers.

## 2. MATERIALS AND METHODS

In present study quantitative approach was used. Non-experimental method of descriptive study was used. Sampling method was a Purposive sampling with probability. Sample was selected from Wardha district. Hospitalized women with elderly primi mother sample size 100 women from selected hospital during OPD visit and admitted in GYN ward.

## 3 AVARIABLES

### 3.1 Research Variable

The research variable in this study is knowledge regarding post natal diet.

### 3.2 Demographic Variables

In These study demographic variables include age, educational level, occupation, No. of gravida, income, family size and dietary pattern.

### 3.3 Source of Data Collection

The data gathering process began from 22<sup>nd</sup> – 28<sup>th</sup> March 2021. The investigator visited selected hospital in Wardha district in advanced and obtained the necessary permission from the concerned authorities. The investigator introduced self and informed them about the nature of the study so as to ensure better co-operation during the investigator approached the

elderly primi mother in hospital of Wardha district and obtained the purpose of the study and explained how it will be beneficial for them.

#### 4. RESULTS

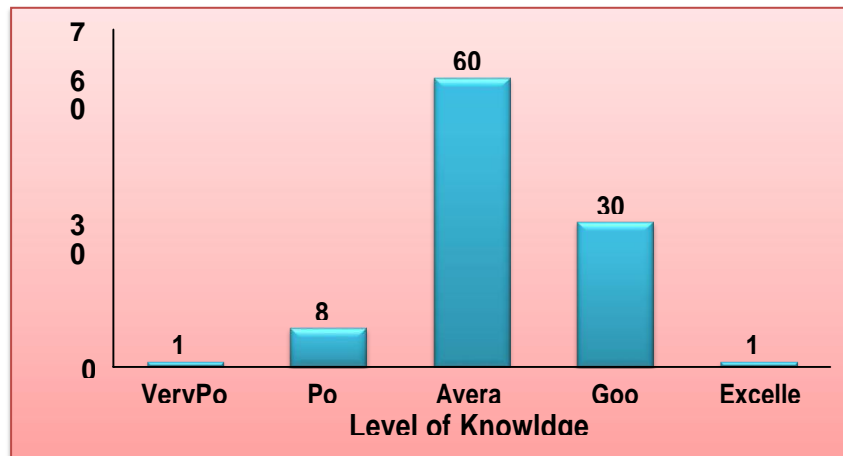
Data collected from 100 participants at a Wardha district hospital. The purpose of this study is to determine the incidence of gestational diabetes in pregnancy in elderly primi mothers, as well as their health-seeking behaviour. The study's objectives guide the analysis and interpretation.

The data analysis is divided into three phases. The first is a frequency and percentage analysis

that was used to describe the sociodemographic features of an elderly primi mother. The descriptive analysis such as mean, standard deviation, and mean score percent were used to examine the incidence and health seeking behaviour of gestational diabetes in pregnancy among elderly primi mothers in the second part. The third portion uses inferential statistics to examine the relationship between health seeking behaviour for gestational diabetes in pregnancy in elderly primi mothers and selected demographic characteristics. Data was gathered using a structured knowledge questionnaire. Inferential and descriptive statistics were used to conduct the analysis.

**Table 1. Distribution of subjects in relation to their demographic variable (n=100)**

<b>Demographic Variables</b>	<b>Frequency(f)</b>	<b>Percentage (%)</b>
<b>Age in years</b>		
35 – 40 years	63	63
41 – 45 years	30	30
Above 45 years	07	07
<b>No. of Gravida</b>		
One	66	66
Two	30	30
Three	04	04
<b>Educational Status</b>		
Below 10 <sup>th</sup>	23	23
At 12 <sup>th</sup> Std.	42	42
Graduate	33	33
Post Graduate	02	02
<b>Types of family</b>		
Nuclear family	54	54
Joint family	46	46
<b>Dietary pattern</b>		
vegetarian	50	50
Non-Vegetarian	50	50
<b>Income</b>		
RS.5,000 - 10000	46	46
RS.10001-15000	20	20
Above Rs. 15000	34	34
<b>Type of Residence</b>		
Urban	37	37
Rural	63	63
<b>Occupational Status</b>		
Farmer	23	23
Worker	25	25
Daily Wages	28	28
Government Servant	24	24
<b>Year of Married Life</b>		
Newly Married	07	07
Below 5 Years	10	10
At 5 Years	08	08
Above 5 Years	75	75



**Fig. 1. Distribution of subjects in relation to their knowledge regarding incidence and Health seeking behavior of gestational diabetes in pregnancy among the elderly primi mother in selected hospital in Wardhadistrict**

Fig. 1. shows the frequency and percentage wise distribution of subjects in relation to their knowledge regarding incidence and Health seeking behavior of gestational diabetes in pregnancy among the elderly primi mother in selected hospital in Wardha district. Majority 60% of subjects had average level of knowledge score, 30% had good level of knowledge score, 8% had poor level of knowledge score and 1% had excellent and very poor level of knowledge score. Mean knowledge score of the subjects was  $20.94 \pm 3.107$ . Minimum knowledge score was 15 and Maximum knowledge score was 33.

Present study finding shows that there was no significance Association of health seeking behaviour of gestational diabetes in pregnancy among the elderly primi mother with selected demographic variables.

## 5. DISCUSSION

A descriptive research study was done to assess the incidence and health seeking behavior of gestational diabetes in pregnancy among the elderly primi mothers. Pregnancy induces progressive changes in maternal carbohydrate metabolism. As pregnancy advances insulin resistance and diabetogenic stress due to placental hormones necessitate compensatory increase in insulin secretion. When this compensation is inadequate GDM develops. So, a study was conducted to assess the health seeking behaviour of the elderly primi mothers.

The result is interpreted that none of the factors included in our study were significant to the

elderly primi mother in correspondence with their knowledge scores. Most of the reviews showed that the knowledge is either too much or not at all. The incidence is yet to be traced and there is no any significant factor responsible for the occurrence of gestational diabetes mellitus which is found yet.

The article Gestational Diabetes Mellitus: Mechanisms, Treatment, and Complications shows that the most common metabolic disturbance that occurs during pregnancy is gestational diabetes mellitus (GDM). The prevalence is on the rise, and it is related to the rise in maternal obesity in recent decades. In mechanistic and epidemiological research, genetic and environmental factors have been implicated in the etiology of GDM. GDM exposes the mother to significant short- and long-term health threats., developing fetus, and offspring. This includes the high likelihood of subsequent maternal type 2 diabetes (T2DM), and possible adverse cardiometabolic phenotypes in the offspring. The most clinically and cost-effective methods of screening for GDM is still unknown. Whilst modifications with lifestyle and pharmacological interventions have shown short-term benefits, the long-term impact for the fetus of intrauterine exposure to antidiabetic medication is still uncertain.

Gestational Diabetes and Health Behaviors Among Women: National Health and Nutrition Examination Survey had results which explained that women without gestational diabetes are at 7 times lesser risk of developing type 2 diabetes than are women with gestational diabetes. The

main aim of this study was to examine the recent developments in the prevalence of gestational diabetes mellitus among women of reproductive age in the United States and assess the contributing factors associated with participating in healthy lifestyle behaviors. The overall prevalence of gestational diabetes was 8.9% (95% confidence interval [CI], 7.6%–10.4%) during 2007–2014. The prevalence then increased from 8.4% in 2007–2008 to 10.4% in 2013–2014, an increase of 24%, but the change was not significant ( $P = .28$ ). The proportions of women meeting the required guidelines for the health behaviors did not change significantly. We found no significant difference in practicing good health seeking behavior between women with gestational diabetes and women without gestational diabetes.

A systematic review on Diabetes-related information-seeking behavior exhibited that to learn more about diabetes recovery and complications, you must engage in information-seeking activity. It is critical for meeting care goals when combined with other self-governance skills and independent disease management. However, a comprehensive analysis of the subject is inadequate. This systematic review's goals were to find and assess current information-seeking behavior: [14] types information-seeking behavior, [15] information sources, [16] the content of searched information, and [17] associated variables that may affect information-seeking behavior. Twenty-six studies were included. There were five different forms of information-seeking behavior found, such as passive and active search. The most widely cited outlets were the 'Internet' and 'healthcare practitioners.' The most frequently identified content of information was 'diet, complications, exercise, and medications and pharmacological interactions.' There were seven key categories listed, each with its own set of variables, e.g., 'socioeconomic', 'duration of DM', and 'lifestyle'.

## 6. CONCLUSION

Gestational diabetes mellitus (GDM) is one of the most common medical complications of pregnancy. The disease has important health implications for mother and child. This research lead to the following conclusion after the through review. Its reveals non significant association with respect to their selected demographic variables. Hence, based on above findings, it was concluded undoubtedly that the written

prepared material by the investigator in the form of questionnaires helped the subject to assess their knowledge regarding gestational diabetes in pregnancy for further improvement of health seeking behaviour in pregnancy.

## 7. NURSING IMPLICATIONS

### 7.1 Nursing Education

Nursing teachers should use the study's findings as an insightful example for nursing students. It helps the nurse educator to plan and implement the topic in nursing curriculum. It also helps the nurse educators to explain how this knowledge regarding Gestational diabetes. Educators can help students, colleagues, and junior staff regarding post natal diet among elderly primi mother.

### 7.2 Nursing Administration

Nurse administrators should take the initiative in organizing continuing education programs for nurses regarding Gestational diabetes. Appropriate teaching / learning material needs to be prepared and made available for nurses regarding postnatal diet during pregnancy.

### 7.3 Nursing Research

The study's findings have expanded the current awareness in the nursing field. Suggestions and suggestions for further study can be used by other researchers.

The method and methodology used have contributed to the information set and can be used for additional references.

## 8. RECOMMENDATIONS

- To assess the incidence rate of gestational diabetes in pregnancy among the elderly primi mother.
- To assess the health seeking behavior of gestational diabetes in elderly primi mothers.
- To associate the demographic variables of gestational diabetes in elderly primi mothers.

## CONSENT

As per international standard or university standard, patient's written consent has been collected and preserved by the author(s).

## ETHICAL APPROVAL

Study was approved by the institutional ethic committees (DMIMS(DU)/IEC/2020-21/158) And study will conducted in accordance with the ethical guidelines prescribes by institutional ethics Committees on human research.

## COMPETING INTERESTS

Authors have declared that no competing interests exist.

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