

## Self-Care of Women with Gestational Diabetes: An Analysis of Knowledge

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Received: 03 Apr 2022; Accepted: 29 Apr 2022; Published: 05 May 2022

**Citation:** Victória G, Beatriz C, Ágatha C, et al. Self-Care of Women with Gestational Diabetes: An Analysis of Knowledge. Arch Metabolic Synd, 2022; 2(1): 1-4.

### ABSTRACT

**Introduction:** Gestational Diabetes Mellitus (GDM) is a metabolic dysfunction caused by an increase in placental hyperglycemic hormones, accompanied by an insufficient amount of insulin secreted by the pancreas.

**Objective:** The present study sought to identify which conditioning factors interfere with self-care in patients with GDM and how the bond between health professionals and patients influences the self-care of women with GDM.

**Method:** This is a field study to analyze data on women who had previous pregnancies diagnosed with GDM or women with GDM.

**Results:** The sample consisted of 76 women with GDM. Among them, the majority (28) 36.8% were between 31 and 35 years old, most were resident in the Southeast region, with a greater predominance of incomplete higher education (39) 51.3%. As for socioeconomic conditions, (43) 56.6% stated that this factor interfered with self-care. Regarding the reception of the multidisciplinary team with the pregnant woman, (75) 98.7% say that they were welcomed and this reception favored (72) 96.0% in self-care during pregnancy.

**Conclusion:** It becomes evident that nursing and the multiprofessional team play a fundamental role in health education, thus facilitating the self-care process in the gestational period.

### Keywords

Gestational Diabetes, Health Education, Self care.

### Introduction

Gestational Diabetes Mellitus (GDM) is a metabolic dysfunction caused by an increase in placental hyperglycemic hormones, accompanied by an insufficient amount of insulin secreted by the pancreas, which leads to insulin resistance due to its antagonistic effects [1,2]. According to the International Federal Diabetes Federation (IDF), in 2021, 80.3% of women who had hyperglycemia in pregnancy were diagnosed with GDM, also showing that gestational hyperglycemia affects about 1 in 6 pregnant women [3].

Advanced age, overweight, family history of DM and diagnosis of

GDM in a previous pregnancy are some risk factors for developing GDM [4]. Therefore, the diagnostic investigation is carried out in the first prenatal consultation, initially requesting the fasting blood glucose test [5]. The diagnosis is defined from the 24th to the 28th week of pregnancy and if the pregnant woman presents signs and symptoms and/or risk factors, complementary diagnostic tests, such as the Oral Glucose Tolerance Test (OGTT), can be performed earlier [6].

After confirming the diagnosis, it is important for the health team to sensitize the pregnant woman and her support network about the importance of adherence to treatment. Healthy eating associated with physical exercise favors the control of GDM. Thus, nursing has a fundamental role in prenatal care, from early identification of signs and symptoms to childcare consultations. The nurse, together with the multidisciplinary team, must promote the bond

and develop humanized care, attending to each particularity of the pregnant woman [7].

In this way, the primary health care nurse has a fundamental role as a facilitator of the pregnant woman's self-care, being able to prevent the risks to the mother-child binomial. Studies highlight the importance of nursing consultation with an educational character and focusing on the pregnant woman's self-care, aiming, in addition to general care, glycemic monitoring and early identification of the disorder through a trained team [8].

Considering the risks of GDM for the binomial, it is observed that the most frequent complications are: spontaneous abortion, arterial hypertension, infections and preterm births, with emphasis on lower abdominal pain, pregnancy-specific hypertensive disease, leukorrhea, headache, urinary tract infection and dyspnea. As for the complications of the newborn, fetal macrosomia and prematurity stand out [8,3].

Low financial conditions, insufficient professional assistance, difficulty in accessing health services, lack of reception, difficulty in creating a professional-patient bond and non-adherence to treatment, are factors that make quality monitoring of pregnant women with GDM difficult [9].

It is understood that popular education focused on promoting self-care and comprehensive care favor the process of treatment and control of GDM, which takes place through active listening, understanding of barriers and risk factors, in addition to establishing a relationship of trust with the team [5].

This study, therefore, aimed to identify which factors interfere in the self-care of women with GDM and how the bond between health professionals and pregnant women influences self-care.

## Method

This is a descriptive and exploratory study, carried out from June to September 2021. The research sample consisted of women with a medical diagnosis of GDM in the current and/or past management and accepting to participate in the study through the signing of the Free and Informed Consent Term (FICT). Women who were already diagnosed with Type 1 Diabetes Mellitus (DM1) or Type 2 Diabetes Mellitus (DM2) before pregnancy were excluded.

The collected data were obtained through a self-administered questionnaire created on the Google Forms platform and disseminated on social networks in Brazil: Facebook, Instagram and WhatsApp. The questionnaire consisted of 30 questions, in which 05 questions were about sociodemographic data (age, profession, marital status, education level and state of residence) and 25 questions about knowledge about GDM and factors that make adherence to treatment difficult. The answers obtained were cumulated in an Excel software spreadsheet.

This study complies with national and international standards of

ethics in research involving human beings and was approved by the Research Ethics Committee of UNIEURO, protocol 4.800.872.

## Results

The study recorded 115 responses, among these 39 (33.9%) women already had a previous diagnosis of DM1 or DM2 and for this reason the responses were excluded, leaving a sample of 76 (66.08%). Among them, the majority (28) 36.8% were between 31 and 35 years of age, most were resident in the Southeast region, with a greater predominance of incomplete higher education (39) 51.3%, according to Table 1. As for socioeconomic conditions, (43) 56.6% stated that this factor interfered with self-care. Regarding the number of pregnancies (30) 39.4% had 1 pregnancy, (27) 35.5% 2 pregnancies, (12) 15.7% 3 pregnancies and (7) 9.2% 4 pregnancies or more 57.5% of women did not need to use medication to control GDM.

**Table 1:** Sociodemographic Data.

Variable	n (%)
<b>Age</b>	
18 to 24 years	07 (9,2)
25 to 30 years	15 (19,7)
31 to 35 years	28 (36,8)
36 to 40 years	20 (26,3)
41 or more	06 (7,8)
<b>Level of schooling</b>	
Incomplete elementary school	01 (1,3)
Complete primary education	03 (3,9)
Incomplete high school	20 (26,3)
Complete high school	02 (2,6)
Incomplete higher education	39 (51,3)
Complete higher education	11 (14,4)
<b>Region where you reside</b>	
Southeast	34 (%)
South	20 (26,3)
Midwest	14 (18,4)
North East	05 (6,5)
International	02 (2,6)
Nort	01 (1,3)

**Source:** Prepared by the authors based on research data

Regarding the signs and symptoms of GDM, (43) 56.6% claim to recognize them and (33) 43.4% do not know how to identify them, in addition (74) 97.4% of women claim that GDM brings risks to the baby and regarding the restriction to breastfeeding, (50) 67.1% affirm that it does not exist.

Considering the knowledge related to the differentiation between DM1, DM2 and GDM, (54) 71.1% claim to know how to distinguish them and (22) 28.9% do not know. Of those who claim to know how to distinguish them, (02) 3.4% had incomplete elementary school, (12) 22.2% completed high school, (02) 3.7% incomplete high school, (30) 55.6% high school complete higher education, (08) 14.8% incomplete higher education. As shown in Table 2.

**Table 2:** Association between education X knowledge variable.

Variable	n (%)
Schooling	
Incomplete elementary school	02 (3,7)
Complete high school	12 (22,2)
Incomplete high school	02 (3,7)
Complete higher education	30 (55,6)
Incomplete higher education	08 (14,8)

**Source:** Prepared by the authors based on research data

As for the professionals that pregnant women consulted during prenatal care, (70) 92.1% consulted with a doctor, (38) 50.0% with a nutritionist, (16) 21.1% with a nurse, (09) 11.8 % included other types of professionals and (02) 2.6% with the physical educator. As shown in table 3.

**Table 3:** Professionals with whom pregnant women consulted during prenatal care.

Variable	n (%)
Professional	
Doctor	70 (92,1)
Nutritionist	38 (50,0)
Nurse	16 (21,1)
Others	09 (11,8)
Physical educator	02 (2,6)

**Source:** Prepared by the authors based on research data

Regarding the reception of the multidisciplinary team with the pregnant woman, (75) 98.7% say that they were welcomed and this reception favored (72) 96.0% in self-care during pregnancy.

Regarding the guidelines of the multidisciplinary team, (74) 97.4% claim to have received information about food; (61) 80.3% about checking blood glucose; (58) 76.3% about physical activity; (28) 36.8% on the correct use of medications; (15) 19.7% about breastfeeding and (06) 7.9% others, as shown in Table 4. In view of the exposed data, (70) 93.4% consider the effectiveness of these guidelines.

**Table 4:** Professional guidelines regarding GDM.

Variable	n (%)
Guidelines	
Food	74 (97,4)
Check blood sugar	61 (80,3)
Physical activity	58 (76,3)
Correct use of medication	28 (36,8)
Breast-feeding	15 (19,7)
Others	06 (7,9)

**Source:** Prepared by the authors based on research data

It was possible to notice that schooling interfered with a good control of GDM, with women who had only secondary education (19) 73.1% of difficulties and those who had higher education (33) 66.0%.

Relating the difficulties of self-care with good control of GDM, it was observed that (10) 13.2% had difficulties in checking blood glucose several times a day, (48) 63.2% in adhering to a good

diet, (40) 52.6% in performing physical activity, (19) 25.0% had no difficulties and (05) 6.6% others, with this, it was evidenced that food was the greatest difficulty for these women. According to Table 05.

**Table 5:** Difficulties related to the control of the GDM.

Variable	n (%)
Difficulty in:	
Adhere to a good diet	48 (63,2)
Perform physical activity	40 (52,6)
Had no difficulties	19 (25,0)
Check your blood sugar several times a day	10 (13,2)
Others	05 (6,6)

**Source:** Prepared by the authors based on research data

Regarding the feelings of pregnant women after the diagnosis of GDM, it was evidenced that (33) 43.4% felt anxious, (44) 57.8% sad, (46) 60.5% fearful and (67) 88.1% felt worried. According to Table 6.

**Table 6:** Feelings after the diagnosis of GDM.

Variable	n (%)
Feeling	
Concern	67 (88,1)
Fear	46 (60,5)
Sadness	44 (57,8)
Anxiety	33 (43,4)
Not applicable	06 (7,89)

**Source:** Prepared by the authors based on research data

## Conclusion

GDM is a common public health problem during pregnancy and poses risks for both the mother and the fetus. Thus, it is of great importance to disseminate information in order to sensitize pregnant women about the dysfunction, as well as the importance of pharmacological and non-pharmacological treatment.

After the results of the study, it is inferred that the information given by the nursing staff to the multidisciplinary team to the pregnant women was effective, but to perform self-care some factors interfered in the process, such as the socioeconomic condition and the difficulty of adhering to new eating habits due to the dysfunction. As a result, the multidisciplinary team proved to be essential to carry out health education and, thus, established and strengthened the bond with pregnant women, facilitating the process of self-care during pregnancy.

It is important to emphasize that during this study, a deficit was observed in the identification of signs and symptoms of GDM. Therefore, there is a need for frequent dissemination on the subject, as well as popular education during prenatal consultations.

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