



Original article

Knowledge about gestational diabetes among pregnant women

Conhecimentos de gestantes sobre diabetes gestacional

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Abstract

Objective: to describe the understanding of pregnant women about gestational diabetes. **Materials and Methods:** the study is based on the qualitative method. The population consisted of pregnant women in all gestational trimesters, from the cities of Montes Claros and Bocaiúva. The interview was carried out using the snowball technique. For data collection, a script of guiding questions and a questionnaire to characterize the profile of women were used. All women had access to the Free and Informed Consent Form – online TCLE. The interviews were conducted individually, the interview was audio-recorded, then the answers were transcribed in full, organized and analyzed. **Results:** seven pregnant women participated in the research, with a mean age of 23 years. Expressing their feelings of understanding, knowledge about eating habits and experiences of gestational diabetes with ways to prevent it. Data were exposed in thematic categories. **Final considerations:** the experience of understanding, habits and experiences about maternal knowledge about gestational diabetes was demonstrated, these results show the importance of understanding the disease and preventing it.

Keywords: Diabetes Mellitus. Gestation. Care.

Resumo

Objetivo: descrever sobre o entendimento das gestantes acerca do diabetes gestacional. **Materiais e Métodos:** o estudo é pautado no método qualitativo. A população, que abarcou as cidades de Montes Claros e Bocaiúva, foi composta por mulheres grávidas em todos os trimestres gestacionais. A entrevista foi realizada por meio da técnica de snowball. Para a coleta de dados, foi utilizado um roteiro de questões norteadoras e um questionário de caracterização de perfil das mulheres. Todas elas tiveram acesso ao termo de consentimento livre e esclarecido on-line. As entrevistas foram realizadas de forma individual, com gravação de áudio; posteriormente, as respostas foram transcritas na íntegra, organizadas e analisadas. **Resultados:** participaram da pesquisa sete gestantes, com idade média de 23 anos, as quais expressaram seus sentimentos de compreensão, conhecimento sobre os hábitos alimentares e as vivências da diabetes gestacional com as formas de se prevenir. Os dados foram expostos em categorias temáticas. **Considerações finais:** foi demonstrada a experiência da compreensão sobre hábitos e vivências, bem como informação materna acerca do diabetes gestacional. Esses resultados evidenciam, por sua vez, a importância do entendimento da doença e sua prevenção.

Palavras-chave: Diabetes Mellitus. Gestação. Cuidado.

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Introduction

Pregnancy is a physiological phenomenon that involves many social and psychological changes, but pregnant women and medical staff should consider it part of a healthy life experience. However, due to the existence of several pathologies capable of affecting maternal-fetal health and/or life, during the process, the pregnant woman may face a situation considered borderline, popularly known as “high-risk pregnancy”. The term is used to indicate the presence of dangerous conditions, which can occur during and after pregnancy or childbirth in the last instance¹.

High blood glucose in pregnant women can lead to fetal hyperglycemia and hyperinsulinemia, which enables the onset of Gestational Diabetes Mellitus (GDM). In addition to metabolic, blood and neurological complications, lack of glucose control is also associated with the occurrence of fetal macrosomia, premature delivery, respiratory and cardiac diseases. It also establishes a risk of the onset of future pathologies, as well as the growth of the predominance of such a disease, due to the increase in obesity worldwide. In this sense, nutritional status and metabolic control during pregnancy are important factors for the good outcome of pregnancy and the maintenance of the health of the mother and child². According to Pinheiro *et al.*³, the therapeutic resource of this pathology requires special assistance, so it is essential to be attentive to the diet and maintain glycemic levels according to the standards.

According to Sales *et al.*⁴, there is a need for a change in lifestyle, with a view to reducing obesity, such as nutritional intervention and even physical activity. And, despite all the preventions, if glucose persists in increasing, certain pharmacological measures will be necessary in order to balance the production of hormones and mitigate the excessive work of the pancreas. The choice of pharmacological therapy for glycemic control during pregnancy can be with two medications: metformin or insulin due to recognized efficacy. Generally, the first drug to be used is metformin, when there is a lack of patient’s treatment with insulin use; inability to obtain blood sugar; difficulty in glucose self-management; increased pressure in the patient due to the use of this hormone.

Even with all the guidelines, there is the possibility of food restriction. As a clarification, you can use sweeteners in place of sucrose, with daily limits, in addition to practicing physical activity, respecting obstetric recommendations. It should be emphasized that it is estimated that 15% to 60% of pregnant women will need pharmacological treatment associated with diet and physical exercise to control the condition⁵.

According to previous population research, the predominance of GDM is 1 to 37.7%, in overall normality of 16.2%. It is estimated that about one in six births occurs in women with some

type of hyperglycemia during pregnancy, and 84% of these would originate from MGD⁶. Given that this disease has grown in different ethnic groups worldwide in recent years, the distinct information of this global propensity should not lead to comparisons for the diversity of methodological factors.

In fact, GDM is a major obstacle in public health today, reaching the miscegenated Brazilian people. There is no doubt that there has been a wide progress in the number of women diagnosed during the fertility period and pregnancy, which indirectly reflects the increase in the population of maternal age⁷.

Therefore, alongside the information, it is worth mentioning that this study has as main objective to describe about the understanding of pregnant women about gestational diabetes.

Materials and Methods

The study is based on the qualitative method, which was understood as one that occupies immaterial level and correlational to the reality of the population. It is treated through diversities, meanings, beliefs, values, among other attitudes of social artists⁸. Its theoretical basis was selected later, according to the nature of the information.

The research was carried out in Montes Claros and Bocaiuva, both cities of Minas Gerais, because the researchers lived and met pregnant women in both municipalities, which facilitated dialogue with the interviewees. The population was composed of pregnant women in all gestational trimesters, followed and who had access to the health system of these municipalities. The interview was conducted using the snowball technique. The interview was conducted using the snowball technique. This consists of asking each participant of the research for an indication for a next participant, until the research objective was achieved.

The statements were recorded until theoretical saturation was reached, the one in which, after data collection, there is a transition from the psychocultural meanings of the original environment to the researcher's environment. Research is considered saturated when there is no longer the need for new information⁹. It is important to mention that women under 18 years of age were excluded.

For data collection that occurred in September and October 2021, a script of guide questions was used, with the following proposals: what do you understand about gestational diabetes; tell me a little about life habits and food; how do you believe they may be linked to the onset of the disease; report on the experiences you have seen about gestational diabetes. The interview was recorded

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with a cell phone. The first contact of the woman with the study was made by telephone, when the researchers presented the proposal, the objectives and made the invitation to participate. Due to the Covid-19 pandemic, data collection and work proposal required access to Google online forms, phone calls and meetings held on Google Meet and WhatsApp.

All women had access to the Informed Consent Form online. The interviews were conducted individually, conducted by a guide script with open questions. After performing the audio recording of the interview, the answers were fully transcribed, organized and analyzed.

The data were developed by content analysis¹⁰, which is a set of communications analysis techniques that seeks to obtain indicators, quantitative or not, that allow to reach knowledge related to the conditions of production of these messages.

By the way, the study followed the ethical principles that govern a research involving human beings, according to resolution n. 466, of December 2012, of the National Health Council. The project was forwarded to the Research Ethics Committee, after registration in *Plataforma Brasil*, with approval opinion n. 4.984.701/2021.

Results

Seven interviews with an approximate duration of 20 minutes were collected. The interviewees had a mean age of 23 years, with complete high school education (n=07), married (n=04), stable union (n=03) and most of them already have a child. Table 1 shows the profile of the study participants, presenting age, educational level, marital status and number of children.

Table 1 - Profile of study participants. Montes Claros and Bocaiuva, Minas Gerais, Brazil. 2022.

Participants*	Age	Education	Marital status	Number of children
Ana	27	Complete high school	Stable union	1
Lúcia	23	Complete high school	Married	0
Carol	23	Complete high school	Stable union	0
Luana	23	Complete high school	Married	1
Paula	23	Complete high school	Married	1
Lívia	30	Complete high school	Married	1
Rose	27	Complete high school	Stable union	0

*Fictitious names.

From the interviewees' statements and analyses, thematic categories were constructed for the exhibition and discussion of the results. The names used are fictitious.

Understanding gestational diabetes

Depending on the interviews, many women expressed some kind of understanding about the consequences of the disease for the mother and child. Here are some lines:

Complications in gestational life, both for the mother and child, there is a chance of mother and child after birth becoming diabetic. (Paula).

It is a disease that puts at risk the health of the baby and the mother, since not cared for can cause several problems during and after pregnancy. (Lucia).

It is a metabolic syndrome characterized by increased glucose, glycemic levels during the gestational period. (Paula).

Life and eating habits

The results show that the interviewees have some knowledge about eating habits, some of which are expressed below:

Meals should be fractionated, a total of 6 meals a day, with intervals of 3 hours, which allows to keep blood sugar levels stable. (Livia).

It is of paramount importance to take care of food, eat plenty of fruit, vegetables and everything that can favor health, always seek medical advice and avoid everything that can cause hypoglycemia. (Carol).

It starts long before pregnancy, we should adjust eating habits not only by pregnancy, but by health, I think that in the period of pregnancy it is very difficult because it is a period that I consider very intense. (Paula).

Women's experiences on the subject of gestational diabetes

Another important result of the research is the reports brought by pregnant women regarding the experiences of gestational diabetes, as expressed:

A friend has already undergone gestational diabetes and I could see how dangerous and worrying it is, care has been doubled. (Carol).

My cousin had the disease and was hospitalized for a long time, had a premature birth due to the disease. (Lucia).

I have an acquaintance who is about to have a baby and the delivery has already been postponed three times by the fact of diabetes. There's also my

aunt who continued with diabetes even after my cousin's birth and thank God she got healthy. (Luana).

Discussion

Understanding gestational diabetes

It is noticed that most of the interviewees have superficial knowledge about the disease. The results of the study are in agreement with a previous study¹¹, which reports that diabetes mellitus is one of the main complications in pregnancy for both the mother and the fetus.

According to Rossett *et al.*¹², it is possible to advise pregnant women about precautions during pregnancy, highlighting the relevance of reducing contrary results that cause metabolic changes for mother and child. As a consequence, with the recognition of changes in blood sugar, it is easier to understand which are the pregnant women who point to a higher risk of developing diabetes later.

Life and eating habits

The results found differ from most studies, which have shown that women are generally resistant to care for food. For example, there are studies conducted by Araújo *et al.*¹³, according to which treatment is not a simple step, because it relates to other aspects of everyday life, such as lack of time, personal preferences and family customs.

It is a fact that healthy habits need to be part of the life of the population that has excess blood glucose¹⁴. Thus, it becomes critical, and urgent, to reduce fat foods and processed foods and have the balance of sugars and saccharides. In fact, this should be part of every individual's routine, but it is run into the rhythm of modern life, marked by the rush and consumption of multi-processed foods. Moreover, a balanced diet is not accessible to the financial conditions of many Brazilians.

Women's experiences on the subject of gestational diabetes

The statements bring to light several types of feelings when experiencing the process of gestational diabetes mellitus. According to Araújo *et al.*¹³, the disease affects up to 25% of the world's pregnant women, the risks of acquiring such a disease are many, however, they can be controlled by observing care.

Therefore, in agreement with Oliveira *et al.*¹⁵, GDM is a public health problem, and even if there is a well-attended prenatal care, some fetal growth problems and other anomalies may persist. They also state that the children of mothers with GDM who used insulin during the last trimester of

pregnancy had a 20.6 times higher risk of showing cardiovascular alterations compared to newborns of non-diabetic mothers.

The limitations of this study were the low number of interviewees, and the results are limited to a specific reality.

Final Considerations

The present study, conducted with pregnant women in all trimesters of pregnancy, shows the experience of understanding habits and experiences about maternal knowledge about gestational diabetes. Undoubtedly, these results warn about the importance of understanding the disease and its prevention.

Thus, it is clear that diabetes in gestational life represents a risk to the mother and child during and after pregnancy. With this, healthy eating habits are urgently urgent in daily life, before and during pregnancy, to avoid complications in the pregnancy period. In addition, feelings and experiences focused on concern and self-care are needed, as well as on the prevention, promotion and protection of pregnant women.

By re-editing the experience lived by these women in the scenario of this research, a knowledge was constructed that is unique and unique. Finally, although on-screen research brings more information and enriches studies on gestational diabetes mellitus, it is observed that the literature lacks studies on the subject, that is, more research is needed.

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