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Original Research

Food Choice Decision-Making by Women with Gestational Diabetes

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ABSTRACT

Objective: To enhance the dietary education presented to women with gestational diabetes (GDM) by exploring the reasons and experiences that women with GDM reported in making their food-choice decisions after receipt of dietary education from a healthcare professional.
Methods: Food Choice Map (FCM) semi-structured in-depth interviews were conducted with 30 women with GDM living in the Winnipeg area during their pregnancies. Verbatim transcripts were generated from the interviews. A constant comparative method was used to generate common themes to answer research inquiries.
Results: Personal food preferences, hunger and cravings were the main factors affecting food choice decision-making in women with GDM. Although the information from healthcare professionals was 1 factor that affected food choice decision-making for most of the participants, more than half of the women, including all the women who were on insulin, reported difficulties in quick adaptation to dietary management in a limited time period. Information from other sources such as family members, friends, and internet were used to cope with the adaptation. These difficulties led to a sense of decreased control of GDM and were accompanied by frustration, especially for women taking insulin.
Conclusions: Food choice decision-making varied for this group of women with GDM. Knowledge and information aided in making healthy food choices and in portion control. However, balancing individual needs and blood glucose control in a short time period was felt to be difficult and created frustration. The findings suggested that dietary consultation needs to be personalized and to be time sensitive to promote confidence in self-control.

Mots clés :
choix alimentaire
diabète gestationnel
grossesse

RÉSUMÉ

Objectif : Améliorer l'enseignement sur l'alimentation qui est offert aux femmes ayant un diabète gestationnel (DG) en explorant les raisons et les expériences que les femmes ayant le diabète gestationnel (DG) rapportaient à propos de leur prise de décisions sur les choix alimentaires après avoir reçu l'enseignement sur l'alimentation par un professionnel de la santé.
Méthodes : Des entretiens en profondeur semistructurés sur le guide des choix alimentaires ont été réalisés durant la grossesse de 30 femmes atteintes de DG vivant dans la région de Winnipeg. Les transcriptions intégrales ont été tirées des entretiens. Une méthode comparative continue a été utilisée pour générer des thèmes communs afin de répondre aux demandes de la recherche.
Résultats : Les préférences alimentaires personnelles, la faim et la faim excessive étaient les principaux facteurs ayant nui à la prise de décision sur les choix alimentaires chez les femmes atteintes de DG. Bien que l'information provenant des professionnels de la santé ait été 1 facteur qui a nui à la prise de décision sur les choix alimentaires de la plupart des participantes, plus de la moitié des femmes, dont toutes les femmes qui prenaient de l'insuline, ont rapporté des difficultés liées à l'adaptation rapide de la prise en charge nutritionnelle sur une période limitée. L'information provenant d'autres sources telles que les membres de la famille, les amis et l'internet était utilisée pour faire face à l'adaptation. Ces difficultés ont mené au sentiment d'une perte de maîtrise du DG et ont été accompagnées de frustration, particulièrement chez les femmes prenant de l'insuline.
Conclusions : La prise de décision sur les choix alimentaires a varié dans ce groupe de femmes atteintes de DG. La connaissance et l'information ont aidé à faire des choix alimentaires sains et à maîtriser les portions. Cependant, l'équilibre entre les besoins des individus et la régulation de la glycémie à court

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terme a été jugé difficile et a engendré de la frustration. Les résultats montrent que la consultation en diététique doit être personnalisée et réalisée à court terme pour renforcer la confiance nécessaire à la maîtrise de soi.

Introduction

Gestational diabetes mellitus (GDM) is defined as glucose intolerance with onset or first recognition during pregnancy (1). The prevalence of GDM in Canada varies from a range of 3.5% to 3.8% in the non-Aboriginal population to a range of 8% to 18% in Aboriginal populations (2–4). In Manitoba, the prevalence of GDM increased from 2.3% between 1985 and 1989 to 3.7% between 1999 and 2004. First Nations women had a 3 times higher prevalence than the non-First Nations women. The GDM recurrence rate was 44.4% in Manitoba between 1985 and 2004 (5).

Poorly controlled blood glucose in GDM pregnancy increases the risks for maternal and neonatal complications (6). A recent large study on the impact of hyperglycemia on pregnancy outcomes, the Hyperglycemia and Adverse Pregnancy Outcomes (HAPO) study, confirmed that elevated glucose during pregnancy is associated with increased risk for macrosomia, cesarian delivery and neonatal hypoglycemia rates (7). Treatment of GDM has been shown to improve maternal and neonatal outcomes (8,9). Treatment of GDM must begin immediately after the diagnosis. Risk reduction may require extensive behavioural and self-care modifications, which could include dietary regulations, blood glucose monitoring, possible insulin injections, and increased visits to healthcare providers for maternal and fetal surveillance (10).

Nutrition plays a critical role in GDM management. It is recommended that women with a diagnosis of GDM be referred to a registered dietitian for individual nutrition management (10). However, the balance between keeping an optimal blood glucose level and providing adequate nutrition for the mother and fetus is not easy to achieve.

There are a few qualitative studies in the literature concerning the perception of managing diabetes during pregnancy. These studies included women with first-time-diagnosed GDM, GDM with a previous GDM and a pregnancy with type 1 or type 2 diabetes. These studies reported that women with diabetes during pregnancy experienced a sense of decreased control and negative feelings toward the high-risk pregnancy (11–14). Diet management was a concern for which women felt vulnerable and lacked control (12,13). They demanded more health service information (15,16), and the failure of diet compliance led to increased stress and anxiety throughout pregnancy (14).

There is still a lack of understanding of what specific dietary events lead to the sense of decreased control. Furthermore, there is also a lack of understanding of what affects food choice decision-making in women with GDM, especially those who have no previous experience of diabetes. This study aimed to collect the above missing information. Therefore, dietary consultation could go beyond reinforcing general dietary restrictions to become more client oriented and effective and may increase compliance with diet management.

Methods

Study design

This study was designed as a qualitative descriptive study that allowed the researcher to describe the factors that influenced women with GDM in making food choice decisions. The qualitative descriptive study method is one of the qualitative research methods that allows researchers to describe real-life phenomena based strictly on the data (7). In qualitative descriptive studies, the researchers stay closer to the reported data to generate descriptions, rather than looking beyond the words and sentences to elicit a conceptual framework as in grounded theory, phenomenologic or ethnographic studies (17).

In-depth interviews provide the means for participants to express their experiences and ideas freely in their own words. It is an effective way to identify factors that are relevant to a particular health behaviour in a population under investigation (18). In order to keep the focus on the whole picture of daily intake, a qualitative interview design that could record a normal eating pattern and reasons behinds food choices was favoured. Such a tool allowed the participant to comment on all the foods that she consumed in real life, without missing or neglecting certain foods cognitively. The results of this kind of data collection could capture the whole picture of food choice decision-making by the participants. The Food Choice Map (FCM) interview tool provided such an opportunity to obtain a complete weekly intake and the reasons behind food choices. It has been shown to collect accurate, reliable and rich qualitative data compared to traditional in-depth interviews or 24-h recalls when collecting information about eating behaviours (19,20). It uses food to start the conversation, and it helps researchers to explore greater meanings behind the food choices and experiences related to living with GDM. This approach is unique in the literature.

The FCM interview uses a large magnet board to record food items and frequencies of meals and snacks in a regular week. Food pictures on magnet stickers that are 1.3 cm^2 can be organized on the magnet board by the participant and/or the interviewer to form the weekly eating pattern. Meal and snack spacings are displayed vertically, and frequencies of food consumption are displayed horizontally. The interview question guide (Table 1) helped the interviewers to explore reasons and experiences related to food choice decision-making in a GDM pregnancy. Participants helped to put food picture stickers on the magnet board to answer questions and were encouraged to discuss reasons for the eating pattern. All interviews were audio recorded.

The sample for this study included 32 women who lived in Winnipeg and the surrounding communities but worked and did grocery shopping in Winnipeg. The participants were purposely recruited from a general hospital outpatient endocrinology clinic that receives GDM referrals from all over Winnipeg. The inclusion criteria were: 1) attended at least 1 education session with a registered dietitian after diagnosis of GDM; 2) were able to communicate in English and were not visually impaired (were able to complete the FCM, the consent and the demographic questionnaire); and 3) had not been previously diagnosed with GDM.

Table 1
Sample semi-structured interview questions

For this pregnancy, what food do you eat often?
You seem to eat this food more often than that food. Is it very important for you?
Have you changed the amount or type of foods you eat?
Where do you get the information on the best buys, what is in the food, how healthy is it?
Who decides what foods will be purchased?