

Brief Report

Facilitators of Postpartum Diabetes Screening in Women with Recent Gestational Diabetes: A Qualitative Study

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ABSTRACT

Background: Risk of diabetes mellitus is higher in women with a history of gestational diabetes mellitus (GDM). Postpartum diabetes screening is recommended in women with GDM. However, the rate of this screening is low. **Objectives:** The purpose of this study was to perform an in-depth exploration of perceived facilitators of attendance to postpartum diabetes screening in women with recent GDM. **Methods:** This qualitative study was conducted in 2016 in Tehran. Semi-structured interviews carried out with 22 women with a recent GDM who gave birth at least 6 months before the interview. **Results:** Four main categories were emerged from the data. Each category included two to three subcategories. The first category was appropriate education and included two subcategories of prenatal education and postpartum education. The second category was feeling the ease of screening and included two subcategories of spousal support, and appropriate laboratory facilities. The third category was self-regulation and included three subcategories of importance of health, a desire toward learning about health, and proper planning. The fourth category was attitudes toward the screening and included three subcategories of initial fear better than consequences, feeling comfortable, and uncertainty regarding glucometers' accuracy. The last category was perceived threat and included three subcategories of fear of developing diabetes, being healthy to serve the child/children, and being healthy for other roles. **Conclusion:** Iranian women with recent GDM reported several facilitators for diabetes postpartum screening. Further studies are suggested.

KEYWORDS: *Gestational diabetes, Postpartum, Qualitative research, Screening*

INTRODUCTION

The incidence of gestational diabetes mellitus (GDM) is increasing over the recent years. Women with a history of GDM are at a higher risk (7 times) of developing type 2 diabetes in the future.^[1] An oral glucose tolerance test (OGTT) at 6–12 weeks after delivery is recommended for postpartum diabetes screening.^[2] However, the rate of this screening is low, which ranges from 18% to 57%.^[3] Reasons for the poor screening are unclear,^[4] and the majority of studies are from high-income countries. Asian ethnicity is a known risk factor for developing GDM^[5] and is associated with higher attendance for postpartum glucose screening. Therefore, the Asian women are good candidate to determine factors related to postpartum glucose

screening. However, few studies about this screening included Asian women as a major population.^[3]


A qualitative method and exploring deep experiences of women with recent GDM can be helpful to understand facilitators of postpartum diabetes screening. However, related qualitative is rare.^[6] To the best of our knowledge, no study is available about this issue in Iran.

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Objectives

The objective of this study was an in-depth exploration of experiences and perceived facilitators of diabetes screening in Iranian women with a recent history of GDM.

METHODS

This article is a part of a grounded theory study conducted in 2016 in Tehran. All of participants had GDM in their last pregnancy and gave birth at least 6 months before the interview. By a purposeful sampling method, telephone numbers of the women with GDM were extracted from their hospital records. During an initial phone call with these women, they were provided with a detailed description of the study and the informed consent procedures. All interviews were conducted by corresponding author at a place and time of the participant's choice, usually in their home, and lasted for 25–45 min. We defined attendance to postpartum diabetes screening as being present in laboratory for fasting blood sugar and/or 75 g OGTT, from 6 weeks to 6 months after delivery.

We used a semi-structured interview using open-ended questions. The participants were asked about their general well-being, pregnancy, and postpartum experiences. If they attended in postpartum diabetes screening, they were asked about what helped or made it difficult to attend the screening. If they did not attend the screening, the questions were focused on the reasons they missed the screening. The later questions were framed around the previous answers of the women. The interview guide was modified as the interviews progressed. For example, the interviewer merged indirect questions about husband support for keeping the baby, whereas the women went to the laboratory for screening, after discussing these concepts individually by several participants. Moreover, we used reflective probes to encourage the participants to further describe their perceptions.

Data analysis

We used grounded theory methodology developed by Corbin and Strauss^[7] to conduct this study. The MAXQDA version 10 (VERBI GmbH) was used for the data management. Simultaneous data collection and analysis were occurred. The interviews were digitally recorded and transcribed. Then, the transcripts were re-read for several times, and the text were coded. Then, the codes were reviewed and categories and subcategories were emerged. According to the categories emerged from the initial interviews, data collecting was continued by theoretical sampling method. For example, after initial interviews with women who

delivered in government hospitals; it was shown that the place of delivery may influence the attendance to the screening sessions. Therefore, during following steps, we interviewed with women who delivered in private hospitals. During the two last interviews, new categories were not emerged; therefore, it was concluded that data saturation was happened.

Data trustworthiness was achieved using Lincoln and Guba's Criteria.^[8] To achieve credibility, we used member-checking technique. Furthermore, some of the categories were rechecked by three qualitative studies experts. Moreover, member-checking technique enhanced dependability of the findings. In addition, to enhance the confirmability of the findings, we tried to document and report the process of the data production and analysis, precisely. Two women, who were not among the study participants, but recently experienced GDM, were invited to read the final findings, and they confirmed that the results were similar to their own experiences.

Ethical considerations

The Ethics Committee of Iran University of Medical Sciences approved this study (Research No. 93-02-123-24619). Informed consent was obtained from the participants. We informed the participants that they could withdraw from the interview at any time. We obtained the participants' permission to audiotape the interviews.

RESULTS

In this study, 22 participants were interviewed. Their characteristics are summarized in Table 1. Five categories were emerged from data analysis. The categories and subcategories related to facilitators for postpartum diabetes screening are presented in Table 2.

Appropriate education provided

Sometimes appropriate prenatal education about why, how, and when to perform postpartum diabetes screening had been provided. Participant 2, who had appropriate education and participated in the screening, stated that "My endocrinologist said he'd order a test for me after 6 weeks... I visited the doctor after 6 weeks and he ordered routine tests."

According to the participants, awareness about screening for postpartum diabetes mostly occurred during the postpartum education, and this education often was not given during pregnancy. For example, participant 5 received the education after her delivery. She stated that: "When my doctor discharged me, she prescribed me a test and told me to do it after 1½ months... the doctor who had delivered my baby prescribed it to me."

Table 1: Demographic and clinical characteristics of 22 participants

Characteristics	n (%)
Age (year), mean±SD	32.2 ± 5.1
Working out of home	7 (36.3)
Educational level less than equal diploma	15 (68.1)
Diabetes in family	11 (50)
Primiparous	11 (50)
Prior GDM	4 (18.2)
Used glucometer during pregnancy	16 (72.6)
Injected insulin during pregnancy	12 (54.5)
Vaginal delivery	3 (13.7)
Weight of the baby at birth (g), mean±SD	3356.2 ± 6.4
Baby required NICU care	5 (27.7)
Breastfeeding at 6 weeks after delivery	19 (81.8)
Attendance to postpartum diabetes	11 (50)

SD: Standard deviation, GDM: Gestational diabetes mellitus, NICU: Neonatal Intensive Care Units

Table 2: Categories and subcategories

Categories/Subcategories
Appropriate education provided
Prenatal education
Postpartum education
Feeling the ease of screening
Spousal support
Appropriate laboratory facilities
Self-regulation
The importance of health
A desire toward learning about health
Proper planning
Proper attitude to screening
Initial fear better than consequences
Feeling comfortable
Uncertainty regarding glucometer's accuracy
Perceived threat
Fear of developing diabetes
Being healthy to serve child/children
Being healthy for other roles

Feeling the ease of screening

Some of the participants were satisfied with their husbands' support in the postpartum period, particularly when their husbands helped with the child care as they wanted to go to the laboratory. For example, participant 2 expressed that "My husband... looks after the baby so that I could go to the lab and take the test."

In addition, proper laboratory facilities were stated by some participants. In this regard, participant 10 stated that "The laboratory which I usually use, is near, organized and accurate. They do not delay patients unreasonably. So it was convenient for me to go to that laboratory for my tests."

Self-regulation

Some participants were interested in learning about health and did not procrastinate screening. For example, the participant 2 stated that "I'm a persistent person in everything, especially issues related to health... I had to schedule my test time with my husband's off day. Thank God that he could take a leave 1 day so I was able to go for the test."

Despite having problems with the baby/babies and other problems, some women went to the laboratory for screening with proper planning. In this regard, participant number 11 expressed that "The day I wanted to go to the lab, my husband accepted to take care of the baby. When they were asleep, I went out at six o'clock to go to the lab. When I came back, my husband and baby were still asleep."

Attitudes toward the screening

Some women believed that a fear of developing diabetes and doing preventive measures are better than suffering from its consequences. In this regard, participant 7 expressed that "Diabetes is an insidious disease like rats... the initial fear is better than wasting time in hospitals."

Peace of mind after screening and feeling reassured about their health encouraged women to go for screening. In this case, participant 3 stated that "As soon as you know it is good for your health... you'll feel relief that you are healthy in that respect." Uncertainty regarding glucometers' accuracy and precision was a reason for women to go to the laboratory for screening. Most participants used home glucometers to measure their blood glucose levels during pregnancy. Therefore, they still had access to glucometers after their delivery. Some participants did not trust glucometers and went to the laboratory for screening despite their easy access to the glucometer and its easy measurement compared to the laboratory. For example, participant 2 expressed that "Lab blood sugar measuring is a bit more accurate than glucometer and that's the reason I went to the lab."

Perceived threat

Some participants went to a laboratory for screening due to a fear of developing diabetes. In this case, participant 12 stated that "I hate diabetes. I heard that diabetes disturbs body system, I'm afraid of diabetes." Some participants suggested that if the mother is not healthy, she cannot meet the needs of the child/children and be successful in her other roles; therefore, they went to a laboratory for screening. Participant 2 stated that "As a mother, I must be healthy to take good care of my children and I also have other roles besides being a mother."

DISCUSSION

The participants, Iranian women with recent GDM, reported several facilitators for postpartum diabetes screening. Appropriate education was one of the facilitators. Capula *et al.* showed that education to women with recent GDM had an important role in diabetes screening.^[6] In our study, the participants stated that spousal support was an important factor in screening. Other researchers reported that the spousal support had a positive influence on diabetes management in non-pregnant women^[9] and women with GDM.^[6]

Self-regulation was another facilitator for the screening in our study. It appears that despite the problems stated by the participants, screening can be easily pursued with proper planning. Self-regulation failure as a key barrier to breast cancer screening was reported in a study.^[10] In addition, feeling comfortable after screening was stated by some participants in our study. In a study about breast cancer, some women performed breast cancer screening to feel comfortable after negative testing.^[11] About the uncertainty regarding glucometers' accuracy as another finding, a number of studies showed positive view of using glucometer rather than going to a laboratory for diabetes screening.^[12] According to our participants, perceived diabetes as a threat was a reason for the screening. An earlier study reported a same finding in patients who feared of having a breast cancer.^[13]

Transferability of our findings might be limited to comparable settings. To confirm our results, we propose future relevant studies with participants from a wide range of settings.

CONCLUSIONS

Education for women with GDM during their pregnancy, delivery, and postpartum period is recommended. Furthermore, self-regulation may play an important role in attendance of the women with a recent GDM in diabetes screening. Therefore, further studies are suggested to confirm our results and enhance evidence-based practice.

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Conflicts of interest

There are no conflicts of interest.

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