

SHORT COMMUNICATION

Perspectives of Healthcare Professionals and Patients on Management of Gestational Diabetes Mellitus: A Qualitative Study in Negeri Sembilan, Malaysia

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ABSTRACT

Introduction: Understanding the perceptions of healthcare professionals and patients regarding gestational diabetes mellitus (GDM) is important for optimal pregnancy outcomes. This study aimed to identify the problems faced by healthcare professionals in the management of GDM and the patients' perspectives as well. **Methods:** Two focus groups consisting of thirteen pregnant women diagnosed with GDM at 20-28 weeks of gestation and sixteen healthcare professionals were interviewed using a semi-structured questionnaire. The subjects were recruited purposively from a public health clinic in Negeri Sembilan, Malaysia. Audio recordings were made of the interview sessions and transcribed verbatim before being assessed independently by two researchers. The NVivo 10.0 programme was used to extract key themes. **Results:** Five emergent themes consisting of views from both groups of subjects were identified. They were: (1) perceived patients' non-adherence to medical advice versus patients' own negligence; (2) poor appetite control versus patients' poor temptation control; (3) patients' lack of knowledge versus confusing information provided by healthcare staff; (4) patients' 'giving up' versus being in a non-supportive environment; and (5) patients being in denial versus the disappointment when required to control diet. **Conclusion:** This study revealed conflicting perspectives between pregnant mothers with GDM and the healthcare staff in managing these patients. There is a need to promote positive communication between healthcare staff and patients for a better understanding of the needs of GDM patients.

Key words: Barriers, Gestational Diabetes Mellitus, pregnancy, qualitative study, self-management,

INTRODUCTION

Gestational diabetes mellitus (GDM) is a growing public health problem in Malaysia. A local study conducted in a hospital setting discovered the rate was about 11.4% (Tan, Ling & Omar, 2009) whereas a centre in a community setting reported a prevalence of 18.3% (Idris *et al.* 2009).

The American Diabetes Association (ADA) (2014) states that the primary goal in the management of GDM is to maintain maternal glycaemic control through dietary modification and physical activity with/without pharmaceutical therapy. The ADA (2004) highly recommends all patients with GDM receive nutritional counselling by registered dietitians in the form of medical nutrition therapy (MNT). Self-management of GDM involves the woman's understanding of basic bodily process of diabetes, motivation, knowledge of recommended dietary intake and physical activity (Rosal *et al.* 2005). Understanding the problems of patients' self-management of GDM from the perspectives of healthcare professionals and the patients themselves is believed to assist in the development of more effective interventions for GDM. This qualitative study aimed to identify the problems faced by GDM patients and healthcare professionals in GDM management based on their own perspectives.

This study consisted of focused group discussions with healthcare professionals and in-depth one-to-one interviews with pregnant women with GDM at a suburban public health clinic in Negeri Sembilan, Malaysia. These were conducted from November 2013 to December 2013. Ethics approval was obtained from the Medical Research Ethics Committee of Malaysia. Study procedures were explained to participants and written informed consent was obtained prior to the sessions.

Two focus group discussions were conducted among healthcare professionals

consisting of medical doctors, dietitians, diabetic educators, and nurses. A total of sixteen participants, in two groups of seven and nine persons, respectively, were recruited purposively from those involved in the management of GDM patients. Thirteen pregnant women with GDM in their 20th to 28th weeks of gestation who had received dietary counselling from the dietitian were selected for the interviews. Subjects on insulin treatment were excluded as the management of their condition was different from those on diet control. Pregnant women diagnosed with type 2 and type 1 diabetes before pregnancy, hypertension, chronic metabolic diseases, mental, or terminal illness were also excluded. Before the sessions, the participants completed a questionnaire on their socio-demographic details. Semi-structured questions used in the focus group discussions and in-depth interviews were developed based on extensive literature review and consultation with dietitians, and obstetrics and gynaecology experts. Focus group sessions lasted approximately 50 to 60 minutes, whereas the interviews took approximately 30 minutes each. The researcher facilitated the focus group discussions while an assistant took notes and controlled the audio recordings. The discussions centred on barriers in making lifestyle modifications and dietary control in the management of GDM. Audio from the sessions were recorded and transcribed verbatim.

Transcripts were repeatedly read and were coded using qualitative data analysis software (NVivo Version 10). Initial analysis was carried out by two independent researchers, who then met to reach a consensus on the identified codes and emergent themes.

RESULTS

The characteristics of the participants' of the focus group discussions and interviews are

Table 1. Focus group participant characteristics

Age range distribution (years)	n (%)
Total	16 (100)
26-35	10 (62)
36-45	3 (19)
46-55	2 (13)
>55	1 (6)
Education level	n (%)
Master's degree	1 (6)
Bachelor's degree	2 (13)
Diploma	7 (44)
Certificate	6 (37)

Table 2. Interviewee characteristics

Age (years)	n (%)
20-25	2 (15)
26-30	5 (39)
31-35	2 (15)
>35	4 (31)
Education level	
University	8 (62)
Secondary School	5 (38)
Week of pregnancy (weeks)	
20-22	5 (39)
23-25	2 (15)
26-28	6 (46)

shown in Tables 1 and 2. Emerging themes from focus groups in the healthcare staff were: patients' perceived non-adherence, poor appetite control, lack of knowledge, patients giving up, and patients' in a state of denial. The following key themes from interviews with GDM patients that matched those from the group sessions were identified: patients' own negligence, poor self-control, confusing information from healthcare staff, non-supportive environment, and disappointment when required to control diet. Each theme consisted of healthcare professional's perceptions against perceptions from GDM patients.

Perceived patients' non-adherence to medical advice versus patients' own negligence

Healthcare professionals perceived that patients failed to manage GDM due to negligence wherein GDM patients understood the consequences of high sugar consumption but they could not have cared less about their glucose readings and gave in to temptations.

"When they are pregnant with the second child, or more, they are preoccupied with their other children. They just do not take care of their health when they are pregnant. To them, as long as the baby is checked regularly, it is enough" (H13, Head Nurse).

Some perceived that their patients understood the recommendations conveyed but were full of excuses for not being in compliance with the recommendations:

"They understand...but they have a lot of excuses like "I don't have time," they say..." (H09, Nurse)

Patients' negligence was observed when they expressed that sometimes they did not adhere to the recommendations:

"The real scenario is that when it's time for me to check my BSP (blood sugar profile), then I will control (food intake). If not, I just eat whatever I like...." (M07)

Poor appetite control versus patients' poor temptation control

For some women, the eating plan for the management of GDM was a drastic change from their previous dietary habits. Healthcare professionals opined that their patients had problems controlling their appetite:

"Most of them (patients) admitted they do not control their appetite. Even though they (patients) know they are diabetic, and they know the risks to their babies, they still could not help themselves to control (appetite)..." (H04, Nurse)

Most participants had a good understanding of the dietary recommendations for the management of GDM. However, cravings and temptations resulted in them not controlling their food intakes. The sudden need to adapt to eating plans so different from their usual intakes created difficulties, especially when surrounded by the attractive choices of outside food and meals prepared by family members:

"Before this (before being diagnosed with GDM), I never thought about it (controlling food intake). I could just eat anything... when I knew I had it (GDM), I had to limit my intake. However, sometimes when I really wanted

it (to eat certain food) I just ate it. Just a small amount, not much..." (M06)

Patients' lack of knowledge versus confusing information provided by health-care staff

Interestingly, there were conflicting views between the health workers and GDM patients. Health professionals perceived patients as having a lack of knowledge regarding their conditions, and that patients did not understand the concept of dietary recommendations given by health workers to manage those conditions:

"Sometimes she (patient) was not sure what to eat. She thought only sweet foods could increase her blood sugar, whereas other carbohydrate source foods also could increase blood sugar." (H03, Medical Officer)

It was possible that adequate information was neither conveyed to the patients, nor fully understood by them. This could be observed from the way patients described the information they received from health workers:

"There's one thing (I learned from nurses) that I think is contradictory from what I learned from the dietician, which is... to eat supper. Some nurses told me my sugar increased because I took supper. The nurse told me not to take supper..." (M02)

Patients also expressed a need for more effective communication with healthcare providers and detailed education on dietary management of GDM.

"It would be better if we (GDM patients) are given one-on-one counselling (by dieticians). Different people have different situations..." (M02)

Patients giving up versus being in a non-supportive environment

A few healthcare professionals agreed that some patients tended to give-up easily:

"There are certain (patients) who follow-up with me because their BSP is still high. Usually they understand the recommendations... but when there are challenges (diet control) they give up (in following dietary recommendations) easily..." (H01, Dietician)

From the patients' perspectives however, they were frequently overwhelmed by their surroundings and day-to-day commitments. Time constraints and family matters were the main issues raised, keeping them occupied. Family matters were said to affect meal preparations and mealtimes. Some participants had to prepare meals that suited the preference of family members despite being inappropriate for their GDM:

"It is quite difficult for me because when I cook at home, I cook one dish that suits all... I don't cook different ones (dishes) for each person in the house..." (M08)

Time constraints due to work and daily household chores limited some participants from practising healthy lifestyles:

"I couldn't follow the meal times (recommended) because I'm working and in the morning, I have to prepare my children... so, sometimes, to have breakfast at 7am is very difficult..." (M10)

Nevertheless, social support from family members helped to motivate these women to control their food intake:

"My husband gives his full support... when I felt like eating sweet food or drinks, he is always there to remind me to control my intake..." (M11)

Patients being in denial versus the disappointment when required to control diet

Four out of thirteen participants described their disappointment and frustration due to the sudden need to change their usual dietary habit:

"When I first knew I had it (GDM) I was stressed and disappointed... suddenly I had to

control my food intake... it is not easy for me to do it..." (M10)

However, healthcare professionals viewed this phenomenon as a state of denial experienced by patients. This normally happens in the earlier stage following diagnosis, which required them to change to a specific eating plan:

"During the earlier stages, they will usually deny (having GDM). Although they've done the BSP many times, they still couldn't accept the fact (of having GDM)..." (H09, Nurse)

DISCUSSION

This qualitative study has identified several issues pertaining to management of GDM patients that matched and contrasted the perceptions of both the healthcare professionals' and GDM patients. The findings of this study were consistent with those of another study on a group of migrant women from low socio-economic backgrounds who similarly identified time pressures and social constraints as factors inhibiting the self-management of GDM (Carolan, Gill & Steele, 2012).

A striking finding in this study was the GDM patients' own negligence. Participants reported that although they sometimes controlled their food intake, there were times when they gave in to temptation. This was in line with the views of the healthcare professionals. Patients' negligence was seen as a negative influence on their health and contributed negatively to their pregnancy outcomes.

Carolan (2013) found that in the period immediately following diagnosis, GDM patients struggle to adapt to the dietary recommendations, which they view as being very restrictive. This could have led to what was perceived by healthcare professionals as patients' being in denial of their predicament. Although denial is associated with poor metabolic control, it is not associated with knowledge of diabetes, belief in conventional medicine, social

support, or perceived stress (Garay-Sevilla *et al.*, 1999). Patients in this study described a considerable amount of disappointment and stress when they were required to control their diets. Contributing to this disappointment was the apparent lack of empathy from healthcare professionals.

Confusing information from healthcare staff was a term used to describe patients' experiences when healthcare providers had conveyed mixed or contradicting information, resulting in confusion and difficulties in the management of GDM. The misunderstanding and misconceptions of patients did not seem to translate into higher concern from healthcare providers. The patients were instead perceived as lacking knowledge by the healthcare professionals. Heisler *et al.* (2002) reports that patients felt that health care professionals who provide more and accurate information on their illness and treatment, as well as involving them in the decision making, led to better understanding of diabetes care, which in turn improved self-management of the disease. On another note, this study showed that many patients felt motivated to adhere to the requirements of GDM self-management by the social support given by family members (mainly husbands and mothers).

CONCLUSION

This study found a need to promote positive and empathetic communications between healthcare professionals and patients to ensure that the knowledge gap is filled, and the dietary and lifestyle recommendations are followed. Better management of GDM can be achieved by ensuring that the education given by healthcare professionals is in line with the understanding and common practices of GDM patients. This study suggests that focus should be given to raise healthcare professionals' awareness and understanding of the problems encountered by GDM patients in their day-to-day self-

management of their condition. This in turn will allow the healthcare professionals to personalise their management plans for this group of patients. Enhancing healthcare professionals' focus on patients' self-efficacy in adhering to dietary recommendations is deemed essential. It is important to reach a consensus among healthcare professionals to ensure that a consistent, universal message is delivered to patients.

Although it is possible to apply the findings of this study to other Malaysian women with GDM, there are limitations due to a small sample size and being restricted to a single ethnic group. Thus, generalisations should be made with caution until further studies on a wider populations are conducted.

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Conflict of interest

The authors wish to state that no conflict of interest was encountered when conducting this study.

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