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Offering weight management support to pregnant women with high body mass index: a qualitative study with midwives

Abstract

Objective: The prevalence of pregnant women with high body mass index is increasing worldwide. High body mass index is associated with health risks for mother and baby and supporting healthy gestational weight gain is important. Midwives play an important role in supporting women to engage in behaviours such as healthy eating and physical activity. The aim of this study was to explore how midwives' support pregnant women with high body mass index to establish a healthy lifestyle with emphasis on nutrition and physical activity in order to minimise gestational weight gain.

Methods: Semi-structured interviews were conducted with 16 midwives working in antenatal health care in Sweden. Interviews were conducted shortly after new guidelines on care for pregnant women with high body mass index had been introduced. The interviews were recorded, transcribed and analysed by thematic analysis.

Results: Three main themes were identified; *use a conscious approach, invite to participate* and *have a long-term health perspective*. Midwives built a relationship with a woman through identifying her concerns and circumstances, before sensitively discussing weight. Some midwives used Motivational Interviewing to help women identify their own resources. To reach long-term health benefits, midwives set achievable goals with the women.

Conclusion: These study findings provide practical examples of how midwives can support women with weight management during pregnancy. Through being sensitive when developing a relationship, midwives enabled the women to identify their own resources and achievable goals. Support after the baby is born is needed subsequently to help women maintain their healthy behaviour changes.

Keywords: Pregnancy, obesity, high body mass index, antenatal health care, support, midwives, experiences, qualitative interview study

Introduction

The prevalence of obesity (body mass index [BMI] ≥30 kg/m^2) is increasing worldwide. In Sweden in 2016, more than 14% of women were categorised as obese in early pregnancy [1]. This is similar to rates in other countries for example 15.6% in the UK [2] and 12.7% in Australia [3]. Pregnant women with high body mass index have increased health risks compared to women who start pregnancy in the healthy weight category. These health risks include, for the mother: gestational diabetes, hypertension/pre-eclampsia, depression, and for the infant: congenital malformation, preterm birth, large-for-gestational-age and perinatal death [4]. Furthermore it is associated with higher rates of caesarean section and long-term risks of high body mass index in both mother and child [4]. In order to minimise negative health risks for women with high body mass index and their babies the United States Institute of Medicine recommends a weight gain of between five and nine kilograms during pregnancy [5]. Women with a healthy body mass index are recommended to gain between 11.5 and 16 kilograms during pregnancy [5].

Pregnancy is often a motivator for women to reconsider their health behaviours, however behaviour changes requires more than merely individual motivation. Other requirements include support from healthcare professionals, family and friends [6]. Midwives are well-placed to offer and deliver weight management support in pregnancy [7-9],

including information on weight gain [10] and weight management services and support [11]. Weight management support includes counselling on physical activity behaviour, which midwives sometimes identify as challenging [12]. Weight management also includes supporting healthy eating behaviours, which is rarely done in a standardised manner [13].

Interventions delivered by midwives have been found to successfully help women gain a healthy amount of weight in pregnancy [8, 9]. Less, however, is known about how midwives support healthy eating and physical activity in pregnancy. The aim of this study was to explore how midwives support pregnant women with high body mass index to establish a healthy lifestyle with emphasis on nutrition and physical activity in order to minimise gestational weight gain.

Methods

Due to the exploratory nature of this study, a qualitative method using thematic analysis was chosen. Midwives are often time poor, thus it was decided to interview participants individually and to offer both face-to-face and telephone interviews. All participants were interviewed once.

Setting and data collection

Midwives were recruited from antenatal clinics in and around Gothenburg, Sweden. Routine antenatal care at the time of the study consisted of nine 30 minute visits with a midwife through pregnancy and a postpartum follow up 2-3 months after birth. Visits to the midwife included check-ups of the pregnant woman and the fetus, and health promotion support in order to optimise a healthy pregnancy outcome for both mother and child. The woman most often meets the same midwife throughout their pregnancy.

New care guidelines were implemented in January 2014 to improve the care for pregnant women with high body mass index. These guidelines followed on from the Mighty Mums intervention study described in detail by Haby et al [9, 14]. The new guidelines for care of pregnant women with high body mass index included an offer of additional appointments to discuss eating and physical activity and to set goals regarding these behaviours, regular weighing at appointments to assess weight gain, referral to a dietician and exercise on prescription [15]. The exercise on prescription enabled midwives to give women a pedometer or walking poles and to refer her for free exercise classes in the community. The guidelines focused on changes to antenatal care and did not include training in eating or physical activity advice for the midwives.

After receiving ethical approval and permission from the antenatal care director, local heads of midwifery were contacted to provide the information about the study to their staff via email. Midwives who wanted to take part in the study contacted the last author to decide on time and place for an interview. The criteria for inclusion in the study were for the midwife to currently be working as antenatal care midwife and having experience of caring for women with high body mass index in Gothenburg. There were no exclusion criteria. All midwives provided oral or written consent before the interview started. The interviews were conducted in 2014-2015, within one year after the new guidelines were implemented. All participants were employed in antenatal care in Gothenburg.

The participants were asked about what barriers and facilitators they face when offering eating and physical activity information and support to pregnant women with BMI $\geq$ 30 kg/m^2. Specifically, questions focused on how the midwives acted during the first meeting with the pregnant woman, how they talked about weight, how they planned healthy activities, if and how they used goal setting, and how they documented what was said and agreed on together with the woman or the couple.

Half of the interviews took part in a face-to-face interview, while the other half of interviews were conducted via telephone. The interviews were audio recorded, and conducted by the last author. None of the researchers worked with the participants. All interviews were conducted in Swedish and quotes have been translated for the purposes of this publication. Translations were conducted by the first author, a bilingual researcher knowledgeable of the Swedish antenatal health care system, and checked by the other native Swedish speaking authors.

Data analysis

All interviews were transcribed verbatim and analysed using thematic analysis. Thematic analysis offers the researcher theoretical freedom to conduct an insightful analysis [16] and in this case an inductive approach was used to explore the midwives experiences of providing care and weight management support to women with high body mass index. The analysis was conducted by AD and FB, both midwives, while MB, also a midwife, gave repeated feedback. First, all transcripts were read once to allow familiarisation with the data. All transcripts were transferred into NVivo Version 11 where initially all meaning units within the data were coded. In the next step, codes with similar meaning were assembled into nodes. These nodes were sorted into subthemes and finally into themes. The themes were examined in more detail and refined by comparing the text included and excluded in each theme. Lastly, the essence of each theme was identified [16] and illustrative quotes chosen. The second author analysed all transcripts with the last author also reading the transcripts independently and reviewing and agreeing all themes. All participants have been given a participant identification number to maintain confidentiality.

Ethical approval

Ethical approval was granted by the Regional Ethics Committee in Gothenburg, Sweden (reference T585-14).

Results

Sixteen midwives were recruited to this study. They were all women and currently working as antenatal care midwives. They had a mean age of 50 years (range 39-60 years), and had worked as midwives for an average of 20 years (range 2-34 years) and specifically as antenatal care midwives for 12 years (range 1.5-33 years). The majority (n=10) of the participants were very experienced with over 10 years' experience of antenatal health care, and had experience of the Mighty Mums project. The participants worked in nine (out of a possible 15) different community antenatal clinics, covering different socio-economic areas in Gothenburg, Sweden. The interviews were on average 39 minutes long (range 30-55 minutes).

In the analysis, three main themes were identified, each with subthemes (see table 1).

Table 1. Overview of the themes and subthemes

Theme	***Subtheme***
Use a conscious approach	*Developing a relationship with the woman*
	Bringing up the subject sensitively
	Balancing women's needs vs risks
Invite to participate	*Motivating through dialogue*
	Building on the woman's own resources
	Planning health activities
Have a long-term health perspective	*Encouraging achievable goals*
	Using the partner as a possible resource
	Motivating women with health benefits

Use a conscious approach

This theme, to use a conscious approach, concerns how the midwives developed a relationship with the woman, discussed weight sensitively and adapted their approach to the needs of the pregnant woman.

Developing a relationship with the woman

To provide successful weight management support during pregnancy, the midwives first established a personal relationship with the woman. This relationship building was

characterised by a positive attitude, respect and consideration as well as encouragement, where the midwife showed she cared for the woman.

> *For it could easily be that you find it uncomfortable and so you do not talk about it [weight], but ... it's easier, I think, if you have a good relationship with the woman so that she dares to open up and so too, then it's easier to talk about it. (IP9*)

The midwives also adjusted their communication style depending on the woman's circumstances. This included being open to whatever she needed to discuss, which may not be weight-related.

> *I try to capture who it is that I have in front of me and not talking over that person's head because I think it's completely meaningless. I cannot talk about things not relevant to her, if she's sitting and thinking of something completely different, it's not possible. // [I try] by simple means, body language or other, show that I am actually open and listening. (IP1)*

Bringing up the subject sensitively

The midwives did not want to make the women feel uncomfortable when discussing their weight. One way to make the women feel at ease was to use terms such as BMI or overweight instead of obesity.

> *I'm talking about BMI; some think it's silly, but for me ... I was in a lecture several years ago where a doctor //... she was talking about this with BMI and that it's easier to say than to say that 'you're weighing too much', and [instead] saying that 'yes, we have a high BMI here'. Then talk about it. It does not get so loaded, I think, therefore, I feel more comfortable, and then I think it will be better conversation…*

(IP7)

Another strategy was to weigh all the women every time, not differentiating between women of different weight categories. The midwives did not want the weighing itself to be an upsetting activity, instead wanted the women to go from the visit strengthened and motivated.

> *And then ... I usually say that 'it's good!' Because sometimes you have not gained weight and it's great and then you'll see it and then you'll be motivated. So, not only is it negative to stand on the scale, but it can actually be something positive too. (IP4)*

Balancing women's needs vs risks

Whilst the midwives were concerned about the women's high BMI, the women were not always concerned about their weight. Instead, the woman could be more concerned about family or relationship issues or was not aware that her weight is associated with health risks. Midwives had to balance their care between providing women with information without worrying them.

> *I usually do not specifically address all the risks, but I usually only mention "we know there is an increased risk of diabetes and pre-eclampsia" and so on. Not so much that there are risks at birth or so, because then you usually only scare them and then it's even harder to motivate them later. (IP8)*

Invite to participate

This theme concerns the midwives' ways of adjusting the support they provide to women based on the women's circumstances and trying to invite them to participate in planning and setting their own lifestyle-related goals.

Motivating through dialogue

It was important to the midwives to motivate women to be healthy. This was done through making the women reflect on their lifestyle. Motivational Interviewing (MI) was used by several participants to make women more involved in their own behaviour change.

> *It's a little bit like 'What do you think has caused this [weight]?And what is your perception of what could help you to keep your weight or not to gain so much in weight?' Then you also hand over the responsibility to the patient clearly in the conversation, but do not point fingers and 'but then I think you should go out with walking rods an hour a day. Now you can do it.' Then it does not become respectful and ... and that you also summarise and 'did I understand you right?' And so on. I think, nevertheless, it gives the patient a sense of being more involved. (IP10)*

However, according to the midwives MI did not always facilitate communication. For example, when a woman used an interpreter it was difficult to use MI as deeper reasoning and nuances disappeared.

> *But I think it's very difficult with an interpreter and we have a lot of [women needing] interpreters. They [the interpreter] do not understand the process of motivational interviewing or open questions. I can ask the question but the interpreter does not ask the [same] question... (IP15)*

Building on the woman's own resources

Midwives found most women motivated to change their lifestyle, but women did not have the capacity to implement these changes. The midwives emphasised to the women that changes should be made for their own sake, and that the midwives could support them with this. The midwives tailored their support to the woman's own knowledge, ideas and capability – i.e. her own resources. The information, action plan and goals that were formulated were based on the woman's expressed needs and circumstances.

> *I make sure I do not talk too much, really be mindful of* ***her*** *knowledge, 'what do you know about this?'. 'What do you think you could change?' That the patient herself should come up with ideas. (IP16)*

Planning health activities

The planning of behaviour changes was documented by the midwives in the woman's health records, however to a varying degree. Some midwives wrote notes in consultation with the women, others invited women to read what they had written.

> *And I usually say that for the first time, at the booking appointment, that 'this time I'll write a little bit about what we've talked about now, but you can read it next time when you come' so they know what I write. So there are never any problems, I think. It usually works really well. (IP9)*

One resource that midwives used was a food diary which supported discussion regarding the woman's diet. Exercise on prescription was also used as a way to remember and follow-up on agreed goals.

... planning, along with the patient ... motivational interviewing about diet and exercise and changes, high BMI, health risks, impact on pregnancy, write exercise on prescription together, bring them back for follow-up. You always follow up with weight and yes, follow-up of prescribed exercise and diet and then dietician. (IP13)

Midwives reported sometimes struggling to motivate women to engage in physical activity and it took time to establish a regular physical activity routine. It helped midwives to be able to offer tools and opportunities such as a pedometer and water gymnastics.

I believe in water gymnastics, when it comes to pregnant women, but with these women, especially because of the weightlessness or feeling lighter in the water, it's a very effective exercise. So that would be the best of all, everyone who now needed help maintaining their weight and so could be offered that kind of exercise. (IP10)

Have a long-term health perspective

This theme addresses the participants' views on how they helped women maintain healthy lifestyle behaviours. The midwives believed it was better to succeed with small changes than none at all. The midwives also believed that these behaviour changes are an investment for the woman and her family in the long term.

Encouraging achievable goals

Midwives noted that successful behaviour changes spurred the woman on to maintain her healthy habits, however unrealistic goals could lead to failures and subsequently reduced motivation. Goal setting was discussed in consultation with women and midwives encouraged small and feasible changes.

We talk about it as a long-term project. Not to lose weight when you are pregnant, it is quite disarming that now that you are pregnant, my goal is not to lose weight, but now we are talking about reducing weight gain. I think it's quite nice for them to hear it. (IP1)

Midwives thought simple dietary advice with small changes in diet had the potential to make a big difference. That said, midwives experienced that women sometimes found it difficult to change cultural and traditional eating behaviour and resist family pressure.

It's hard, because the women have just told me that this cultural [food] that it might be very ... so it's not so healthy food, if it is said that it's hard for them to refrain from that; there is a lot about food and so in some cultures. It may be that women find it difficult to change. (*IP 2*)

Using the partner as a possible resource

The woman's partner sometimes attended the midwifery appointments with her. This was more often the case with younger women or first-time mothers. A committed encouraging partner was seen as invaluable support for the woman and enabled midwives to focus on the whole family.

Yes, at least in the beginning, when they come to the booking appointment and this extra visit, I think that sometimes you can focus on the whole family, including him, and many are very interested in it. (*IP15*)

However, some women did not want their partner to know their weight or to discuss weight with their partner present. It was also perceived that some partners did not provide helpful

support regarding healthy eating and physical activity behaviour and could be an obstacle to lifestyle changes.

> *And many [women] did not want to talk about their weight and became very... well, it's hard to talk about it [weight], and many do not want to weigh themselves and the man cannot see, if they now have a husband, when they weigh themselves; it's very taboo to talk about their weight. (IP10)*

Motivating women about health benefits

Midwives had found that pregnancy, the unborn child and the desire to reduce weight gain were important motivational factors for women and pregnancy was seen as a good opportunity to make lifestyle changes. The midwives clarified to women that the goal was to minimise excessive weight gain, not lose weight. Even though women did not manage to change their lifestyle during pregnancy, midwives tried to encourage small changes and viewed it as an investment for the future health of the woman. One way to encourage behavioural changes was to emphasise health benefits instead of scaring women with increased risks in relation to the weight.

> *I think that you can scare off some women who think that 'oh what I'm fat' and 'this is going to be really bad', and then it's just the focus on the weight. You have to find a balance accordingly. It should be fun, she should like to come here! She will be happy when she walks out of here! It should not only be a lot of pointers, it's just about the weight. It's about she's going to be mom, she's pregnant! (IP4*)

Discussion

The current study findings show how midwives support women with high body mass index with weight management during pregnancy, consciously building relationships with women, and working with them to identify appropriate and achievable behavioural goals that benefit the woman's health in the long term. These findings add to the current literature in which midwives have often reported avoiding or not having time to discuss weight management [17, 18].

The first theme *use a conscious approach*, suggest that ahead of providing weight management support, midwives focused on establishing a relationship with the women. This included adjusting their communication style and focus depending on the woman's circumstances, which may not be weight-related. Considering the woman's own context has been found in previous research to be important when midwives develop a relationship with women [19] and is a central tenet in providing person-centred care [20]. Importantly, the participants in this study identified how a balance needed to be found between the woman's priorities and the midwives professional responsibility to inform her of health risks associated with high body mass index and excessive gestational weight gain. This is a dilemma that has been identified in previous literature where midwives have prioritised the relationship with the woman by avoid discussing weight [21].

Discussing other issues than just weight is something women appreciate when they visit their midwife [22]. Several studies have identified that when women's weight is focused on, women with high body mass index felt stigmatised by healthcare professionals [23, 24]. In contrast, when women felt they received personalised care, they reported a high level of satisfaction with their maternity care [25]. When discussing weight, the study participants tried to do this as sensitively as they could, for example by using terminology they viewed as less stigmatising such as body mass index instead of obesity. This is in line with past research where midwives have reported that they are more comfortable with using the word BMI in

contrast to ‘obese’ [26]. Other methods to introduce weight was to discuss the issue when weighing women. Recent research has found that regular weighing can be reassuring for women [27] and encourage them to continue their healthy behaviour changes [22]. Implementing regular weighing however has been found to be difficult in some settings [28] thus our finding that midwives can and do weigh women regularly is encouraging.

The second theme *invite to participate*, showed how midwives tried to motivate women to eat healthily and be physically active. Several participants had attended motivational interviewing training and used this to encourage women to make healthy behaviour changes. Motivational interviewing has been shown to facilitate discussions on weight, diet and physical activity with pregnant women with BMI ≥30 kg/m^2 as it tailors the discussion towards women's circumstances [29]. Tailoring support to find opportunities for behaviour change in women’s own context is important and a review found that person-centred care can be much improved in weight management interventions for women with BMI ≥30 kg/m^2 [30]. Using MI and providing person-centred care was reported to be challenging if an interpreter had to be used in appointments. This is echoed by women who report that discussions via interpreters are difficult [31]. More work is needed on how to best support migrant pregnant women with weight management, in particular as they are more likely to be overweight or obese than women born in Sweden [32]. Furthermore, this finding has important implications for weight management intervention fidelity; many interventions now include motivational interviewing as a core component (for example [33]). Our findings suggest that MI may be difficult to deliver to all population groups.

The study shows how midwives built on the woman’s resources when supporting behaviour change, for example by asking women to identify behaviour they wanted to change. This led to an action plan and goal setting based on the woman’s expressed needs and circumstances. Setting goals has previously been found to be an important strategy to

facilitate antenatal behaviour change [19] and it is an encouraging finding for intervention developers that midwives feel able to set behavioural goals with women within routine practice. Other strategies used by the participants included prescribing physical activity and providing pedometers and food diaries. Both pedometers and food diaries have been found helpful by women to monitor their behaviour [34, 35]. The agreed behavioural goals were documented in the women's notes, however to a varying degree. A review of person-centred care in interventions targeting gestational weight gain in pregnant women with high body mass index found that no interventions documented individuals care preferences [30]. Documenting a woman's preferences and beliefs have been argued to be important to deliver person-centred care [20] as it facilitates continuity of care [30].

The third and final theme *have a long-term health perspective,* describe how the midwives focused on women´s small behaviour changes whilst keeping their long-term health in mind. Small changes were considered better than none at all, and these changes were important for women beyond pregnancy. Setting small achievable goals may in particular be important to pregnant women with BMI $\geq$30 kg/m^2 who may be used to being judged based on their weight status [23] and have low self-esteem regarding physical activity or healthy eating [36]. Another barrier to behaviour change was women's cultural and traditional eating behaviour. Supporting women from cultures different from their own has previously been reported to be challenging by midwives, with some midwives resigning responsibility for these women [19]. A novel finding in this study was that midwives tried to overcome this barrier by encouraging small behavioural changes.

To further aid behaviour change, participants reported utilising the woman's partner as a resource. Whilst a committed and encouraging partner was seen as invaluable support for the woman, partners could also be an obstacle for behaviour change. For example, the midwives reported that some women did not want to discuss their weight in front of their

partner. That the partner's attendance can be a barrier to discussing weight management has been reported previously [37] and is not surprising as weight is a sensitive issue for many women. However, as partner support is important to women [22, 38], their reluctance to discuss weight with their partner may be problematic and more research is needed on how this may influence women's gestational weight management. Moreover, a novel study finding was that sometimes the partner is keen to make behaviour changes themselves, and midwives are then able to support both woman and her partner. This is likely to help the woman making long-lasting behaviour changes. Encouraging partner support is in line with the tenets of Swedish antenatal care and person-centred care where including family is a key component [20]. That said, not all women bring their partners to their midwifery appointments, thus it is important to identify other family members or friends who can provide women with social support.

The study participants also reported emphasising the long-term health benefits of healthy behaviours to the women. Whilst pregnancy is a time when women report being motivated to change their behaviours [6], not solely focusing on pregnancy is often stated as important to women [38]. Focusing on the child is a known motivator for women [22], and may change to focus on being able to care for one's baby after birth. Thus motivation for behaviour change remains after birth and weight management support after pregnancy is thus imperative when work and childcare can act as barriers to maintain the healthy habits women initiated in pregnancy [38].

Study strengths and limitations

This study has a number of strengths. Firstly, the interviewer was a midwife and thus well versed in the topic and current antenatal care provision. Another strength is that the

participating midwives worked in different socio-economic areas and had experience of caring for women living in a variety of circumstances. Despite these important strengths, there are study limitations. Being interviewed by a midwife may have made it more difficult for participants (all current midwives) to discuss issues regarding professional practice and in particular aspects they may have found difficult in their current role. Whilst this may have biased our findings, participants did admit experiencing some care aspects difficult which suggests appropriate rapport was built between interviewee and interviewer. The midwives volunteered to take part in the interviews, and it may be that those midwives with a positive experience of supporting pregnant women with a high body mass index were more likely to volunteer compared to those who were less interested. This may have biased the results to be more positive and needs to be taken into consideration when reading the study results. Further, some of the participants had taken part in the intervention Mighty Mums [9, 14] and may therefore have felt more confident and equipped to discuss weight support with pregnant women with high body mass index compared to other midwives in other settings who had not had this training. It is also likely that the new care guidelines which enabled midwives to have more and longer appointments with women with high body mass index helped midwives provide appropriate support. The results here may therefore not generalise to other midwives working in antenatal care.

Practical implications and future directions

The current findings support the new antenatal care guidelines implemented in 2014. These guidelines provided midwives with an opportunity to schedule additional visits with women with a high body mass index and introduced regular weighing. These guidelines have now been implemented in other areas of Sweden and future research needs to evaluate these to assess if they are sufficient to support women gain a healthy weight in pregnancy. In

addition, participating in (and receiving training for) a research intervention such as the Mighty Mums is likely to have benefitted midwives and improved their practice. For example, motivational chats was a component of Mighty Mums and mentioned by several participants. Some participants not taking part in Mighty Mums had also had previous training in Motivational Interviewing. More research is needed to assess what happens after a research intervention has stopped in terms of midwives' skills and practices.

Conclusion

These study findings shows that to provide weight management support to pregnant women with high body mass index, midwives consciously build relationships with women. They identify appropriate and achievable behavioural goals together with the woman, considering her circumstances and that will benefit the woman's health in the long term. To best build on this midwifery support, partners or others should be included to provide social support. Appropriate resources for different cultures should be made available and postpartum support should be offered to help women maintain their behaviour changes.

Conflict of interests

The authors declare that they have no competing interests.

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