Chapter 5: Exploring health education with midwives, as perceived by pregnant women in primary care: A qualitative study in the Netherlands

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Abstract

Objective: To explore the experiences, wishes and needs of pregnant women with respect to health education in primary care with midwives.

Design: Qualitative semi-structured interview study, using thematic analysis and constant comparison.

Setting and participants: Twenty-two pregnant women in midwife-led primary care, varying in socio-demographic characteristics, weeks of pregnancy and region of residence in the Netherlands, were interviewed between April and December 2013.

Findings: Women considered midwives to be the designated health caregivers for providing prenatal health education, and generally appreciated the information they had received from their midwives. Some women, however, believed the amount of verbal health information was insufficient; others that there was too much written information. Nulliparous women generally expressed a greater need for more health education than multiparous women. Many nulliparous and multiparous women still had questions and expressed uncertainties regarding various health issues, such as weight gain, alcohol, and physical activity. They perceived their health education to be individualized according to their midwives’ assessments of the extent of their knowledge, as well as by the questions they asked their midwives. A few were concerned that midwives may make incorrect assumptions about the extent of their knowledge. Women also varied in how comfortable they felt about contacting their midwives for questions between prenatal visits. Women felt that important qualities for midwives underlying health education, were making them feel at ease and building a relationship of trust with them.

Key conclusions and implications for practice: Health education was highly appreciated by women in general, suggesting that midwives should err on the side of providing too much verbal information, as opposed to too little. Pregnant women may benefit more from health education if midwives take a pro-active role in finding out what their needs are. As midwives are the principal health care providers throughout pregnancy, they should ideally emphasize their availability for questions between prenatal visits.
Introduction

There is ample and growing evidence that women’s health behaviours during pregnancy can have a life-long influence, not only on their own health, but also that of their children. Alcohol consumption, smoking, maternal overweight or underweight are known potentially modifiable risk factors for unfavourable pregnancy outcomes, such as giving birth to a preterm, or small for gestational age infant [1-4]. Long-term effects on children of suboptimal health behaviours in pregnancy include asthma, cognitive defects, obesity, type 2 diabetes and cardiovascular diseases [5-8]. In contrast, healthy nutrition and sufficient physical activity during pregnancy have been associated with beneficial maternal and fetal outcomes [9, 10]. Pregnancy is considered an opportunity for promoting healthy behaviours, as women are generally motivated to give their unborn children the best start in life [11]. In the Netherlands 84.9% of women are under the care of primary care midwives at the start of their pregnancy [12]. One of the tasks assigned to midwives in the Netherlands and other countries, is to educate pregnant women by promoting beneficial health behaviours among their clients [13, 14].

The effective provision of health education may depend on its contents as well as on underlying communication skills to convey these contents. Women consider their midwives to be important sources of information, but in some earlier studies from the Netherlands and other countries, women have reported receiving little to no information from their midwives on lifestyle topics, such as physical exercise, alcohol, weight gain, or nutrition [15, 16]. It is unclear to what extent women need and desire this information during prenatal visits and what they expect from their midwives as health educators. Previous studies on physician-patient relationships as well as midwife-client relationships, suggest that good communication skills and the ability to build client-friendly relationships are important underlying assets for health care providers to have in order to provide health education effectively [17-19]. In order to gain more understanding about prenatal health education among pregnant women, this study aims to explore the experiences, wishes and needs of pregnant women with respect to health education in primary care with midwives.

Methods

Study design
This was a qualitative explorative study using semi-structured, face-to-face interviews. A qualitative design was used to allow pregnant women to express their opinions openly, and to allow the emergence of new information. Pregnant women under midwife-led primary care were interviewed from March to December 2013 about their own health
behaviours and the health promotional role of their midwives. This study obtained ethical approval from the Medical Ethics Committee of the VU University Medical Centre, Amsterdam in the Netherlands.

**Study sample and recruitment**

In order to obtain a sample of pregnant women who could potentially represent the different experiences and views of women living in the Netherlands, we aimed to include women who varied in age, education, ethnicity, parity, weeks of pregnancy and region. The inclusion criteria were pregnant women under primary midwife-led care, who had had at least one prenatal visit, and who had a good speaking ability of either Dutch or English. Pregnant women were recruited by different means, including word of mouth (resulting in some ‘snowball sampling’), posting of requests for participation on a website for pregnant women (www.babyopkomst.nl), sending emails to contacts of mother and child centres in various cities and hanging up posters and leaflets in health and community centers, primary schools and day care centers. Posters and leaflets contained some brief information about the study, the duration and location of the interview and contact information. After 12 respondents, it was clear that women of university and higher college level as well as Dutch ethnicity were more likely to respond to our request for interviewees; we therefore employed purposive sampling to aim for maximum variation. This entailed specifying the background characteristics of women in which we were now particularly interested (women who did not have a university or higher college degree, or women of another ethnicity, or women expecting their third or more child) in our posters and leaflets and hanging them up in areas where our target respondents were most likely to be found. Women who were interested responded by phone or by email. The interviewers then supplied them with additional information and arranged a meeting time and location with them.

**Interviews**

Previous studies on health behaviours during pregnancy were used to develop an interview guide, centered around the topics smoking, alcohol consumption, physical activity, nutrition, weight gain and antenatal class attendance during pregnancy, as well as the health promotional role of midwives. A few questions were formulated to accompany each topic and to use as a guide during the interviews. Open-ended questions were used to introduce new topics, such as ‘when you think about health in general, what comes to mind?’ and ‘what information about health do you remember receiving from your midwife?’ The topics and example questions were read and discussed by four of the co-authors and adjusted accordingly.

The interviews were conducted by one of two authors (RB or QH). Both interviewers carried out a pilot interview each to test the adequacy of topics and questions. Before
the start of the interview the interviewers assured the respondents they would remain anonymous and the women gave their written informed consent. They endeavoured to reduce possible researcher bias resulting from their presence and possible socially desirable information by letting the women know their background, that they were not midwives themselves, and that there were no right or wrong answers to the questions. They sought to maintain an objective attitude throughout the interviews. The interviews were recorded digitally and lasted on average 52 minutes (30 to 90 minutes). Women were asked about their experiences with health behaviours during pregnancy, such as what their current health behaviours were; if and how their health behaviours had changed since becoming pregnant and the circumstances that made practicing these health behaviours easy or difficult. Additionally, they were asked about their experiences with their midwives as educators of health behaviours, including what they believed the role of midwives to be in health education, how they perceived the amount of information they had received, what they thought were important qualities for a midwife to have as health advisors and other wishes or expectations they had of their midwives regarding health promotion. The flexibility of the semi-structured interview enabled us to obtain information about predefined topics of interest, while still allowing new ideas and topics to surface and to be explored further.

Each interview was finalized by asking the respondents to provide some socio-demographic information about themselves, such as their age, highest completed educational level and ethnic background. All interviews were conducted in Dutch. Impressions, non-verbal language and other relevant issues that were observed during the interview, such as presence of a child or partner, were written in field notes.

Between the interviews, the researchers RB and QH discussed their interviewing experiences by summarizing relevant information obtained during the interviews and discussing emerging ideas and questions to ask in subsequent interviews. In this iterative process, questions were added, adjusted or omitted in the following interviews. In total 22 interviews were conducted. Two women attended the same midwife practice; the other women lived in different parts of the Netherlands, or within different neighbourhoods in the larger cities, making it highly probable that the women in our sample were under the care of 21 different midwife practices. Twenty of the 22 interviews took place in the respondents’ homes; one interview took place in a restaurant; and one in a primary school where the respondent worked. Nineteen interviews were carried out with the woman only, during three interviews the women’s partners were present, in one interview the partner also gave his opinion on his partner’s health and health care. This information was also recorded and transcribed. In seven of the interviews, a small child was present and occasionally required attention from the mother during the interview. One interview was not recorded due to a technical error in the recording apparatus. A detailed summary of this interview was written out.
afterwards that same day. Her words are paraphrased in the text. The interviews were all transcribed verbatim by RB, QH or a medical student. Demographic information about each respondent (such as her age, education, parity, ethnicity and the city she lived in) was added to each transcript and each transcript was assigned an anonymous respondent number.

**Analyses**
For the current study we focused on the experiences, wishes and needs of pregnant women with regard to health education provided by their midwives. Thematic analysis was used to analyse the transcripts of the interviews. Thematic analyses is a method derived from grounded theory and uses the same coding procedures, but its aim is not to generate a whole new theory [20]. This method allows the use of both deductive predefined themes obtained from literature and included in the interview topic list, as well as inductive themes which emerge during the interview process and analysis of the data [21]. Besides looking for recurring themes and patterns, RB and QH also looked for responses that differed to the rest (constant comparison [22]). Initially RB and QH read and reread six transcripts and individually assigned codes to fragments of text, with the aim of staying as close to the text as possible in meaning without adding any subjective interpretations. The codes that were assigned to the text were clustered in categories and these categories were then organized into themes containing more interpretation by the authors RB and QH. The transcripts of the remaining interviews were then coded, using these themes as a main framework, but leaving room still to adjust, omit or add new themes. Possible researcher bias resulting from personal bias was addressed first by the two interviewers discussing their personal experiences with the interviews and comparing their individual coding of the transcripts and second by discussing the findings and interpretations with other members of the research group. Interviewing continued until no new information was gained and data saturation had likely occurred within the identified themes. The final themes and sub-themes that are presented reflect the results of the interviews as interpreted by the authors. Quotations were selected to illustrate the themes and were translated into English by RB. In this study each quotation presented in the results is preceded by a respondent (R) number, their age, and parity (nulliparous (nulli) or multiparous (multi)). The software Atlas.ti version 7 was used as a tool to help organize, code and analyse the data.

**Results**
The 22 women in our sample were on average 30.5 years old (range 23-37 years) and 25.4 weeks pregnant (range 10-37) (table 1). Seven (32%) were of non-Dutch ethnicity (including mixed Dutch background), ten (45%) were nulliparous and five (22.7%) were
of lower education.

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<th>Table 1. Background characteristics of the study population</th>
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*One parent is Dutch, the other has another ethnic background

We structured the themes that we identified under two main sections: I. Contents of health education consists of the themes Basic versus extensive verbal information, Questions and uncertainties in client health knowledge and Varied appreciation of written health educational materials. These themes describe the opinions of women towards both the verbal and the written health education that they received during their pregnancy, as well as health-related questions and uncertainties which surfaced during the interviews. II. Process of providing health education consists of the themes Individualization of health education (divided further into subthemes: i. By assessment of client characteristics and ii. According to clients’ questions) and Midwife qualities and midwife-client relationship. The themes in the second section describe women’s perceptions and opinions about what determined the contents and extent of information they received from midwives and how women valued a client-friendly relationship with respect to health education, although there were varying ideas of what this entailed.

I. Contents of health education

**Basic versus extensive verbal information**

All women considered midwives to be the designated caregivers for the provision of health education and midwives were perceived as being reliable sources of important information. Women generally recalled their midwives providing them with basic information on health, such as recommendations for safe nutrition to prevent infections, and they recalled being asked by their midwives as part of a standard checklist, whether they smoked, and/or drank alcohol. Most women did not recall receiving verbal
information during prenatal visits on nutrition for promoting good health, physical activity, recommended weight gain and on why alcohol was harmful. A few women recalled their midwife recommending certain pregnancy classes, which would be useful to attend. Two women (one nulliparous and one multiparous) did not recall having received any information at all on health behaviours during pregnancy. The women who had received basic health information generally expressed being pleased with the amount of information they had received. When asked if they felt they had missed any health information, they tended to mention information related to other issues, such as the birth process, their health after the birth, or more support for fears surrounding the 20-week ultrasound. None of the women reported receiving too much verbal health information from their midwives. A few women, however, wished the midwives had given them more extensive information beyond the basics.

**R5: age 30, nulli:** I would like it if they explained more, that she doesn’t only ask, ‘would you like to do a pregnancy course?’, but also says, ‘because we know that women who take a course are less afraid of giving birth and have more enjoyable pregnancies.’

**R14: age 30, nulli:** (about alcohol) I think that the midwife should mention why it is so bad. They didn’t mention it to me....I heard it from a friend who had been to a special information evening, that’s why I know a bit about it.....I have read many books about it, and they all say it’s bad, but not necessarily what the consequences are.

Nulliparous women, in particular, often expressed wishing they could have more frequent contacts with their midwives during the first trimester. They found that the time between prenatal visits was often too long in a phase of pregnancy, where they were not able to see signs of the baby yet. Several women expressed wishing that their practices offered additional meetings where midwives would give all kinds of information to newly pregnant women, because as one nulliparous woman said “in the first trimester there’s not much going on”, although this wish was not expressed by everyone. One nulliparous woman spontaneously mentioned her midwife had offered her an information evening, but that she was not interested: “Then I’ll be sitting there with all these pregnant women who don’t know anything. And I thought, I can read everything in a book.”

**Questions and uncertainties in client health knowledge**

Among the women who had reported receiving sufficient information from their midwives about maintaining good health during pregnancy, many still had questions, or
expressed uncertainty about various health issues during the interviews. Several women wondered, for instance, how much weight they should be putting on, at various stages of their pregnancies. As one woman said “I do want to know what’s normal though. Is it normal that I have put on so much weight in the last 4 weeks for example?”. Another woman wondered why her glucose levels were only checked at the beginning of pregnancy and never again.

**R12: age 24, nulli:** The midwife doesn’t check to see whether you (your glucose levels) are very high or far too low. And I really love sugary foods and I wonder to what extent that is harmful to the child.

Sometimes women expressed some uncertainty about the safety of certain health issues. One multiparous woman who was 17 weeks pregnant and expecting her fourth child, used to run regularly before her pregnancy. She had stopped running after she became pregnant, as she believed it may be harmful for the pregnancy. When asked if she had discussed this with her midwife, she said no, but she would ask her about this the next time. A multiparous woman who said she drank a little wine with dinner now and then during pregnancy mentioned that she would not drink any more alcohol as “they say it is bad for the child.” None of these women had expressed wishing their midwives had given them more information, however. One multiparous woman, when comparing her current pregnancy with her first pregnancy, mentioned that during the second pregnancy, one suddenly feels more confident, even though “I don’t really know how experienced you really are after one (pregnancy). I think that’s really funny.”

**Varied appreciation of written health educational materials**

Women reported receiving additional information on relevant health topics in the leaflets and booklets that were supplied by midwives during the prenatal booking visit, which could be read at home. In general they considered the materials to be useful for referring to at home and a complementary part of the verbal health education provided by their midwives.

**R22: age 34, multi:** They (midwives) do give a book with all the information, I can read it myself if I don’t know something. (Interviewer: Do you believe that all or most women do that?) I think most women do, I don’t think midwives need to explain everything in one visit.

There were a few women, however, who felt they had received too many leaflets and booklets, which they didn’t really want to read, some preferring more verbal information from their midwives and others, such as the following woman, preferring fewer leaflets
and booklets and more concise information:

**R10: age 31, nulli:** you get a whole package of folders and information in different shapes and sizes. It is very overwhelming when you’re just pregnant, you think, your life is just about to change and there are suddenly a lot of emotions and then when you get a lot of information of all sorts, it’s a little hard to process. I think you could just as well receive a small book with basic information, that you can calmly read through with a cup of tea.

II. Process of providing health education

**Individualization of health education**

i. **By assessment of client characteristics**

Although we did not specifically ask women how they believed their midwives determined what health information to give them, most women spontaneously expressed believing that their midwives adapted and individualized the health education that they provided, according to their clients’ characteristics, such as their educational level, parity (in particular if their midwives had known them from previous pregnancies), and their general health status. There were differing opinions by both multiparous and nulliparous women on whether midwives did this assessment adequately. Many multiparous women, for instance, believed that midwives assumed they were already aware of pregnancy health recommendations from their previous pregnancies, and therefore gave them little health information. They generally judged this assessment of their health knowledge to be correct and believed it was unnecessary for the midwife to have to go through the list of ‘do’s and don’ts’ with them again.

**R8: age 27, multi:** During the conversation, I’d be asked ‘have you heard there are certain things it’s better not to eat during pregnancy?’ I said ‘yes’. Then she said ‘Well, we have a book here with everything in it’. Then we’d scroll through it. I think they make a kind of estimation about what you already know.

Women generally recalled being asked if they smoked or consumed alcohol during pregnancy, and if they answered no, these subjects would not be discussed and would not re-emerge for the rest of the pregnancy. They believed that if they had reported smoking, or if they had been overweight or had some other health issues, they would have received more health information and advice from their midwives accordingly, as the following woman of normal weight remarked:

**R10: age 31, nulli:** If a huge woman comes in (to the midwife practice) who is
pregnant, then I think alarm bells will go off and they'll ask what her eating patterns are. But yes, most likely a healthy looking woman came in, so all they thought about me was, ‘as long as the blood results are fine’.

Some women, however, wished that their midwives did not make assumptions too quickly about their clients. One multiparous woman was disappointed about the lack of health information she had received from her midwives, believing it probably because they assumed she was already experienced, having had two children already. She wished they had taken the time to give her more information, just in case she had forgotten some of the relevant health information for pregnancy.

A nulliparous woman who had experienced anxiety in her past, as well as problems with underweight and not wanting to put on weight, expressed disappointment that her midwives had not kept a better eye on her, by asking her about her anxiety or about her weight during subsequent prenatal visits. She expressed having mentioned these past health issues to her midwives: “I have had a lot of anxiety in my past, so take notice of that! Then I think: is this because they assess me, and, think, well this woman seems to be functioning very well and she comes across as cheerful, so she will handle everything well?” She believed that her high educational level and her healthy appearance had likely led the midwives to believe she most likely monitored her own health and to mistakenly assume she did not need much information and health care. Some women felt that midwives should just provide all the necessary information in a standard way, without distinguishing between clients.

**R10: age 31, nulli:** I think it would be good if the midwife just approaches these issues (health behaviours) with everyone, some will need it and others won’t.

**ii. According to clients’ questions**

Midwives were generally described as supplying basic health information during prenatal visits, but if women wanted more detailed or additional information on other topics, they would have to ask the relevant questions themselves. Many women mentioned appreciating the opportunity to be able to ask questions during the prenatal visits and positively viewed the midwife supplying information according to their questions.

**R3: age 31, multi:** I think that I am now more experienced and therefore have few questions. And because I have very few questions, I get very little information of course. I have noticed, that as soon as I have a question, then they do have all kinds of information.
Some women mentioned preferring the midwife not to wait for their questions and to pro-actively provide additional information. One multiparous woman mentioned that all the health information she had received was due to her own questions, and she was concerned that she may not receive important information if she did not ask the relevant questions.

All women also reported that their midwives had told them they could call them if they had questions between prenatal visits, which they generally really appreciated. Women varied with respect to whether they made use of this service. A few women mentioned they had called their midwives, especially when they were worried about having eaten or done something they thought may have been harmful.

*R7: age 36, nulli:* Last week, even though I have only been there (midwife practice) once, I felt comfortable enough to call them, they opened their doors very wide after that first time. It was something really silly, it was about food.

Women were sometimes hesitant, however, to call their midwives about questions related to health behaviours, because they didn’t want to bother the midwife unnecessarily. One mentioned that the telephone numbers she had received were either for making appointments or for urgent matters, and she didn’t believe her questions were worth calling these numbers for. Another did not want to call the midwife, if there were still other sources she could consult first. The following woman explained where she goes for information if she has a question:

*R21: age 26, multi:* first internet for sure, otherwise I will ask my sister-in-laws or friends, and if there is really something which I really would like to know, and I can’t get a good answer, then I would call the midwife, but she is the last one……I think, can you imagine getting phone calls every day, can I eat this, can I eat that? That would be unthinkable (Interviewer: from the midwife’s perspective?) Laughs) Yes, if you can look it up everywhere, and then call them still, come on, no!

**Midwife qualities and midwife-client relationship**

Women were asked what they considered to be important qualities in their midwives as health educators. Qualities, which were often mentioned, were making them feel at ease, respect, supporting women in their choices, kindness, friendliness, giving them the feeling they had time for them, giving clear information, treating them seriously and being professional. One nulliparous woman who was struggling to stop smoking during pregnancy described how much she liked one of her midwives for being direct and clear. She expressed not liking that “ultra-sweet vagueness” and that she wanted a midwife who could give her clear instructions on what to do, “otherwise things will go
wrong”. Later however, when discussing her smoking, she described how difficult it was for her to stop, as “an addict is an addict”, but that she did not want the midwife to keep returning to her smoking issues.

R12: age 24, nulli: But it is my opinion, that they shouldn’t keep focusing on the smoking. With me it was all about the smoking. Every time. And the last time as well, how is the smoking going?....I understand that they need to do it, but I just think it should be a choice, your own choice. It shouldn’t be forced.

Women also expected a certain amount of sensitivity by midwives towards their needs. One woman, who was already overweight at the start of pregnancy and doing her best to keep further weight gain under control, described how she felt when she was weighed at the midwife practice and the scales showed four kilograms more than when she had weighed herself at home. Although the midwife mentioned that the scales were not exact, she still registered that weight in her pregnancy records. The midwife did not seem to realize the effect this could have on her psychologically.

R16: age 31, nulli: That really upsets me, I am already quite heavy, so then of course I don’t really like that my weight is increasing. I am trying to keep it within the limits, and suddenly with the midwife, I am 4 kilograms heavier.

Midwives were considered responsible for building a good relationship with their clients, although this good relationship had different definitions for different women. When asked about the relationship with her midwife, one nulliparous woman said: “Yes, I think it should be a relationship of trust, that you have the feeling you can ask anything and say anything, that they will not look at you strangely if you ask an unusual question.” A relationship of trust with their midwives was mentioned several times by different women. Some women even felt that the bond with their midwives was of importance to encourage health behavioural change:

R8: age 27, multi: I think a good bond is the most important thing, that people feel at ease with the midwife, and if there is anything, they dare to tell her……..I think that a good midwife, if she is able to build a bond with someone, will most likely be able to motivate someone to do something.

Another woman mentioned that a bond was unnecessary, because “soon I won’t be going there anymore. When it’s over, then it’s completely over.” She had also felt that the focus of care was on the pregnancy, but not on her. She told of how she had been experiencing bad nausea, but had felt that her midwife was not really trying to help her,
as she had only suggested an ‘old wives’ remedy.

**R11: age 29, multi:** I notice that it is mostly about the child, how the child is doing. How you are and how your complaints are, well, that’s just…. How the child is, is the most important.

One nulliparous woman who had been unhappy about the provision of health information by her midwives mentioned that her friends had told her about the nice, warm midwives they had. She herself could not understand the nature of her relationship with her midwives, and said: “I wish someone would give some instructions at the beginning about what to expect of our relationship.”

**Discussion**

In this study we aimed to explore the experiences, wishes and needs of pregnant women with respect to the health educational role of primary care midwives during their prenatal care. Women believed the midwife to be the designated health provider responsible for providing individualized health education, and being there to answer their questions. Women differed with respect to how much verbal and written health information they wanted from their midwives. They often still had questions about their weight gain, for instance and at times expressed uncertainty about certain health issues, such as the safety of physical activity or certain food products. Women believed that midwives individualized health education by estimating their clients’ knowledge, according to characteristics, such as their parity. Women also believed that much health education provided by the midwives was driven by their own questions. Women had varying views regarding the individualization of health education based on maternal characteristics and women’s questions, and on how accessible they felt their midwives were for questions between prenatal visits. Nulliparous women generally expressed a greater need for more health education than multiparous women. Building a good relationship with clients was considered to be an important midwife task underlying health education.

Although many women in our study reported being pleased with the health education provided by their midwives, a few women did report a need for more extensive health information. Previous studies have shown that pregnant women would like more information on nutrition and physical activity than they receive [23]. A review study showed that in general, little nutritional information is given by midwives internationally [24] and a previous Dutch study also showed that the nutrition education given verbally by midwives tended to be very general [25]. Women may be more likely to adhere to advice if they are told why this advice is important [24], implying that
providing more detailed information beyond the basics may be effective in practice.

Although some women had reported gaps in their knowledge, most did not appear to put any ‘blame’ on their midwives, suggesting they believed themselves to be responsible for obtaining the information they needed. In general public health, there has been an increasing focus on placing the responsibility of health on the individual, by encouraging self-management of health (Petersen et al., 2010). While encouraging personal responsibility for better health is considered ideal, Marchman Andersen et al. (2013) argue that no one can ever be held completely responsible for their own behaviours, as behaviours are the result of a chain of other circumstances one does not have control of [26]. This suggests that a certain amount of pro-activity with information provision and interventions from midwives may be justified, in order to increase awareness of and help shape beneficial health behaviours.

In our study, the nulliparous women in particular often expressed large gaps between prenatal visits during their first months of pregnancy, which they described as being a time of many uncertainties, questions and needing personal attention. Typically, women will have just one prenatal visit during the first trimester, usually between 6 and 8 weeks of pregnancy [14]. It may be worthwhile investing in more frequent prenatal visits or additional information meetings for newly nulliparous pregnant women during these months. As women have greater needs for attention in this early stage, they may be also more receptive to extensive information and recommendations about health and healthy behaviours, which may be beneficial for both their current as well as ensuing pregnancies.

In line with an increasing emphasis on self-management, more and more written information in leaflets and booklets, as well as links to websites are being supplied to pregnant women during their prenatal visits. The combination of verbal and written information has generally shown to be beneficial for increasing knowledge and retaining information [27, 28]. As some of the women in our sample mentioned and earlier studies have found, however, not all women will read or appreciate all the written materials, or only use them for reference [25]. An earlier study from Sweden [11] also reported that some women preferred verbal to written advice from their midwives. This suggests that written materials should be used as a complementary source of information, but should not replace verbal information provided by the midwife during the prenatal visits.

The women in our study believed that their midwives first estimated the amount of health knowledge they had, based on their educational level, their parity or their apparent health status, and tailored health education accordingly. This is in accordance with the Dutch guideline for prenatal care, which advises midwives to assess clients and give them individualized care [14]. While most women believed this assessment was done adequately, there were some concerns that midwives undertook this assessment superficially, leading potentially to incorrect assumptions about their needs and
wishes regarding health education. Women believed that if they looked healthy and were neither overweight, nor underweight, for instance, they would not receive much information on healthy nutrition or weight gain. A Swedish study had similar findings, in which new parents reported that appearing healthy led to receiving less information during pregnancy [11]. Similarly, in our study, when midwives asked whether the women smoked or drank alcohol in the booking visit, and they responded with ‘no’, the subject never re-emerged in subsequent prenatal visits. Appearing healthy, however, may still conceal suboptimal habits, such as smoking or drinking during pregnancy, which can be sensitive issues and therefore result in hesitance to disclosing such information [29]. A previous study examining how women felt about disclosing their smoking habits with midwives, also reported that some women were not ready to talk about this during their first prenatal visit, and were surprised that the subject did not re-emerge later in pregnancy [30].

Women also reported that additional and more detailed health information was provided only in response to questions they asked themselves. Although many women appreciated this, a few were concerned that not asking the right questions would lead to missing important information. This is similar to findings from a US study in which pregnant women reported only receiving advice about nutrition and gestational weight gain from their obstetricians, if they solicited it themselves [31]. It is possible that many women are not aware of what they need to know and therefore are less likely to ask relevant questions. Midwives in an earlier interview study, for instance, expressed frustration that the pregnant women who showed the least interest in nutrition were the ones most in need of a healthy diet [32]. Letting the contents of the prenatal consult be dependent on the questions asked by women, may therefore lead to a deficiency of information in those needing it the most. Women were also told they could call their midwives between prenatal visits, if they had questions, but some women expressed hesitation in calling for seemingly minor questions. This suggests that midwives could emphasize their availability more, by encouraging women to call a special telephone number with any questions or worries about their health.

Women wanted a client-friendly relationship with their midwife, which was often described as having a relationship of trust with her. They wanted midwives who made them feel at ease, were friendly, respectful, supportive of their choices, treated them seriously, gave them sufficient time, gave clear information, and were professional. People in general tend to rate their health care by the way they are treated (World Health report 2008). Some women considered a good bond with their midwives to be a prerequisite for influencing health behaviours, which has also been suggested in earlier studies [33]. Earlier studies on physician-patient communication also showed that physician qualities, including empathy, encouragement, increased time on health education, friendliness and courtesy were associated with positive health behaviours.
in patients [17, 34], making it plausible that midwife qualities that are client-friendly may also have some influence on a woman’s health behaviours. The first book written for midwives about health promotion also underlines the importance of good communication skills in health education, and mentions some essential qualities midwives should have, such as empathy, respect and being able to develop rapport [19].

Covering all essential topics such as alcohol, smoking, physical activity, healthy nutrition and recommended weight gain during prenatal visits may be helpful for those who express wanting more information and for those who believe they do not need it, but are nevertheless not aware of, or have forgotten recent health recommendations. Erring on the side of providing too much information, as opposed to too little, may on the whole meet a greater number of clients’ explicit and implicit needs for health education.

Further studies could focus on investigating the experiences in health promotion of pregnant women with health issues, such as smoking or alcohol consumption during pregnancy, as well as women starting their pregnancy in secondary care who are likely to have higher medical risks [35] and who may also have different needs in health promotion. Further studies could also explore the experiences of health educators from the perspective of midwives, how they perceive their role as health educators, how they assess their clients’ health educational needs and the barriers they experience in health promotion.

Strengths and limitations
Our study is qualitative, and therefore contains rich and nuanced information. The validation of our study was improved by the comparison of findings across all the transcripts and the search for negative findings which did not conform to the other findings. In doing so, we strived to present a balanced and objective view of women’s similarities and differences, illustrated by appropriate citations.

One possible limitation to improve the validation of our study was that we did not perform member checks with the respondents to ensure our interpretations of their experiences were correct. The conversations were audiotaped however, meaning we could go back and check what had literally been said. During the interviews, RB and QH had also checked their interpretation of the information that was provided to them by regularly summarizing what they had understood.

It is possible that women with a pre-existing interest in health were more likely to respond to our requests for participants and that the findings would differ for women who did not respond. However, we were able to recruit women varying in socio-demographic characteristics (such as age, education, ethnicity, parity and region) and with various health issues (such as smoking or being overweight), giving us a wide range of possible experiences. As the women were most likely under the care of 21 different
midwife practices, their experiences reflected the health education provided by different midwives in a wide range of practices and regions in the Netherlands. We did not include pregnant women who were in secondary care under the care of obstetricians, and therefore cannot compare their experiences with the women in our sample. Our respondents, who were under the care of primary care midwives, do reflect the majority of women living in the Netherlands.

Conclusions

Pregnant women generally appreciated the health education provided by their midwives. There were still some questions and uncertainties, however, regarding health issues which surfaced during the interviews. A more pro-active approach with information provision, may be of value not only to those with a clear desire for more information, but also those who are unsure of what information they may be missing. Encouraging clients to ask questions, however minor, between prenatal visits may benefit those who are hesitant to call their midwives. Midwives should continually be aware that each contact with a pregnant woman provides a unique opportunity to help improve her health and that of her children.
References


