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# The needs of women and their partners regarding professional smoking cessation support during pregnancy: A qualitative study

S. Weiland<sup>a,b,\*</sup>, J.C. Warmelink<sup>a,b</sup>, L.L. Peters<sup>a,b</sup>, M.Y. Berger<sup>a</sup>, J.J.H.M. Erwich<sup>c</sup>,  
D.E.M.C. Jansen<sup>a,b</sup>

<sup>a</sup> University of Groningen, University Medical Center Groningen, Department of General Practice & Elderly Care Medicine, Groningen, The Netherlands

<sup>b</sup> Amsterdam UMC, Vrije Universiteit Amsterdam, Department of Midwifery Science AVAG, Amsterdam Public Health Research Institute, Amsterdam, The Netherlands

<sup>c</sup> University of Groningen, University Medical Center Groningen, Department of Obstetrics & Gynecology, Groningen, The Netherlands

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### ABSTRACT

**Background:** Despite the health risks of smoking, some women continue during pregnancy. Professional smoking cessation support has shown to be effective in increasing the proportion of pregnant women who quit smoking. However, few women actually make use of professional support.

**Aim:** To investigate the needs of women and their partners for professional smoking cessation support during pregnancy.

**Methods:** Semi-structured interviews were held with pregnant women and women who recently gave birth who smoked or quit smoking during pregnancy, and their partners, living in the north of the Netherlands. Recruitment was done via Facebook, LinkedIn, food banks, baby stores and healthcare professionals. The interviews were recorded, transcribed and thematically analysed.

**Results:** 28 interviews were conducted, 23 with pregnant women and women who recently gave birth, and five with partners of the women. The following themes were identified: 1) understanding women's needs, 2) responsibility without criticism, and 3) women and their social network. These themes reflect that women need support from an involved and understanding healthcare professional, who holds women responsible for smoking cessation but refrains from criticism. Women also prefer involvement of their social network in the professional support.

**Conclusion:** For tailored support, the Dutch guideline for professional smoking cessation support may need some adaptations. The adaptations and recommendations, e.g. to involve women and their partners in the development of guidelines, might also be valuable for other countries. Women prefer healthcare professionals to address smoking cessation in a neutral way and to respect their autonomy in the decision to stop smoking.

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#### Statement of significance

#### Problem or issue

Despite the availability of professional smoking cessation support, only few pregnant women make use of professional support and continue smoking. Smoking during pregnancy has negative health consequences for the mother and fetus.

#### What is already known

A reason why pregnant women do not use professional smoking cessation support is because the support is not tailored to their needs.

#### What this paper adds

The results of this study provide insight into the needs of pregnant women and their partners for professional smoking cessation support. Our findings indicate that they have clear ideas about how this support should be organised.

\* Corresponding author at: Universitair Medisch Centrum Groningen, Hanzeplein 1, 9713 GZ, Groningen, The Netherlands.  
E-mail address: [s.weiland@umcg.nl](mailto:s.weiland@umcg.nl) (S. Weiland).

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## 1. Introduction

Smoking during pregnancy is associated with adverse health outcomes for both the baby, such as an increased risk of low birth weight, fetal growth restriction and stillbirth, and for the mother, such as cardiovascular disease and cancer [1,2]. However, despite these health risks, some women continue to smoke during pregnancy. With an estimated prevalence of around 8%, Europe has the highest prevalence of smoking during pregnancy compared to other regions in the world [3]. Women from lower socioeconomic groups, women who experience higher levels of stress, and women with a smoking partner are more likely to smoke during pregnancy [4,5].

To encourage pregnant women to quit smoking and to remain abstinent postpartum, healthcare professionals provide smoking cessation support. Several guidelines recommend that healthcare professionals provide counselling for behavioural changes [6–8], often based on stages of an individual's readiness for such change [9]. If needed, behavioural counselling can be combined with more intensive interventions, like pharmacotherapy or telephone-based support [6–8]. Smoking cessation support has shown to be effective in increasing the proportion of women who quit smoking during pregnancy [10,11].

However, despite its effectiveness, only a small percentage of pregnant women make use of professional smoking cessation support: in the United Kingdom (UK) and in the Netherlands respectively 12% and 7% of pregnant women [12,13]. Reasons for this might be that some healthcare professionals do not discuss smoking behaviour or offer support because they lack the necessary knowledge and training and are confronted with time restrictions and women's lack of motivation to discuss smoking cessation [14,15]. On the other hand, some pregnant women perceive that they have missed opportunities, as they were not informed about support options or have not received the information and support they preferred, and the support by professionals did not fit their needs [16,17].

To the best of our knowledge, only a few studies to date have investigated pregnant women's needs for professional smoking cessation support. These studies, performed in the UK, Australia, and New Zealand, were focused mainly on indigenous and socially disadvantaged women [17–20]. Personalised support, easily accessible information, and respectful discussions without judgement were identified as women's needs when considering smoking cessation support [17–19]. In addition, the study that focused on a more general population found that pregnant women prefer to receive support from someone who has also had experience with smoking [20].

Because of cross-country differences in smoking cultures, it cannot be said with certainty that these reported needs for professional smoking cessation support are the same as those of pregnant women in the Netherlands. Compared to the Netherlands, the UK and Australia have high levels of implemented tobacco control policies (e.g. budget for public information campaigns and smoking cessation services) [21,22]. Furthermore, in these countries the smoking cessation support services for pregnant women differ. The UK handles an opt-out referral system for pregnant women, and offers Carbon Monoxide (CO) testing as standard procedure [6]. In Australia and New Zealand, pregnant women are referred to telephone-based counselling (Quitline) for smoking cessation support [8,23], whereas in the Netherlands pregnant women are advised to consult a specialised healthcare professional for more intensive support [7].

Studies performed to evaluate these smoking cessation programs generally report that they are effective by increasing the proportion of pregnant women who stop smoking. In the UK, the introduction of the opt-out referral system with CO testing

has-, compared to the previous opt-in system, doubled the proportion of pregnant women who set a quit date and who actually stopped smoking [24]. Although no studies are available on the use of the Quitline by pregnant women in Australia and New Zealand, telephone-based counselling in general seems to be effective by increasing cessation rates [11]. A study performed in the Netherlands reported that behavioural counselling provided by midwives doubled the proportion of pregnant women who stop smoking [25]. However, only 10% of the Dutch midwives actually provide full behavioural counselling; more than 79% of the Dutch midwives refer pregnant women for more specialised support [26].

The aim of this qualitative study was to investigate the needs of pregnant women and their partners in the northern Netherlands for professional smoking cessation support. The focus is on the north of the Netherlands because of its high percentage of pregnant women who smoke [27]. Moreover, as the smoking behaviour of pregnant women is associated with the smoking behaviour of partners, the needs of the latter will also be taken into account [5].

## 2. Methods

### 2.1. Design

This qualitative study makes use of a phenomenological framework, aimed at understanding people's experiences within the context of their daily life [28]. Semi-structured interviews were held to gain insight into the need for smoking cessation support during pregnancy on the part of women and their partners living in the northern Netherlands [28]. In February 2020, at a Dutch conference for tobacco control, a peer debriefing was performed. The purpose of a peer debriefing is to establish the reliability and trustworthiness of the data [28]. On the conference for tobacco control, we presented the method and results of this study to researchers and healthcare professionals responsible for supporting smoking cessation. After the presentation, the interpretation of the results was discussed with the peer researchers and healthcare professionals. The researchers and healthcare professionals at the Dutch conference for tobacco control confirmed the results of this paper.

### 2.2. Recruitment of women and their partners

Interviews were conducted with women and partners living in the northern provinces of the Netherlands, i.e. Groningen, Friesland and Drenthe. Because the prevalence of women who smoke is known to increase postpartum in the Netherlands [13], women who had recently given birth were also involved in this study. Women were invited to participate if they were pregnant and were currently smoking, pregnant and had quit smoking at the start of or during their pregnancy, or if they had given birth within the last year and were currently smoking.

Two experts by experience in poverty and social exclusion, and two researchers from an organisation that represents the voices of consumers in research (in Dutch: Zorgbelang), were involved in the recruitment of women. A flyer with information about the study and contact details of the first author (SW) was distributed via Facebook groups targeting mothers in the north of the Netherlands, social media pages of the researchers (i.e. LinkedIn and Facebook), the network of Zorgbelang, food banks, supermarkets, baby stores, midwives, and obstetricians, and subsequently via women and their partners. We aimed to include a representative sample of women and their partners with different social backgrounds, living in the north of the Netherlands. Women could sign up for the interview by contacting SW via e-mail or telephone. Partners were recruited via the interviewed women.

**Table 1**

Examples of the coding process: the needs of women and their partners regarding professional smoking cessation support during pregnancy.

Coded segment	Sub-theme	Theme
"Definitely if they know that you smoked before the pregnancy, just ask every time you come, uh, every time you come, are you smoking? You know, give it some attention." (#3, pregnant, current smoker)	Involvement	Understanding women's needs
"So, just that it is important that you feel respected, that you don't just get the feeling that you are doing something bad and that you have to stop." (#1, recently gave birth, quit smoking during pregnancy)	Being valued	Responsibility without criticism
"I think that if you involve the partner more, you know, because they say: Yeah, you need to stop smoking because YOU are carrying the child. Yeah, that's all logical and so, but if you have a partner next to you who just keeps on smoking and doesn't even cut down, then it isn't easier for yourself." (#8, recently gave birth, smoked during pregnancy)	Role of the partner	Women and their social network

Recruitment continued until data saturation for the interviewed women was reached.

The women and their partners were informed about the aim of the interviews both in person and by an information letter, after which they were asked to sign an informed consent form. Participation was voluntary and women and their partners could withdraw from the interview at any moment. For taking part in the study, women and their partners received a voucher worth €25.

### 2.3. Data collection

Semi-structured interviews were held from May 2019 until October 2019. The experts by experience and the researchers from Zorgbelang were involved in the development of a semi-structured interview guide, whereby special attention was paid to the phrasing of the questions. The main question of interest was: "How would you like to be supported with smoking cessation during pregnancy?" After each interview, field notes were written down and the interview guide was evaluated. No questions were added to the interview guide.

The interviews were conducted in Dutch by SW, either alone or together with an expert by experience or a researcher from Zorgbelang. All interviewers were female and received interview training beforehand. At the start of the interview, the interviewers introduced themselves to the participant, telling briefly about their work and their involvement in the study. The interviewers had no relationship with the women and their partners before the interview. The interviews were held at a location of the women and their partners' choice, most often at their homes or at the University Medical Center Groningen. Children of the women and their partners were present during eleven interviews. The interviews lasted on average 39 min (range 18–66 min). The interviews were audio recorded with permission from the women and their partners. A member check was performed by giving women and their partners the option to read and comment on the completed transcripts [28]. After completion of the study, women and their partners were informed about the results, but none of them gave feedback on the transcripts or results.

### 2.4. Data analysis

The recordings of the interviews were transcribed verbatim and anonymised. Data management and coding was done with the software ATLAS.ti 8.4. Data collection and analysis took place concurrently. The data was analysed using a six phase thematic approach [29]. First, SW (health scientist) read all transcripts multiple times to become familiar with the data. The second author (JCW – psychologist) also read seven transcripts. After becoming familiar with the data, SW and JCW discussed the transcripts with the aim to generate initial codes. Afterwards, SW applied the formulated codes to the data. In the third phase, SW and JCW discussed the codes with the aim to identify potential patterns in the data. The codes were arranged in categories which

defined themes and sub-themes. In the fifth phase, the identified themes were further refined to interpret the data, as illustrated in Table 1. SW and JCW compared three transcripts with the code tree to ensure that the themes completely covered the essence of the data. During the peer debriefing, the researchers and healthcare professionals agreed with the methods used and the results as formulated. Lastly, the report of the findings was written. Quotes were translated into English by a native speaker.

## 3. Results

### 3.1. Women and their partners

Demographic characteristics of the women and their partners are illustrated in Table 2. In total, 23 women and five partners participated in the interviews. Nine women who initially applied for the interview did not participate; two were not living in the north of the Netherlands and seven did not respond to the request to make an appointment. The women and partners were on average 29 years old (range 20–41 years). At the time of the interview, thirteen women were pregnant, of whom four were currently smoking and nine had quit smoking during pregnancy. Most women quit smoking directly after a positive pregnancy test, and one of the women at the end of her pregnancy. Ten women had recently given birth, of whom five smoked during the entire

**Table 2**  
Demographic characteristics women and their partners.

Characteristic	Frequency
<b>Gender</b>	
Female	23
Currently pregnant	13
Recently gave birth	10
Male	5
<b>Age, average (range)</b>	29 (20–41)
<b>Smoking status</b>	
<b>Women</b>	
Currently pregnant	13
Smoking at the time of the interview	4
Quit smoking at the time of the interview	9
Recently gave birth	10
Smoking at the time of the interview	10
Quit smoking during pregnancy	5
<b>Men</b>	
Smoking at the time of the interview	4
Quit smoking at the time of the interview	1
<b>Socioeconomic status<sup>a</sup></b>	
Low SES	5
Middle SES	19
High SES	4
<b>Province</b>	
Groningen	16
Friesland	5
Drenthe	7

<sup>a</sup> Classified according to Dutch standard education division [40].

pregnancy and five started smoking again postpartum. Four of the five interviewed partners were currently smoking.

### 3.2. Themes

From the analysis of the data we derived the following three main themes regarding the needs of women and their partners for professional smoking cessation support: 1) Understanding women's needs, 2) Responsibility without criticism, and 3) Women and their social network. The coding tree is shown in Table 3.

#### 1 Understanding women's needs

Women and their partners expressed that apart from the complexity of a nicotine addiction, circumstances in their daily life influenced their decision to continue smoking during pregnancy. Some women experienced serious life-events before and during pregnancy, such as unstable relationships, financial stress, and loss of family members. For these women smoking was a way of coping with these life-events; they expressed that they could consider smoking cessation only when these stressors were dealt with.

*In my case it's to have something to do and as little stress as possible. It actually has a bit to do with external circumstances –. Yeah, with me it's just a typical vicious circle. So I know why I smoke and so. (#16, pregnant, current smoker)*

Women who were motivated to stop smoking preferred that the healthcare professional continue to ask about their smoking behaviour and need for support during the entire pregnancy. With all women smoking was discussed during the first visit, but often remained unaddressed in subsequent consultations. Both women who managed to quit smoking and those who did not succeed, would have preferred to discuss their smoking behaviour and need for smoking cessation more often. The women who stopped smoking would have liked to share their struggles and receive compliments from the healthcare professional.

*She did not discuss it any further, like "are you struggling with it?". No, she just asked "have you stopped (smoking)?" And when I confirmed, that was that. Then I was thinking yes [...] 'give me a compliment or something'. But she was like "okay, fine!". (#9, pregnant, quit smoking)*

Women who continued to struggle with smoking cessation would have preferred the healthcare professional to keep considering ways to stop smoking. On the other hand, women who did not want to stop smoking expressed that they did not want the healthcare professional to address the issue in subsequent visits. According to the women, healthcare professionals can best discuss smoking cessation by asking open questions (e.g. 'what would be a reason for you to think about smoking cessation?' and 'how can I support you with smoking cessation?').

*I think, just asking what someone needs, [...] more like if a midwife asks 'how can I support you?' Like that. (#12, pregnant, quit smoking)*

Women and their partners had different preferences as to the kind of healthcare professional to support them with smoking cessation: their midwife, general practitioner, a practice nurse, an addiction expert, or an expert by experience with smoking. In general, women and their partners emphasised the importance of someone with personal knowledge of nicotine addiction, someone who understands their struggle. Some women perceived that their healthcare professional did not really understand how difficult smoking cessation was for them.

*But then you get that advice, the really standard advice. Like oh yes, you just have to go on, and if you feel the urge you should eat a grape or drink a glass of water. I think that is just no use. That's just the kind of advice non-smokers give. (#26, pregnant, quit smoking)*

#### 2 Responsibility without criticism

The majority of women and some partners highlighted how important it was that the healthcare professional recognise a woman's own responsibility in smoking cessation. Smoking and smoking cessation were seen as individual decisions. Although women wanted the healthcare professional to show involvement, some women and their partners expressed that they wanted to make the decision to quit smoking themselves, and therefore did not need additional support from a healthcare professional.

*But I want to do it myself. I'm the boss over my own body; that's how I see it. [...] Then I think 'yes, I'm the one who started, I know there are lots of disadvantages to smoking, um, I'm a grown*

**Table 3**

Coding tree: the needs of women and their partners regarding professional smoking cessation support during pregnancy.

Theme	Sub-theme	Sub-category
1. Understanding women's needs	• Stressors	
	• Involvement	Give compliments and Discuss it more often
	• Communication	Ask open questions
	• Healthcare professional	Understand complexity
2. Responsibility without criticism	• Individual responsibility	
	• Information	Health consequences and support options
	• No judgment	
	• Being valued	
3. Women and their social network	• Influence of friends, colleagues and family	
	• Role of the partner	Involve partner in smoking cessation support
	• Peer support	Group-based prenatal care



woman. So then I should be able to do it myself. (#4, pregnant, quit smoking)

For most women, the health of the fetus and their wish to be a role model for their children was their main motivation to quit smoking. To be able to make an autonomous, informed decision, women indicated that they would have liked to receive more tailored and visual information from healthcare professionals about the health damage of smoking for them and for their fetus, for example information about the oxygen level in their placenta or the condition of their own lungs.

*I don't know, I think that it is because these television programs like 'Four hands on one belly' where you see that a baby is actually born prematurely and is small and has to be put in the incubator. [ . . . ] That could eh be a tip, to really make it visual. (#7, pregnant, quit smoking)*

In addition, women wanted to receive information about the various methods for smoking cessation support (e.g. nicotine replacement therapy). A few women expressed a need for medication that can help with smoking cessation and can be taken during pregnancy.

Since women and their partners perceived smoking as their own responsibility, they did not want healthcare professionals to interfere with this. Therefore, healthcare professionals who criticise women for smoking during pregnancy, and who address the issue in a judgmental way, evoke resistance on the part of the women and their partners. The women and their partners expressed that they wanted to be valued and respected by the healthcare professionals, whether or not they stopped smoking.

*That they didn't use pressure or nag, that they made their point clear in a very respectful manner. But that they tried to do everything in agreement with me, also giving information. That way you don't feel forced, you don't feel as if the school teacher is waving his finger at you. That was very nice. (#21, recently gave birth, smoked during pregnancy)*

### 3 Women and their social network

The women had many smokers in their social networks. Apart from their partners, most women had friends, family, and colleagues who also smoked. Being exposed to the smoking behaviour of others can be challenging for these women. Although most women did not expect their partner to stop smoking during their pregnancies, they did express that this would be of great support for them.

*And I think eh if my boyfriend would not smoke, it would be a lot easier. Well, he can quit, but he says: "one should be ready for it, one should not be obliged to stop, because then it won't work". And then for a while, he only smoked at his work. But then I noticed that he became a bit more grumpy and because of that we got into arguments. And then I said: you know, please start smoking again. Because I . . . it shouldn't be at the expense of your relationship. (#2, pregnant, current smoker).*

*We did talk about it, that he would also quit smoking. Especially when the baby is born. But yes, I also know how difficult it is to stop smoking [ . . . ]. The baby is of course in my belly, not in his. So I also understand that for him-, well, that he does not have the big stick that I have. (#17, pregnant, quit smoking)*

Some women indicated that the healthcare professional should involve the partner in smoking cessation during pregnancy.

*I mean, uh, I definitely think that if there are two smokers in a relationship, that you should almost, uh, actually take on the project together. Of course, uh, some things you can only do alone, but you need support from others and if you are constantly being*

*tempted, yeah, that doesn't have much impact. (#10, partner, quit smoking)*

In addition to the role of the partner, the women felt the need to receive support from others in their social network. Most women said that during their pregnancy their friends and family did not smoke in their presence. Some women preferred the support of friends and family above support from a professional.

*Yes, I really do think from the family. I think family and friends could pull me through better than somebody from outside. (#25, recently gave birth, quit smoking)*

Furthermore, some women experienced great support from other pregnant women when dealing with smoking cessation. They expressed that these women knew and understood what they were going through. A number of women received group prenatal care, where they experienced professional support in a group where some other women had also stopped smoking.

### 4. Discussion

Although healthcare professionals offer smoking cessation support for pregnant women, only few women actually make use of this support [12,13]. We aimed to gain insight into the needs of pregnant women, and of women who recently gave birth and their partners in the north of the Netherlands with different social backgrounds in relation to professional smoking cessation support. We identified three main themes: 1) Understanding women's needs, 2) Responsibility without criticism, and 3) Women and their social network. The results indicate that women need support from an understanding and involved healthcare professional who tailors the support to their needs; women's experienced stressors and motivation levels have implications for their support needs. Women want the healthcare professional to discuss smoking cessation in a neutral way and to support them in making their own decision about it. Women also value the involvement of their social network in the professional support.

Our first result suggests that some pregnant women do want to quit smoking, but cannot because of serious life-events which they have experienced before or during pregnancy. Women indicated that it is difficult for them to be open to smoking cessation support if these stressors persist. This result is in line with other studies that identified stress as an important barrier to smoking cessation [15,30]. These studies conclude that learning to cope with stressors should be part of smoking cessation programs [15,30]. However, although stress reduction interventions seem to be effective for reducing stress levels during pregnancy [31], the pregnancy period may be too short and too intensive to deal adequately with stressors. In light of the importance of smoking cessation during pregnancy, stressors should be made open to discussion and women taught to cope with these, preferably in an early phase or even before pregnancy.

A second result is that the needs of women who are motivated to stop smoking seem to differ from those of non-motivated women. While motivated women indicated that they need (more) support from an involved healthcare professional, non-motivated women seemed to prefer less involvement. This result illustrates that women need support that is tailored to their own level of readiness to quit smoking [9]. In previous qualitative studies, women perceived healthcare professionals to be coercive or nagging when the support was not tailored to their own readiness to change [17,20]. Although the Dutch guideline recommends repeated discussion of smoking cessation even if women are not motivated to stop smoking [7], little evidence is available about the effectiveness of such repetition [32]. This raises the question whether healthcare professionals should persist in discussing

smoking cessation if women are not ready for it. Based on the needs of the women and their partners in our study, healthcare professionals might first need to ask women in what way and how frequently they want to be supported, so as to tailor the support to their readiness to change. This is contradictory to the principle of an opt-out referral system in the UK, where women are automatically referred for smoking cessation support [6].

A third finding of our study is that pregnant women and their partners perceive smoking behaviour as their own responsibility. This perceived autonomy in smoking behaviour was not reported in previous studies, performed in the UK, Australia and New Zealand, to address pregnant women's support needs [17–20]. However, a Dutch study among people with chronic obstructive pulmonary disease (COPD) also reported that they had a need for autonomy in smoking behaviour. The authors stated that this could be related to the Dutch emphasis on individualism [33]. Furthermore, the perception of autonomy might be fed by public health campaigns that hold the individual responsible for adopting a healthy lifestyle [34]. Our finding implies that respect for autonomy in the smoking behaviour of women and their partners is an important element for tailored smoking cessation support.

Related to the women and their partners' desire for autonomy in smoking behaviour is their wish to receive more information about how smoking affects their own health and the health of the fetus; women indicated that they preferred to see proof, hoping that this information would motivate them to quit smoking. This could indicate that to enhance women's motivation to stop smoking more attention could be focused on providing feedback and personalised information [11]. In the UK this information is given in the form of Carbon Monoxide (CO) feedback, found to be a helpful tool in motivating women to quit smoking [24]. CO testing is not a standard part of the Dutch guideline for smoking cessation support during pregnancy, but might be an option to explore [7].

The women in our study preferred the healthcare professional to involve their social network in the smoking cessation support. Having ascertained the great influence of partners on women's smoking behaviour [5], previous studies also reported the importance of involving them in smoking cessation support [5,35]. Although women in our study preferred the involvement of their social networks, this might be difficult to achieve because partners and others members of their network are not always willing to be involved and to stop smoking [36]. Despite this discrepancy, a recent Dutch study recommends adjusting the guideline for smoking cessation support to include individuals from women's social network in smoking cessation support by giving them advice to stop smoking, providing information about third-hand smoke, and referring them for intensive smoking cessation support [36].

#### 4.1. Strengths and limitations

A strength of this study is its use of multiple methods to increase the validity and reliability of the results. After conducting the interviews, we used a member check and peer debriefing to ensure agreement over the results. Furthermore, we involved experts by experience and researchers of *Zorgbelang* in the design and execution of the interviews. They ensured that the interview questions were phrased in a way that made women feel at ease to share their experiences, as smoking during pregnancy could be a delicate issue to discuss. Furthermore, the involvement of these experts made it possible to recruit women with a lower socioeconomic status, who are difficult to recruit [37].

Some limitations of this study must also be acknowledged. One is that a response bias may be present in the recruitment of the women and their partners. The women who applied for the interview might be more willing than other women to share their

needs. Furthermore, because we interviewed only a small number of partners we did not reach data saturation for them.

#### 4.2. Recommendations

Based on our results we can offer a few recommendations to improve the implementation of the guidelines for smoking cessation support and thereby the use of smoking cessation support by pregnant women. The adaptations and recommendations might also be valuable for other countries.

First, already in an early phase or before pregnancy some women might need to receive support focused on stress relief and coping with stress. Second, healthcare professionals can best discuss smoking cessation in a neutral way, and tailor their support to women's needs by asking them how they want to be supported. Third, options could be explored to incorporate in the smoking cessation support guidelines tailored information and feedback about the negative effects of smoking on women's own health and the health of the fetus. Fourth, future research could explore ways to increase the involvement of partners and others (e.g. friends and family members) from women's social networks in professional smoking cessation support. Lastly, involvement of women and their partners in the development of smoking cessation support guidelines could make the latter more tailored to women's needs and thus more likely to be implemented [38,39].

#### 5. Conclusion

Although professional smoking cessation support increases the prevalence of women who quit smoking during pregnancy, few women actually make use of smoking cessation support. We aimed to gain insight into the needs of women and their partners for professional smoking cessation support during pregnancy. The findings of our study indicate that women and their partners have clear ideas about how the support could be organised. To better tailor this support to women's needs, the current guidelines for professional smoking cessation support could benefit from some adaptations. Moreover, women's needs for smoking cessation support may differ depending on the influence of stress in their lives and their motivation levels. The findings of our study add that pregnant women and their partners perceive smoking behaviour as their own responsibility. Therefore, healthcare professionals can best address smoking cessation in a neutral way, and respect women's autonomy in their decision about smoking cessation. More research is needed regarding the inclusion of women's social networks in smoking cessation support. Early involvement of women and their partners in the development of guidelines could improve the implementation of the guidelines and the use of smoking cessation support. Healthcare professionals in other countries where smoking during pregnancy is prevalent may also benefit from the insights provided by this study [3].

#### Author agreement

The article is the authors original work and has not received prior publication and is not under consideration for publication elsewhere. All authors have seen and approved the submission of the manuscript. The author(s) abide by the copyright terms and conditions of Elsevier and the Australian College of Midwives.

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healthcare professionals supporting low SES pregnant women in the North or the Netherlands'. ZonMW had no involvement in the study design, the collection, analysis or interpretation of the data.

### Ethical statement

A waiver (number: METc 2019/099) was obtained at 12-02-2019 from the ethical review board of the University Medical Hospital Groningen which states that the Medical Research Involving Human Subjects Act (WMO) does not apply to this study.

### Conflict of interest

None declared.

### CRediT authorship contribution statement

**S. Weiland:** Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Project administration, Writing - original draft. **J.C. Warmelink:** Data curation, Formal analysis, Project administration, Writing - review & editing. **L.L. Peters:** Conceptualization, Data curation, Funding acquisition, Methodology, Project administration, Resources, Supervision, Writing - review & editing. **M.Y. Berger:** Conceptualization, Funding acquisition, Project administration, Supervision, Writing - review & editing. **J.J.H.M. Erwich:** Conceptualization, Funding acquisition, Project administration, Resources, Supervision, Writing - review & editing. **D.E.M.C. Jansen:** Conceptualization, Funding acquisition, Methodology, Project administration, Resources, Supervision, Writing - review & editing.

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