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Research article

# Meeting the needs of pregnant women in socially vulnerable situations: A phenomenological qualitative study

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ABSTRACT

*Objective:* Vulnerability relates to fragile physical, psychological, and socio-environmental circumstances. Pregnant women's social vulnerability can lead to disruptions in their medical follow-ups, prematurity, and increased infant mortality rates, such that their special needs must be considered. Yet, despite different governments' 'perinatality' plans, international literature suggests their care can be improved. Although quantitative studies regularly evaluate these plans, few studies have assessed vulnerable pregnant women's views. This study explores the needs and expectations of vulnerable women regarding their follow-ups during pregnancy and identified strategies to improve their circumstances.

*Methods:* The study was a phenomenological qualitative study involving semi-structured interviews with women who gave birth in the past six months (December 2017 to June 2018) and who fulfilled at least one vulnerability criterion. The women were recruited by French midwives and general practitioners (GPs).

*Findings:* Concerning these vulnerable pregnant women, three phenomenological categories emerged: 1) they need to be monitored by a single trusted contact; 2) they seek medical and social support adapted to their situations that addresses their needs; and 3) they expect kind and person-centred communication skills from professionals who provide them appropriate information.

*Conclusion:* We identified various international recommendations to screen and care for vulnerable pregnant women, but still these women often experience numerous challenges. Finally, the implementation of recommendations for healthcare professionals based on women's real-life experiences could help optimise the identification of vulnerable pregnant women as well as their follow-up care.

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## 1. Introduction

Pregnancy is a physiological process, however, for the majority of women, the time from conception to the postpartum stage is also a significant psycho-emotional [1] period of upheaval. Thus, pregnancy can be a factor of vulnerability. Notably, biological, psychological, and sociological circumstances contribute to women's vulnerability, and a vulnerable state prior to pregnancy increases the risk of a less favourable outcome, particularly concerning whether or not women have recourse to support processes in the presence of a 'threat' or 'obstacle' [2]. Further, these circumstances increase the risk of domestic violence [3], for which screening is systematically advocated for [4,5], and of postpartum depression, which must be identified and managed due to the suicide risk [6,7].

In developed countries, how pregnant women are monitored varies [8], as does the number of consultations, ultrasounds, and monitoring professionals. In France, medical follow-ups for pregnant women are conducted by midwives, gynaecologists, and general practitioners (GPs) and are done in outpatient clinics, in consultation with the French Protection Maternelle et Infantile (Mother and Child Protection) [9] service, private clinics, and public hospitals. The French Protection Maternelle et Infantile, a local structure, and the public hospital are resources for vulnerable patients. French Protection Maternelle et Infantile (PMI) is a departmental service under the authority of the president of the departmental council and responsible for protecting the health of mothers and children. The service organises consultations and medico-social prevention and monitoring activities for pregnant women, parents, and children under 6, as well as family planning and family education activities.

In France, a gynaecologist serves as the referring doctor for half of all pregnancies. Medical gynaecologists provide follow-up care for up to six months, unlike obstetric gynaecologists who provide all necessary follow-up care and carry out deliveries. Midwives are becoming increasingly involved in monitoring pregnancies. They are the point of contact for one in five pregnancies [10] and they monitor and provide medical care during pregnancy and offer birth and parenthood preparation sessions. They are authorised to deliver low-risk pregnancies in private and public hospitals. Furthermore, French GPs are authorised to monitor low-risk pregnancies. They represent an alternative for patients to gynaecologists due to their availability and proximity and they can facilitate monitoring, coordination, and minor problems during pregnancy. However, GPs' role in antenatal care has declined, and in 2016 they were the main referral for one in every ten pregnancies [10]. A patient's choice of professional is made according to their wishes, after assessing their pregnancy risk level based on medical, gynaecological-obstetric, and socio-environmental criteria.

Further, in France in 2016, 92.9 % of women had at least six of the seven recommended prenatal consultations, and 93.9 % had at least three of the recommended ultrasounds [10]. In Canada, care for women during pregnancy is multi-professional (e.g., obstetrician, nurse practitioner, midwife, general practitioner). Women can choose prenatal care providers based on the size and resources of the community that they live in Ref. [11]. Antenatal care can be provided mainly on an individual basis and sometimes in groups [11]. Group antenatal [11] care allows for improved patient education and social support. In the United Kingdom, women register with a midwifery centre attached to a maternity hospital if needed and the centre will facilitate all follow-ups [12]. However, women are not able to choose their centres or maternity hospital [12]. There are nine visits for the first pregnancy, and six for subsequent pregnancies [12].

Moreover, health and social vulnerability are prevalent in all developed countries. Broadly, vulnerability relates to fragile physical, psychological, and socio-environmental circumstances, which expose a person to risk and reduce the ability to cope with life events [5,6,13]. Specifically, social vulnerability among pregnant women can lead to late declarations of pregnancy, disruptions in medical follow-up, prematurity, and children with stunted growth and is correlated with increased infant mortality rates [6,7,11]. The French government, similar to other developed countries, has developed multiple national 'perinatality' plans to improve follow-up and care conditions for pregnant women [8,11,14,15]. French [16,17] and international perinatal plans and clinical practice recommendations for pregnant women address the specificities of vulnerable pregnant women [11,12,15–19] including relational problems, prior negative birth experiences, domestic violence, stress, anxiety, sleeping disorders, mood disorders, addictions, vulnerability, births with high psycho-affective risk (e.g. illness, malformation, or disability), and social risks. Social risks include illness, unemployment, and changes in family composition resulting from children, single-parent homes, or marital breakdown [8,11,14,15].

Despite these plans, the international literature indicates there is room for improvement in the support and care of pregnant women in vulnerable situations. Professionals need to identify vulnerable pregnant women and facilitate their access to care [16,20,21]. Currently, there are quantitative epidemiological studies evaluating the effectiveness of perinatal measures [21–23]. In addition, some studies have considered pregnant women's views of their maternity and follow-up experiences [24,25] or screenings conducted by GPs [1]. However, very few studies have assessed the views of vulnerable pregnant women regarding their everyday experiences, and those that have, have done so only in relation to a specific dimension, such as cultural specificity [26–30]. Thus, exploring vulnerable pregnant women's daily experiences across all dimensions is significant. This is especially necessary to better understand their specific needs and challenges and optimise their follow-up. As such, this study explores the needs and expectations of vulnerable women in a developed country regarding follow-up during pregnancy. In addition, we aim to inform healthcare professionals of strategies to improve follow-ups for pregnant women in vulnerable situations.

## 2. Materials and methods

### 2.1. Participants

We recruited women from three private midwives' clinics and three general practice clinics. The women were from a rural area in France with a high rate of vulnerable women; in other words, the local poverty rate is higher than that in the general French

population: 23 % vs. 14 % [31]. They also lived far away from hospitals. We included women who had given birth to a living child in the six months preceding the study (December 2017 to June 2018) and who fulfilled at least one of the following social vulnerability criteria (based on national surveys and 2005 French Health Authority national guidelines) [10]. The criteria included, being in a difficult financial situation (e.g., unemployment, unemployed partner, or precarious job), family composition-related issues (e.g., isolated parenthood, relationship breakdown, or domestic violence), foreign nationality, communication problems, being younger than 20 years old, or geographical isolation.

First, the interviewer (LG) met with the midwives and GPs to introduce the study and discuss the inclusion criteria for participation (women who had given birth to a living child in the six months preceding the study and who met at least one of the following social vulnerability criteria: being in a difficult financial situation, family composition-related issues, foreign nationality, communication problems, being younger than 20 years old, or geographical isolation). Then, GPs and midwives introduced the study to women who met the inclusion criteria, on an individual basis, and obtained their consent to be interviewed (in French). Women who met the inclusion criteria were recommended to us to be involved in a face-to-face semi-structured interview. They had the opportunity to reflect on whether they wanted to participate, after which several women declined. The interviewer (LG) scheduled appointments, by telephone, at the homes of the women who agreed to be interviewed. Written consent was obtained. All women spoke French. Despite some language limitations, all participants were able to give full consent (or refuse to participate). However, due to some difficulties expressing themselves, some women could have been limited in the in-depth exchange with the interviewer. Researchers did not feel it was appropriate to use interpreters due to intimate nature of the interviews.

### *2.2. Ethics*

This study was conducted in accordance with the Helsinki Declaration and French regulations. Moreover, the Commission Nationale de l'Informatique et des Libertés was informed of the study as required. Ethical approval for this research was granted by the Collège National des Généralistes Enseignants Ethics Committee in 2018 (Number N°22111859) and we obtained informed consent from participants; the study's aims and methods were explained verbally and in writing.

## 3. Methods

### *3.1. Study design*

This was a phenomenological qualitative study involving interviews and phenomenological semiopragmatical analysis. The study explored the needs and expectations of women in vulnerable situations regarding follow-ups during pregnancy through an understanding of their lived experiences [32,33].

### *3.2. Interviews*

An interview guide was produced by two researchers (LG, BL) prior to the semi-structured interviews based on a narrative review of related literature (PubMed and Cochrane databases) [10,11,16,25,28–30,34–40] [Table 1]. Then, the interview guide was evaluated by two other qualitative research methodologists (AOE, GB) by analysing the results obtained from the first interview. They verified the appropriateness and the intelligibility of the questions after the first interview was completed (included in the analysis). The guide, which comprises five open-ended questions and prompts, was adapted to allow for the retrieval of as much information as possible after the initial interview. To obtain person-centred responses, careful attention was paid to reminders using phrases such as 'in your opinion'. The interview guide was modified after the first two interviews to obtain clearer answers for the study objectives. These pilot

**Table 1**
Interview guide.

| |
|---|
| 1. I am interested in your healthcare pathway as a pregnant woman. How did-you experience your pregnancy? Your medical follow-up? |
| Prompts |
| - How would you explain the role your healthcare professionals had during your pregnancy? |
| - How would you explain the role your close relatives had during your pregnancy? |
| 2. How did you seek information during your pregnancy? |
| Prompts |
| - With whom did you discuss? |
| - What did you know about financial care during pregnancy follow-up? |
| - What other information did you have during your pregnancy? |
| 3. Can you recall a situation during which you were aware that you did not have access to care or a consultation during pregnancy, though you would have liked to? |
| Prompts: |
| - Describe the situation to me. |
| - What happened? |
| - What you did? How you felt? |
| 4. According to you, what is an optimal pregnancy follow-up like? |
| Prompts: |
| - - What about the post-natal period preparation? |
| 5. Would you like to add something about the subject? |

interviews were analysed and included in the results. The interviews were audio recorded and then transcribed. The recordings were destroyed after the transcriptions were completed. The interviews were anonymised by coding participants as pseudonyms.

### 3.3. Data collection

One researcher (LG), who was trained in phenomenological interviewing, interviewed the women between May and December 2018. Data collection ended after data saturation, that is, when the analysis of the interviews did not add any new information [32].

To identify relevant categories, verbatim transcripts were analysed using floating reading and annotations at the margins of the interviews [32]. Socio-demographic data were collected at the start of the interviews. The phenomenological analysis was carried out concurrently with the interview to enrich our questions and deepen a particular theme or understanding of a category. In addition, analysis was carried out inductively by three researchers without any a priori assumptions (the researchers were unfamiliar with the topic). The phenomenological analysis was triangulated by the interviewer (LG) and two other qualitative researchers (BL, EM). Pragmatic phenomenology is a descriptive categorisation method of lived experiences based on recorded semi-directed interview transcripts. Our pragmatic phenomenological analysis was based on Pierce's Universal Category Theory and Sign Class Theory (Semiotics) [33]. Pierce describes 3 classes of signs to describe the phenomenon under study: signs of law, generalities or concepts (thirdness, coded 3), signs of fact or experience (secondness, coded 2), and emotional signs or feelings (firstness, coded 1). These signs have dependency relationships with each other: 3 presupposes 2, which presupposes 1. The formal [3/2/1] semio-pragmatic system of this analysis method enables us to order the data to obtain conceptual categories. This limits interpretation bias linked to the sensitivity of the researcher.

All the semiotic elements of a text, including linguistic and contextual cues, are taken into consideration by the researcher [33,41,42]. Semio-pragmatic analysis, the stages of which are described below, is based on several processes [41–44].

1. The word-by-word transcription of recordings (verbatim).
2. A reading using floating attention, followed by a focussed reading.
3. Extracting signifying units from the text and grouping these units by themes.
4. Collating textual and contextual meaningful semiotic elements and their semio-pragmatic characterisations.
5. A first categorisation through a regrouping of these semiotic elements and the signifying units according to the research question.
6. Enriching the categories by continuing the comparison until the theoretical saturation is reached.
7. Placing the emerging categories in a logical order inspired by C.S Pierce's Theories [33] and reducing them and their properties to model the ensemble in integrative semio-pragmatic statements

The triangulation of the analysis took place when the verbatims were coded. Three researchers carried out the coding and then met to compare their analyses and agree on the results.

### 3.4. Reliability criteria

This study was conducted according to the Standards for Reporting Qualitative Research criteria [45]. To respect the trustworthiness of the data, a semio-pragmatic phenomenology was used to analyse the data without improper interpretation to stay true to what the women were saying. In our qualitative study, credibility was respected by methodological choices: we ensured coherence

**Table 2**
Sociodemographic characteristics of the study.

| | Age (years) | Professional situation | Marital status | Number of children | Partner's professional situation | Nationality/duration of stay in France | Social protection |
|---|---|---|---|---|---|---|---|
| Sophie | 32 | Housewife | Married | 3 | Farm worker | French | CMU[a] |
| Lucie | 34 | Unemployed | Cohabitation | 2 | Wage-earning contractor | French | ACS[b] |
| Chloé | 34 | Unemployed | Contractual partnership | 2 | Electrician | French | HI[c] + CHI[d] |
| Anne | 42 | Housewife | Contractual partnership | 4 | Construction employee | Portuguese in France for three years | ACS[a] |
| Marie | 36 | Waitress | Cohabitation | 2 | Military | French | HI[c] + CHI[d] |
| Laura | 28 | Unemployed | Cohabitation | 1 | University lecturer | Gabonese in France for two years | HI[c] + CHI[d] |
| Juliette | 30 | Unemployed | Married | 1 | Credit controller | French | CMU[a] |
| Valérie | 27 | Animator | Single | 1 | | French | HI[c] + CHI[d] |
| Caroline | 29 | Unemployed | Cohabitation | 2 | Estate agent | French | HI[c] + CHI[d] |
| Clémence | 20 | Housewife | Cohabitation | 1 | Unemployed | French | CMU[a] |

[a] Couverture Maladie Universelle (Universal Health Coverage).
[b] Aide à l'Acquisition d'une Couverture Maladie Complémentaire (Assistance to Complementary Health Coverage).
[c] Health insurance.
[d] Complementary health insurance.

between the research objective and the phenomenological analysis of the data and used precise steps in the method. The data analysis process aimed for theoretical saturation as each interview was conducted. This involved a continuous comparison that allowed emerging categories to be enriched to the highest density. For data significance, triangulation was ensured between the three researchers performing the qualitative research and the interviewer, all of whom co-analysed the data. This process allowed the researchers and the interviewer to agree on the emergence of phenomenological categories. When the main categories were saturated, there was no need for further interviews. To confirm the transferability or external validity of our results in other contexts, we compared our results to the literature [46].

### 3.5. Findings

#### 3.5.1. Participants

Ten interviews were conducted between May and December 2018. The women had diverse characteristics, allowing for maximal variation in the sample (Table 2). The women interviewed were aged between 20 and 42 years (median: 31 years old). Nine of the women had partners and one was single. The women had between one and four children. Meanwhile, five women were unemployed, two were employed, and three were housewives.

The interviews lasted from 12 to 45 min, with an average duration of 28 min and 30 s. Although all women spoke French, some had difficulty in expressing themselves due to language limitations; for this reason, two interviews were relatively short. As mentioned earlier, the researchers felt that interpreting was not appropriate due to the intimate nature of discourse.

Theoretical saturation was achieved through eight interviews, and data were confirmed through two additional interviews. All interviews were conducted at the participants' homes.

#### 3.5.2. Phenomenological categories

Three phenomenological categories emerged from the verbatim transcripts: *1. Vulnerable pregnant women should have a single point of contact, 2. Vulnerable pregnant women request personalised social and medical* support *that meets their needs,* and *3. Vulnerable pregnant women want person-centred communication to* support *their pregnancy and parenting.*

1. Vulnerable pregnant women should be monitored by a single trusted contact person to ensure continuity of care and coordination of the multidisciplinary team.

The women expressed a need for a trustworthy contact person, who they selected based on feeling at ease with such a person and/or their professional skills. Coordinated follow-up with this contact person would ensure follow-up continuity until postpartum. This continuity of care was particularly appreciated by women in the delivery room. As childbirth is such a vulnerable time, a known environment improved their experience during this intimate moment.

> *'I don't really like having lots of different people' (Valérie).*
>
> '*Ideally, I would have liked to have a midwife who would follow me through to the birth. You're looked after by someone who knows you, who knows what to expect during childbirth … (…) someone familiar. (…) It was also a plus for me to find a midwife I knew in the delivery room. That was nice for me and they were very attentive'. (Lucie)*
>
> 'Frankly, I was very well looked after during my pregnancy' (Clémence).
>
> 'They're reassuring, they don't just let you go, they make sure you're ready. That's why some of them are conscientious) and I find them very committed' (Marie).

Co-monitoring of the pregnant women continued until the postpartum period.

For Valérie, '*It was the midwife who delivered me. She was there, the one who followed me (Valérie.) I was very happy' (Valérie).* For Caroline, *'I was lucky because I was really very, very well looked after (…) whenever I had a problem it was really my midwife I turned to and I really trusted her' (Caroline).*

When participants were questioned concerning their ability to look after the child, they described having doubts and feeling '*a bit overwhelmed' (Clémence).*

The contact person acted as a care provider whose coordinating efforts lead to a more coherent application of specialised skills, which can otherwise be overwhelming. The contact person would aim to coordinate the various stakeholders, such as midwives, GPs, gynaecologists, and social workers. However, multiple stakeholders can make coordinating the care pathway more complex due to their specialised concerns, inhibiting a more global approach. Thus, for the women, appropriate coordination meant a vision of an 'ideal' follow-up, although the reality of multiple stakeholders could sometimes make the follow-up more restrictive, tiring, and expensive.

> '*As soon as someone notices something they make a comment and the others are perhaps more attentive to certain points' (Juliette).*
>
> '*Things went well when we got home and it was my midwife who took over and all that, who did things calmly' (Valérie).*
>
> '*I had ideal medical care. I had a good gynaecologist, a good GP (…) I had good midwives'* (Laura).

2. Pregnant women in vulnerable situations would like medical and social support adapted to their situations to address their needs according to their vulnerability profiles. This is especially true concerning their social or geographical isolation and financial or psychological difficulties.

Participants explained that their different vulnerability profiles led to specific needs. For example, being isolated from family or healthcare professionals meant that they required social support and reassurance from professionals.

Family and friends were key in supporting the women. Partners were primary caregivers and allies by participating in the pregnancy experience and dealing with social and medical difficulties alongside a multidisciplinary team. However, the partner's role was sometimes difficult to define.

> *'He said to me … you make your decision. You're the one who's going to carry it, you're the one who's going to keep it at home' (Caroline).*

> *'My spouse who was very present. Too present. I had him all the time near to me, actually (laughs). (…) he was a bit too involved (…) That's what being in a couple is all about, you listen to each other' (Laura).*

> *'I was lucky because I had a friend who came over from time to time to cook for me because I could do everything, but I was throwing up, so it was complicated' (Laura).*

Mothers played an important role in accompanying women during their pregnancy.

> *'When you're pregnant, you need your mother to be there. She provided support and was the first port of call in the absence of my partner' (Clémence).*

Some women did not benefit from the involvement of relatives as they worried about the women being pregnant in an uncertain environment. This exacerbated the women's anxiety and isolation. These women required more support from professionals and relied on the reassurance of their own abilities.

Women who were geographically isolated and lacked access to professionals experienced feelings of abandonment. Therefore, proximity to services is a key factor in choosing which professionals to engage with. In addition, geographical isolation limited pregnant women's care pathway choices through to the postpartum period. Besides feelings of abandonment, this led to additional follow-up costs, especially for women who wanted to access other forms of pregnancy support.

> *'And then the rural area can be a drag, it can create social difficulties …. Because we're in the countryside, I've been left out in the wild a bit' (Chloé).*

To counteract these difficulties, the women needed locally based professionals: *'I prefer to go to my midwife because she is closer' (Sophie).*

Economic and social difficulties influenced participants' pregnancy course and caused apprehension. The participants found that they had better experiences when they could address their difficulties by improving the conditions for welcoming their children. As such, they sometimes had to restrict aspects of their everyday lives and prioritise their needs to ensure access to optimised pregnancy care.

For the women, the resulting changes in their social situation were a source of guilt that left them more vulnerable and questioning their ability to care for their children.

> *'It's mainly the social level that's suddenly gone downhill. It's not like [before] where the money was flowing, and I was spending without counting' (Juliette).*

Childcare conditions were assessed at the beginning of pregnancy and being in a vulnerable situation increased the women's anxiety. Concerning psychological difficulties, the women tended to either minimise or accept them: *'It may be hormonal' (Sophie*) or *'I couldn't crack' (Juliette)*, respectively. To allow women to express themselves, dialogue with supportive individuals should be encouraged.

> *'I told him straight away; I must admit that I don't feel good right now. I'm crying for nothing, I'm irritable when I'm not usually like that. And she helped me a lot, she supported me a lot' (Caroline).*

3. Women expect kind, person-centred communication skills from healthcare professionals who value their parenting skills and consider their aspirations. Appropriate information must be delivered by physicians rather than via a technical means of communication that women distrust.

The women sought kindness and consideration and expected professionals to be caring people to talk to: *'Very warm, very human … very attentive' (Valérie)*. Otherwise, the women felt disregarded and dehumanised.

> When efforts were made to adapt communication to their situation, participants felt comfortable and secure. Language barriers made the women feel isolated, as was the case of one woman whose French was limited. She used hand movements to show that

she felt rejected by a doctor who did not make an effort to understand her: *'I can explain well but the doctor … pff [hand sweep sign]'* (Anne).

In situations where the health professional's communication was not patient-centred and caring, the women felt embarrassed and misunderstood. Sometimes, a conflict emerged, resulting in a break in follow-ups. One woman (Valérie) did not feel considered or safe during the postpartum period and lost confidence in the professional, which affected the subsequent care of the child.

Participants expected professionals to include them in their follow-ups, play a role in their pregnancy, and trust them. If communication between health professionals did not include the women, they felt disempowered during follow-ups and became disinterested in further follow-up care for their pregnancies.

Moreover, the involvement of an informed support person helped them obtain reliable information. The women sought information from their friends and family because of shared experiences.

*'And friends … who almost all have three kids older than mine. Yeah, because we share the experience. It brings another opinion. My friends for the two pregnancies, that's quite an important source of information' (Chloé).*

Participants used the Internet for information and access to relevant care support.

*'We were on it a lot.… On the internet all the time'(Laura*).

This was also done to help complete the various administrative steps more easily, such as declaring pregnancy, and filling out social assistance applications and maternity hospital registrations: *'It is done all by itself' (Sophie)*. However, the women lacked confidence in this resource when they required confirmation from professionals. For instance, sometimes the women needed more detailed answers when information was unclear, and automated procedures were unhelpful, but they could not reach direct human contact for assistance.

*'We used to be able to get them on the phone from time to time when we had the patience to spend half an hour on voicemail.… Fortunately, my midwife helped me, too, because I was sometimes lost.' (Caroline)*

The inability to reach a point of contact negatively impacts the quality of pregnancy follow-ups; therefore, health professionals should be involved in supporting women through the relevant administrative procedures.

## 4. Discussion

This study aimed to assess pregnant women's lived experiences of healthcare pathways to identify their specific needs based on social vulnerability. Three phenomenological categories emerged from the interviews: *1. Vulnerable pregnant women should have a single point of contact, 2. Vulnerable pregnant women request personalised social and medical* support *that meets their needs,* and *3. Vulnerable pregnant women want person-centred communication to* support *their pregnancy and parenting.*

In the sections below, we elaborate on the aforementioned three categories.

### *4.1. Vulnerable women recommended a single trusted contact person to coordinate prenatal care*

Vulnerable populations are barred from certain forms of social security and are susceptible to frailty, and instability, increasing the likelihood of poverty [19]. Pregnancy is a known vulnerability factor and our participants, who were already vulnerable, experienced increased vulnerability when they were pregnant because of this double burden. Thus, in accordance with the literature [2,47,48], vulnerable pregnant women tried to feel secure by simplifying their prenatal care and accordingly wanted to rely on a single trusted person to coordinate their care [25]. Further, if a pregnant woman feels secure in her antenatal care, she will feel more comfortable caring for her newborn and with professional care. Thus, addressing their specific needs by establishing a single trusted contact person would optimise the experience of pregnancy, birth, and new-born care for these vulnerable pregnant women [25,48]. The contact person can be a general practitioner, a midwife, or a gynaecologist, depending on the country, but they must be trustworthy.

Previous studies have focused on vulnerable pregnant women in different countries [1,23,25]. For instance, a 2014 quantitative descriptive study in Belgium investigated the expectations and satisfaction of vulnerable pregnant women regarding antenatal care [23]. Furthermore, the authors highlighted that user satisfaction is significant in healthcare reform and reported an association between some of the identification criteria in our study (immigrant origin and financial difficulties) and low expectations of antenatal care. However, the authors affirmed, as did our study's participants, that the prenatal care period allowed women to discuss their vulnerability to optimise their situations for the arrival of their unborn children.

Other studies from Australia and Denmark showed it was important to identify vulnerable pregnant women early to enable the women and accompanying professionals to anticipate difficulties, optimise follow-ups, and prepare for the coming birth [1,25]. This speaks to our participants' expectation that a single trusted contact person would best coordinate their prenatal care. A 2014–2015 Canadian study focused on indigenous women and used qualitative methods to explore 'cultural safety in pregnancy care' [27]. The indigenous participants described a need for a personal approach in relation to their vulnerability profiles (or culture) and access to health professionals who were close to them and familiar with their specific vulnerabilities. The French Health Authority national guidelines also recommend having a dedicated team of healthcare professionals and, ideally, a single healthcare professional as a contact person to organise pregnancy follow-ups [16,17].

Our results underlined the importance of care coordination and the key role of a single contact person to coordinate with the various healthcare professionals, including social and care networks, to ensure continuous follow-up care. As such, based on the French Health Authority's recommendations [17] and the Canadian study on indigenous women [30], we can confirm the importance of a single trusted contact person to optimise the coordination of prenatal care. Other international studies about the care of vulnerable pregnant women do not specifically recommend the place of this support person [16,20,21,23,26]. However, an analysis of the recommendation for having personalised care in proximity to the vulnerable pregnant woman's culture corresponds to our findings, ensuring a single trusted contact person. This would allow these women to have more autonomy in their care and perinatal period. In addition, such professionals would target different types of social vulnerability to ensure more effective coverage.

### *4.2. Women asked for medico-social care personalised to their specific needs and linked to their vulnerability profiles*

Needs related to different vulnerability profiles require early identification during pregnancy to facilitate effective personalised medical and social support, as recommended by the women in our study. A single and fixed care pathway is not an option for all vulnerable pregnant women due to distinct vulnerability profile variability. Therefore, these women require more psychological support, financial support after birth, and locally-based healthcare professionals. Geographical isolation was described as hindering their access to care and was, consequently, a factor leading to health disparities. In other words, these women have to invest more than non-vulnerable women to access the same care. Thus, social isolation comprises a specific vulnerability profile and requires particular support and early identification [19].

To meet all their needs, the women's distinctive characteristics must be identified at the beginning of pregnancy to engage more effectively with any subsequent difficulties [5,7,49].

According to the French Health Authority guidelines, pregnant women are entitled to early individual appointments, if possible with their partners, to estimate their vulnerability level, particularly concerning possible domestic violence [16]. This screening should guide women towards a specific and appropriate healthcare pathway and the possibility of parental support in perinatal networks. In 2019, an Australian descriptive study, Hammarberg et al. [49] recommended identifying and addressing vulnerable situations. They advised that people of reproductive age should routinely be questioned about their pregnancy intentions, and those planning pregnancies should be encouraged to improve their preconception health. In other words, identifying intentions and providing advice and information should foster better periconceptional conditions [49]. In addition, according to this Australian study, women identified women- and family-centred care, staff quality, and continuity of care and information as important aspects of pregnancy-related care [25]. As per our findings, the need for responsive follow-up is consistent with a 2007–2009 Scottish study, which revealed that socioeconomically disadvantaged women felt less personally involved in their care and experienced less effective communication or shared decision-making [29]. When women enter pregnancy, childbirth, or postnatal periods in a state of vulnerability, any 'threat' or 'obstacle' increases the risk of an unfavourable outcome, especially if strategies to address the issue are not part of the women's healthcare pathways [2,50,51]. In our study, only a few women had early consultations, and the French 2016 national survey further supported this finding, with only 28.5 % of women in the general population and 18.5 % of women in the vulnerable population having early consultations [10]. It has been reported that early consultations to identify pregnant women's vulnerability are lacking globally. This indicates a gap between the recommendations for identifying vulnerable pregnant women and the actual practices in many countries, including France [35,36].

The women in our study recommended personalised medical and social care adapted to their vulnerability profiles [2,4,5,11–13,18,20,21,52]. An early prenatal consultation would make it possible to identify the specific needs of pregnant women and adapt it accordingly to optimise their care. While France and other countries recommend this early identification of vulnerability profiles, it is rarely enforced. Thus, promoting early consultations is necessary to encourage the development of a needs-based follow-up process for vulnerable pregnant women [21]. As noted above, social isolation is a specific profile of vulnerability [47,53] for which early identification is essential. However, access to local care networks and primary care is limited and workable solutions to this problem need to be promoted. In France, pregnant women are cared for by midwives, GPs, or gynaecologists. Outpatient care is increasingly provided by multidisciplinary teams, that is by several health professionals in multidisciplinary health centres. However, coordination between these health professionals can sometimes be limited, depending on the territory. When social actors (social worker, healthcare mediator) are necessary, coordination is complicated for women who are often referred to hospital services in large cities. Workable solutions are needed to promote access to this local care networks and primary care. One solution could be to ensure self-employed midwives, i.e., local independent midwives, are available to offer pregnant women follow-ups (if they do not have any clinical complications and are low risk).

In addition, local primary care teams, such as multi-professional health centres, could involve midwives and GPs more, particularly in terms of identifying and supporting women in situations of geographical isolation or social vulnerability. Health centres could also focus on monitoring vulnerable pregnant women and post-partum women who have returned home.

In Canada, a multidisciplinary care model allows for women's personalised care, which is beneficial for a single resource person. In the United Kingdom, women do not choose the location of antenatal care, which is allocated geographically. Prenatal care groups are an alternative to individual care and are growing globally, including in the United Kingdom [12], Canada [11] and USA [39]. The Centering Pregnancy program, which is used internationally, is the most studied mode [18,39]. It is an alternative model of care that encourages social connection, empowerment, and best practices [39].

Telemedicine [54,55] has been developed since the COVID-19 outbreak and has been utilised in pregnancy care [56]. Combined with local teams and group prenatal care, it could provide benefits for vulnerable pregnant women based on a personalised care pathway. This pathway could be supported by a trusted person to coordinate all the actors.

We therefore understand that continuity of care models can be effective in adapting to the needs of these vulnerable women, as for all women. Several proposals can be found in the literature.

The continuity of care model is recommended because it allows patients' needs to be met by a single person throughout the care process. A Cochrane review in 2016 by Sandall et all [56], including 15 trials involving 17,674 women, found that the majority of included studies reported higher rates of maternal satisfaction in midwife-led continuity of care models. This model is favoured in Australia [57], particularly for Aboriginal people and Torres Islanders [58].

In the United Kingdom [59,60], maternity policy recommends that named midwives accompany women throughout pregnancy, birth and postnatal care. A qualitative study by Dharni in 2021 [61], highlighted the success of a continuity of care model for antenatal and postnatal care, reporting that women and midwives were more satisfied with this model than the standard approach; this trend was confirmed by a qualitative study by Turner in 2022 [62], which reported that the Midwifery continuity of carer (MCoCer) models were rewarding and brought meaning to midwifery leadership. Meanwhile, in Sweden, consideration is being given to conducting trials of this model for geographically isolated patients [63].

### *4.3. Women expect kind, person-centred communication skills from healthcare professionals who value their parenting skills and consider their aspirations*

Our participants underlined the importance of healthcare professionals' empathetic and supportive attitudes. A lack of consideration and dehumanisation within the patient–professional relationship negatively influenced the women's experiences. This aligns with the literature [2,47] and it is understandable that vulnerable women expect special attention from their healthcare professionals to reassure them in their journey as pregnant women and mothers.

A 2011–2012 Australian qualitative study focused on women's needs during delivery and reported similar findings [25]; women expected a person- and family-centred approach. Such support is especially important for vulnerable populations. Thus, raising healthcare professionals' awareness of the specificities and difficulties faced by vulnerable populations can improve relationships with these patients. A 2013 Japanese qualitative study explored the experiences of pregnant women followed by midwifery teams in the postpartum period [24]. The women described their experience as a 'warm mutual relationship' that involved the women's families, fostering comfort, safety, and empowerment during their pregnancy and postpartum care.

Our participants wanted their individual needs to be respected during their pregnancy and to feel involved in their maternity and medical care. Therefore, support must be needs-based and adapted to the women's vulnerability profiles, which should be identified early by healthcare professionals. A trusting relationship between women and the health professionals who accompany them will facilitate the identification and adaptation of the prenatal care programme to the specific needs of each vulnerable woman.

Our participants proposed specific solutions, based on their lived experience, to improve the provision of personalised follow-ups at healthcare organisations in relation to various types of vulnerability (Table 3).

**Table 3**
Proposed guidelines for practitioners to increase screening of women in vulnerable situations during pregnancy and improve personalised follow-ups based on women's perceptions and expectations.

| A single key referent and local healthcare professionals |
|---|
| *Women* **always** *at the heart of each decision:*<br>- The key referent adjusts the follow-up to the women's personal vulnerability profile.<br>- Healthcare professionals support and reassure women through respect of their personal desires.<br>- Women are valued for their parenting skills.<br>*The single* **key** *referent*<br>- has a kind and person-centred attitude,<br>- uses effective and appropriate communication tools to communicate with the women (e.g. due to language obstacles),<br>- coordinates with all healthcare professionals in the pregnant women's care pathway, and - favours the inter-personal links with pregnant women to facilitate digital procedures.<br>**Network** *of healthcare professionals for the follow-up of vulnerable pregnant women:*<br>- Local healthcare professionals are privileged relays for follow-up.<br>- The number of healthcare professionals are limited to facilitate personalised care.<br>- Healthcare professionals are made aware of social vulnerabilities.<br>- Healthcare professionals are available and answer questions to frame information research for women and avoid false information.<br>**Improved screening of women in socially vulnerable situations**<br>- It is essential to raise the awareness of all local health professionals about the identification of social vulnerabilities.<br>- Early prenatal consultation for every woman must be promoted.<br>**Personalisation and optimisation of the pathways of vulnerable pregnant women**<br>**Conduct** *personalisation and optimisation through* - a single referent and local network of healthcare professionals;<br>- personalised follow-ups from the prenatal to the post-partum periods;<br>- provision of human support for social administrative procedures through systematic appointments with health insurance and social centre agents; and - anticipation of women's specific needs according to their profiles to<br>• address women at welfare centres in case of financial difficulties,<br>• involve close relatives in case of isolation, or offer close local follow-ups by health care professionals, and<br>• propose psychological solutions, if needed. |

### 4.4. Strengths and weaknesses

The qualitative methodology, based on a semio-pragmatic phenomenological approach, has enabled us to gain a better understanding of the experiences of vulnerable women's lived experiences regarding follow-up care during pregnancy, which is the hallmark of all phenomenology. The semio-pragmatic phenomenological approach is the only one to include in its analysis procedures a principle based on a data ordering system. The principal limit is interpretation bias linked to the researcher's sensitivity and brings additional rigor to the analysis in our study. The disadvantage of this method is the complexity of the terminology used and the need for researchers to be trained in it, while methodological literature is difficult to access. The categories derived from our analysis were consistent with the study objective as it was relevant for assessing women's experiences. Qualitative research has long been adapted to exploring women's experiences and their representations. In addition, the effectiveness of perinatal policies [16] is based on perinatal surveys. However, no study has investigated what patients feel and what their needs are. Our findings may be transferable to similar settings, especially in countries with the same social or cultural structures, as confirmed in the international literature [11,12,14,18]. Notably, three researchers compiled their analyses to triangulate the data, which increased the study's reliability. Furthermore, the participants had diverse experiences with a wide range of healthcare professionals (apart from midwives and GPs). This allowed for considerable variation in the women's experiences, thus informing the in-depth analysis more extensively. Our qualitative research method was rigorous and endeavoured to respect the criteria of scientificity according to the Standards for Reporting Qualitative Research criteria [45] and Guba and Lincoln's recommended criteria [46]: trustworthiness of the analysis, reliability, validity, credibility of the data. Memory bias could not be discounted because participants could discuss any previous pregnancies, but what they remembered was also important to understand as part of their pregnancy experiences.

However, the maximum variation in our sample could have been optimised; we did not manage to recruit any women who had no follow-ups by a private midwife and the language barrier may have excluded some particularly vulnerable women. In addition, our participants had recently given birth.

Some interviews were relatively short, particularly because of the language barrier. Further research on this subject should take these difficulties into account. In particular, future studies should consider the experiences of women whose language barriers can limit exchanges in terms of health or social relationships. To do this, researchers could call on interpreters, social mediators, or relatives of the women who may not face similar language barriers.

The methodological rigor of our study, combined with the semio-pragmatic method itself, ensure the quality of the results of the analysis. The semio-pragmatic method effectively limits the risk of interpretation by the researcher, which reinforces the quality of the results. International recommendations for the care of vulnerable women should therefore be based on these results, which are grounded in women's experiences. Broadly, such work should aim to optimise the operation of services aimed at women's health and well-being. Their experience of pregnancy is recent, so they can talk about their felt needs. Finally, several women from particularly vulnerable situations declined to participate as they could not take time off work. We believe that their insights could have enriched our results significantly, and future studies should consider these situations as a research context.

## 5. Conclusion

Vulnerable pregnant women's follow-ups are an important issue in primary healthcare. Social vulnerability is an environmental risk factor for pregnancy complications.

To level the normative pregnancy experience for all women and unborn children, regardless of social conditions, health-related social disparities must be reduced. Our participants wanted person-centred, needs-based follow-up care provided by a single trusted contact person. Thus, further efforts are needed to improve person-centred follow-up care and ensure simplicity without compromising quality. Moreover, educating health professionals on patient-centred approaches is a major challenge. As recommended by our participants, primary care multidisciplinary local teams comprising healthcare professionals and social workers need to be developed. In France, and in other developed countries, such teams could be attached to multidisciplinary healthcare centres to provide appropriately targeted healthcare to local populations.

Although there are international recommendations to screen women in vulnerable situations, they are rarely enforced. Our participants' suggestions were rooted in their real-life experiences and thus the implementation of these suggestions could optimise their identification and follow-up processes during pregnancy. Finally, to improve the specific follow-up care of vulnerable pregnant women, future studies should analyse care pathways in different countries and compare them with our recommendations.

## Ethics statement

This study was reviewed and approved by CNGE Ethics Committee, with the approval number: 2111859.

All participants provided informed consent to participate in the study.

no author declares any conflict of interest.

There was no financial support for this study.

## Data availability statement' section

We did not deposit the study data on a specific secure depository for qualitative data. Datas are stored on a password-protected external disk.

Data will be made available on request.

## CRediT authorship contribution statement

**Béatrice Lognos:** Writing – review & editing, Writing – original draft, Visualization, Validation, Supervision, Resources, Project administration, Methodology, Formal analysis, Conceptualization. **Agnès Oude Engberink:** Writing – review & editing, Writing – original draft, Supervision, Methodology, Formal analysis, Conceptualization. **Lorène Gonzalez:** Writing – review & editing, Writing – original draft, Validation, Methodology, Investigation, Formal analysis, Conceptualization. **Julia Leandri:** Writing – review & editing, Writing – original draft, Validation, Formal analysis, Conceptualization. **Carla Charlot Pisoni:** Writing – review & editing, Writing – original draft, Validation, Methodology, Conceptualization. **Nadia Rachedi:** Writing – review & editing, Writing – original draft, Validation, Conceptualization. **Bernard Clary:** Writing – review & editing, Writing – original draft, Validation, Supervision, Methodology, Formal analysis, Conceptualization. **Gérard Bourrel:** Writing – review & editing, Writing – original draft, Supervision, Methodology, Formal analysis, Conceptualization. **Sabine Bayen:** Writing – original draft, Supervision, Formal analysis, Conceptualization. **Elodie Million:** Writing – review & editing, Writing – original draft, Validation, Supervision, Methodology, Formal analysis, Conceptualization.

## Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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