



The experiential knowledge of migrant women about vulnerability during pregnancy: A woman-centred mixed-methods study

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ABSTRACT

Problem: Within maternity care policies and practice, pregnant migrant women are regarded as a vulnerable population.

Background: Women's experiential knowledge is a key element of woman-centred care but is insufficiently addressed in midwifery practice and research that involves migrant women.

Aim: To examine if pregnant migrant women's experiential knowledge of vulnerability corresponds with sets of criteria of vulnerability, and to explore how migrant women make sense of vulnerability during pregnancy.

Methods: A sequential two-phased mixed-methods study, conducted in the Netherlands, integrating survey data of 89 pregnant migrant women and focus group data obtained from 25 migrant mothers - living in deprived areas according to the Dutch socio-economic index.

Results: Criteria associated with vulnerability were reported by 65.2% of the participants and 62.9% of the participants reported adverse childhood experiences. On a Visual Analogue Scale, ranging from 0 (not vulnerable) to 10 (very vulnerable), participants self-reported sense of vulnerability showed a mean score of 4.2 (± 2.56). Women's experiential knowledge of vulnerability significantly correlated with the mean sum score of clinical criteria of vulnerability ($r .46, p .002$) and with the mean sum score of adverse childhood experiences ($r .48, p < .001$). Five themes emerged from the focus group discussions: "Look beyond who you *think* I am and see and treat me for who I *really* am", "Ownership of truth and knowledge", "Don't punish me for being honest", "Projection of fear" and "Coping with labelling".

Conclusion: Pregnant migrant women's experiential knowledge of vulnerability is congruent with the criteria. Calling upon experiential knowledge is an attribute of the humane woman-midwife relationship.

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Statement of significance

Problem or issue

Vulnerability of pregnant migrant women is defined by professionals in a non-egalitarian way – not through a dialogue with pregnant migrant women.

What is already known

In woman-centred care the woman is recognised as an important and essential stakeholder in her own care. In woman-centred care the woman's authoritative experiential knowledge is of equal value to the midwife's professional knowledge and expertise.

What this paper adds

The experiential knowledge of migrant pregnant women is equally relevant compared to sets of criteria of vulnerability. Midwives, policy makers and researchers therefore need to acknowledge and embrace the experiential knowledge of vulnerable pregnant women. Humanisation of midwifery care includes appreciating, respecting and nourishing experiential knowledge of pregnant women.

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1. Introduction

Woman-centred care has become a key element of contemporary midwifery care, without distinction between a woman's background, culture or country – woman-centred care is meant to be available for all childbearing women [1–3]. The concept of woman-centred care is defined as “a midwifery philosophy and a consciously chosen tool for the care management of the childbearing woman, where the collaborative relationship between the woman –as an individual human being–and the midwife–as an individual and professional–is shaped through humane interaction; recognising and respecting one another's respective fields of expertise. Woman-centred care has a dual and equal focus on the woman's individual experience, meaning and manageability of childbearing, as well as on health and wellbeing of mother and child” [4]. This definition fits an egalitarian society and recognises the woman as an important and essential stakeholder in her own care, acknowledging and legitimating the woman's authoritative experiential knowledge next to the midwife's professional knowledge and expertise – these are of mutual importance and bear an equal weight in woman-centred care [4,5]. During woman-midwife interaction, midwives bring professional, organisational and institutional knowledge into the relationship, while women hold the expertise and embodied knowledge of their own life, personal (past) circumstances and experiences, of their body and mind – so called, knowledge from within [4,6]. Embracing experiential knowledge is known to reduce inequalities in healthcare, in particular in groups or communities who lack status or power [1,5]. The woman-centred care definition also acknowledges the mutual and equal importance of measurable (clinical) maternal health and birth outcomes juxtaposed with the woman's values. Within woman-centred care there is no prioritising of one over the other [4].

Much research in maternity care focuses on the prevention of adversity (i.e., mortality and negative health outcomes of mothers and their newborns) and on identifying medical and non-medical factors that predispose adversity. In several western studies and reports, the migrant background of women is associated with higher rates of mortality and morbidity and poorer perinatal outcomes when compared with women with a non-migrant background. The overall public opinion is that migrant women are a pre-constituted vulnerable population, showing inequalities and disadvantages in social position, status and social interaction, when compared with non-migrant women. These inequities and disadvantages are associated with non-emancipation, social isolation, a low socioeconomic status, negative life experiences and cultural matters [7,8]. Based on social and medical/obstetric observations, childbearing migrant women are classified as a vulnerable group of women in the western society, related to population susceptibility within a health system originally designed for a population in which perinatal mortality and morbidity are not ordinary outcomes, enacting policies that evoke vulnerability [9–14]. In this context, vulnerability of migrant women is modelled through the eyes of society, practitioners, policymakers and researchers, based on health and birth outcomes to be improved through focusing on complex life factors – that is, certain sociodemographic factors, the woman's personal lifestyle and her obstetric details and previous and/or current mental health [10,12,14–17]. According to this view, the migrant background of women is labelled as deprived, complex and high-risk and a predisposing element for adverse or sub-optimal perinatal health outcomes, morbidity and mortality – in summary, as vulnerable [14–18].

Within the concept of woman-centred care, however, vulnerability of pregnant migrant women can only exist when women's discourses of their experiential knowledge are heard and

acknowledged regarding (coping with) their specific health and social context [4,6,19,20]. Women's experiential knowledge is of equal value to the knowledge and observations of practitioners, only knowing that in current maternity services, the opinions of healthcare professionals or policymakers prevail and determine the management of care of (vulnerable) pregnant migrant women [21]. A limited number of empirical explorations have focused on reporting primary experiences of pregnant migrant women. In other words, we do not know if pregnant migrant women perceive themselves as vulnerable citizens, and if so, if their perception about their vulnerability differs or is congruent with the perception of healthcare professionals. We also don't know how pregnant migrant women perceive vulnerability during pregnancy, how they experience to be classified as vulnerable, it's possible impact on experiencing pregnancy and on midwifery care and how they make sense of the vulnerability phenomenon that surrounds them during pregnancy [22,23].

The Netherlands is well known for its cultural diversity and for providing an environment that supports people from different cultures. Currently, 24.5% of the Dutch population has a migrant background of which 46.3% belongs to the second generation of migrants. Most migrants in the Netherlands have a Turkish, Moroccan, Surinam, Indonesian or Polish background, although this varies per region. Women between 20–40 years of age, account for the biggest group among the migrant population in the Netherlands [24]. The largest proportion of the pregnant migrant population is to be found in the Dutch municipalities [25].

As a result of the EURO-PERISTAT project, which revealed relative high rates of perinatal mortality and morbidity and substandard care practices in the Netherlands [26], in 2009, a Dutch national committee wrote the report ‘A good start’, providing governance of future Dutch maternity services [27]. Since the publication of this report, there has been a strong emphasis on the improvement of perinatal health outcomes, followed by risk-assessment initiatives of vulnerable childbearing groups of women [17,28]. Antenatal risk assessment, used by midwives in Dutch municipalities and targeting specific groups such as pregnant migrant women, is the Rotterdam Reproduction Risk Reduction scorecard (R4U). The R4U includes maternal clinical and non-clinical components of vulnerability (e.g., ethnicity, employment/income, education level, language, living in a deprived area, weight, obstetric history) which are regarded as predictors for premature birth, newborns small for gestational age and with a low Apgar Score. The R4U is a simple scoring system (box ticking yes or no) completed by maternity care professionals. Three or more categories answered with ‘yes’, lead to risk-specific care pathways and multidisciplinary consultation between practitioners and clinical decisions, including the involvement of child protection [17,27].

Migrant childbearing women in the Netherlands, have not been given a voice and have not been actively involved in drawing up, reflecting on vulnerability policies and scoring systems, or in defining the terms of their own vulnerability. Up to this moment, defining and appointing vulnerable populations in Dutch maternity services, has followed a rather non-egalitarian approach, observing women in an empirical way with a focus on measuring, categorising and stratifying predisposing characteristics, determinants of adverse health and birth outcomes of women and their newborns [17,18] – not showing congruence with the woman-centred care approach [4]. For not wanting to lose sight of pregnant migrant women, this study starts with the conviction that an approach towards vulnerability in this group must be searched in dialogue with the women whom it concerns.

The purpose of this study was to gain new understandings of woman-centred care through observations and recounted descriptions addressing women's experiential knowledge. To achieve this,

we focussed specifically on the experiential knowledge data from pregnant migrant women and migrant mothers. First, by examining whether experiential knowledge of pregnant migrant women and mothers corresponds with the empirical evidence-based perspective of vulnerability, to distinguish between theoretical and observed, perceived or assumed vulnerability – and self-identified vulnerability. By acknowledging experiential knowledge, we hypothesise that pregnant migrant women are able to effectively self-identify their individual vulnerability status. Second, by exploring how migrant mothers engage with and respond to the vulnerability phenomenon (e.g., sense of responsibility or social dependence), how they want to be taken care of and how they connect with the embodied outcomes of care [22,23].

2. Methods

2.1. Design and procedure

Our study utilised an emancipatory approach, to overcome the invisibility of women in social research, grounded in the lived experiences of women and to address power imbalances [29–31]. We performed a mixed-methods study with an explanatory complementary design using (i) structured interviews, collecting quantitative data by a set of closed-ended questions in a standardised order (face-to-face survey research) and (ii) focus group discussions, collecting qualitative data in a semi-structured way. We integrated quantitative and qualitative data from different sources, addressing different parts of the same phenomenon – being vulnerability – during a current and past pregnancy in different settings. The study included two equal-status sequential phases to improve the usefulness of the results of the survey data (phase I) with the focus group data (phase II), combining the outcomes at the end of the study to connect with midwifery practice [32]. We were aware that the target group is often hard to reach for participation in research [33,34]. As well as experiential knowledge is an essential part of woman-centred care, we also recognised the increasingly importance of public and patient involvement [5] – needing to make any effort to involve pregnant migrant women and mothers. Purposeful sampling was employed for recruitment and selection processes. Throughout the research process, migrant women were consulted about the research process, approach, the research questions, pre-testing and data interpretation.

The researchers contacted 12 primary care midwife-led practices situated in deprived areas of Dutch municipals and with social workers of a community centre in one of the most deprived areas of a Dutch municipal, according to the social economic status index of the Dutch Social and Cultural Planning Office (<https://www.scp.nl/>). The areas have large migrant populations, including citizens with low levels of education and a gross monthly household income of on average €1.050 (<https://www.rijksoverheid.nl/onderwerpen/minimumloon/bedragen-minimumloon-2019>). The researchers explained their interest in experiential knowledge of migrant women about their perceptions of vulnerability during pregnancy and why and how they wanted to explore this phenomenon through face-to-face structured interviews and focus groups. The researchers obtained approval from the midwives and social workers to approach women on their premises. One researcher was invited to take part in social activities for migrant mothers at the community centre. Five midwifery practices agreed to facilitate the survey and one researcher was allowed to be present in waiting rooms of those midwifery practices. The researcher who was introduced to the mothers by the social workers, visited the community centre a couple of times prior to commencing the study. First, informal chats between women and the researcher took place, facilitating a

process of getting to know one another. The researchers explained and discussed the aims and content of the study with potential participants and invited them to participate. Midwives, social workers and women were encouraged to disseminate information about the studies among pregnant migrant women through word-of-mouth, allowing snowballing. Migrant women with various ethnic backgrounds were approached, to ensure sample diversity. By utilising this approach, we felt to invite women in an earnest way, allowing to sincerely reach and represent the target group.

2.2. Ethical procedures

Ethical approval was sought (Ref. No. MEC 2018-037). Participation was voluntary and informed consent for participation and dissemination of the study results was obtained from the participants at an individual level according to Dutch regulations. Data were analysed anonymously.

2.3. Phase I. Structured interview

2.3.1. Procedure

For the structured interview, we aimed to include pregnant women, 16 years of age or older, with a migrant western and non-western background, during any trimester of pregnancy. According to the national index of migration, asylum and integration, non-western migrant women come from Turkey or an African, Latin-American, Asian country (Indonesia and Japan excluded). Western migrant women come from a European country (Turkey excluded), a North American or Oceania country, Indonesia or Japan (<https://www.cbs.nl/nl-nl/faq/specifiek/wat-is-het-verschil-tussen-een-westerse-en-niet-westerse-allochtoon->). Women with a sufficient level of the Dutch language were eligible as the questionnaire was only available in Dutch. A research-assistant, trained to conduct the structured interviews, visited the five primary care midwife-led practices, and one researcher was present at the community centre to structurally interview pregnant migrant women during weekly drop-in sessions (March–May 2019). The structured interviews were performed impromptu as no appointments were scheduled in advance. Prior to the structured interview, we verified if the woman was aware of the aim and content of the study, providing additional information when necessary. A room was available to conduct the structured interview. Women gave written consent to participate, via box ticking included in the questionnaire. The women <18 years of age, were accompanied by another adult who introduced themselves as the mother of the participant, providing consent for the young woman. The structured interviews continued during the three-months planned period, aiming to include as many women as possible. Because of the exploratory character of the structured interview, a sample size calculation was not required [35]. Thinking about handling possible communication barriers (language, literacy skills such as comprehension and vocabulary) and to decrease interview heterogeneity, we combined written questions with a face-to-face survey [36]. The researcher gave the participant a paper copy of the questions and also read these out loud. The participants could either complete the survey on paper or on a laptop or tablet available in the room. Berber, Arabic and Turkish translators were present at the community centre but not at the midwifery practices. None of the women needed translation. All answers were imported in the Statistical Package for the Social Sciences (SPSS©) version 25 for analysis.

2.3.2. Participants

In total, 89 pregnant migrant women, all with a non-western background, completed the survey. The mean age of the participants was 25.9 (± 7.6 ; range 16–48) years and the mean

Table 1
Characteristics participants (N=89).

Age categories	% (n)
Age category: 16–18 years of age	6.7 (6)
Age category: 19–30 years of age	62.9 (56)
Age category: 31–40 years of age	25.9 (23)
Age category: ≥41 years of age	4.5 (4)
Lead carer	% (n)
Midwife as primary lead carer pregnancy	84.3 (75)
Obstetrician as primary lead carer pregnancy	7.8 (7)
Shared care between midwife & obstetrician	7.8 (7)
Parity	% (n)
Nullipara	66.3 (59)
Multipara	33.7 (30)
Relationship status	% (n)
In a relationship	67.4 (60)
Single	32.6 (29)
Level of education	% (n)
Primary school +2 years of secondary education	25.9 (23)
Secondary education	16.9 (15)
Vocational education	31.4 (28)
Higher education, including university	25.8 (23)

gestational age was 23.2 (±9.03; range 8–37) weeks. Most women appointed the midwife as the lead-carer. The majority of women had low and medium levels of education. Most women were pregnant of their first child. The participants' characteristics are presented in [Table 1](#).

2.3.3. Measures

We assessed women's self-reported vulnerability using three measures: criteria of complex life factors and previous and/or current mental health issues, the Adverse Childhood Experiences scale and a Visual Analogue Scale to measure women's self-perceived vulnerability.

2.3.3.1. Nineteen criteria of complex life factors & previous and/or current mental health. Based on a literature review (unpublished), complex life factors and previous and/or current mental health issues were identified and formatted in a list of items or criteria ([Table 2](#)). The participant could choose one or more item (box ticking yes/no). The criteria were introduced by the question: "Do

Table 2
Vulnerability criteria.

Do you recognise any of the following aspects in your current life?	
1	Current stressful situation (or things) in life
2	Personal present mental health issues
3	Personal past mental health issues
4	Fearful of partner or other close relation or significant other
5	Sense of social isolation
6	Strong feelings of insecurity
7	Little or no self-confidence
8	Chronical illness or handicap of self-and/or significant others
9	Traumatic previous birth experience
10	No/limited (access to) family or friends nearby
11	Not/insufficiently speaking the language (in this case Dutch) of the people of the country of residence
12	No/limited partner support
13	Excessive worries/being a 'worrier'
14	Feeling unsafe in the neighbourhood and/or living in dangerous circumstances
15	Unplanned pregnancy
16	More than 5 concurrent physical complaints/discomfort
17	Feelings of aversion towards pregnancy and/or motherhood
18	Lack of bonding/attachment with (unborn) child
19	No/ limited finances/financial resources

you recognise any of the following aspects in your current life?" We verified the criteria with the six risk domains of the R4U (social status, ethnicity, care, lifestyle, medical history and obstetric history) of the R4U, showing congruence, apart from item 7 and 13 ([Table 2](#)) which had arisen from the literature [[10,12,14–18,25](#)]. Different from the R4U, we did not include Body Mass Index, diet, medication, sexual transmitted diseases and substance use because these aspects did not appear in the literature. Five midwifery students with a migrant background pre-tested the 19 items for comprehensibility and comprehensiveness. The relevance of the items was assessed by eight health and social care professionals working with vulnerable groups of people [[37](#)]. No changes were made.

2.3.3.2. Adverse Childhood Experiences (ACE) scale. We measured maternal adverse childhood experiences with the 11-item Adverse Childhood Experiences (ACE) scale. The items of the scale are categorised as abuse, neglect or household dysfunction [[38,39](#)]. Participants were asked if they had experienced one or more events during childhood (before 18 years of age), for example: *Before the age of 18, did a parent or adult in your home ever hit, beat, kick, or physically hurt you in any way?* Multiple experiences could be ticked (yes=positive answer). The more adverse childhood experiences were ticked, the rougher and more burdened childhood had been, associated with increased personal health risk, including reproductive health outcomes such as birthweight and reduced gestational age [[38–43](#)].

2.3.3.3. Visual Analogue Scale (VAS). Participants self-reported their personal sense of vulnerability using a Visual Analogue Scale (VAS), ranging from 0 (feeling not vulnerable) to 10 (feeling very vulnerable). We described vulnerability as: "experiencing difficulties and being unable to cope with or recover from difficult situations" and/or "anticipating difficulties and being unable to cope with these difficult situations ahead" [[15](#)]. The VAS is an adopted version of the stress thermometer, validated with measures of stress [[44](#)], and has been used among a pregnant population to self-report on burden of life factors and of mental health [[45](#)].

2.3.3.4. Analysis. We summed the positively scored vulnerability criteria and the ACE items. In order to compare the scores of the top-down strategies (i.e., using criteria of vulnerability) with the bottom-up approach (i.e., ask a woman if she feels vulnerable), we used Spearman correlation to measure the statistical relationship

between the mean of the summed positive scores of the clinical criteria, the ASE and the VAS-scores of self-perceived vulnerabilities.

2.4. Phase II. Focus group discussions

2.4.1. Procedure

For the focus groups we aimed to include pregnant women with a migrant background, who had given birth in the Dutch maternity care system since the publication of the Steering group report in 2009 [27]. This allowed to compose a sample that had received maternity services that included the execution of the high-risk care pathways for vulnerable pregnant women. Prior to the focus group discussions, an informal meeting with a social worker and a migrant woman/mother was organised. During this meeting the content of the topic guide was discussed, in particular whether the topics were acceptable, understandable and would allow sufficient discussion addressing women's experiential knowledge of the vulnerability phenomenon, addressing awareness, responsiveness and responsibility regarding vulnerability during pregnancy and to verify if the questions were leading or suggestive [22,23]. No changes were made.

For taking part in the focus groups, women expressed their interest to the social workers and a date and time, fitting the women's agendas, were scheduled in May and June 2019. We conducted focus group discussions among a sample of 25 migrant women divided in two groups of 13 and 12 participants, respectively. Prior to the focus groups, verbal consent was obtained, and women were assured they could leave the discussion at any moment. Participants were assured that their data were treated confidentially and that information during the discussions that could identify them (e.g., names of midwives, hospitals) would be anonymised in the transcripts. The discussions were in Dutch, requiring sufficient understanding of the Dutch language, although women were asked to translate for one another when needed. In agreement with the women, two social workers, well known to the women, were appointed to serve as moderators, assuring a safe environment. One social worker served as an observer of group dynamics, while the other monitored women's participation and supported interaction among the participants, safeguarding all women had a chance to contribute to the discussion. Before the start of the focus group discussion, the R4U screening list was presented to the participants to explain why this tool was developed and how pregnant women are categorised as vulnerable when using the R4U scorecard. This approach was taken enabling women to understand the midwife's or obstetrician's perspective on vulnerability to compare, contrast and juxtapose with experiential knowledge. The researcher regarded herself as an outsider and asked the probing-questions. During the discussion, the researcher regularly summarised the answers to verify the participants' answers as a form of member checking and made field notes [46]. With permission of the participants, the focus group discussions were audiotaped.

2.4.2. Participants

The participants had given birth between 2010 and 2018, a minimum of one and a maximum of nine years ago. Women were invited to score themselves with the R4U, thinking back at their last pregnancy. They did not share the details with the group but left the completed R4U scorecard (anonymously) in the room after the discussion. All women's scorecards included three or more positive answers on the R4U categories [17,25]. This meant that all the women in the sample had been subjected to the R4U risk-screening policy and the vulnerability specific care pathways when they were pregnant, allowing lived-experiences of the clinical decisions resulting from the R4U risk-score [25,27]. No participants were pregnant at the time of the focus group discussions. Four (16%) women were second-generation migrants, 21 (84%) were first-generation migrants, all with a non-western background (e.g., Morocco, Surinam, Ethiopia, Somalia, Turkey, Syria, Eritrea, Cape Verde, Myanmar). The participants had one to seven children. Most of the women (18/72%) had given birth no longer than three years before.

2.4.3. Focus groups

Participants were asked (unstructured) to express their thoughts about the R4U classification and the rationale behind it (i.e., Steering group report). They were instructed to use the thinking aloud technique [47]. To minimise response bias, there was a 15-min break before continuing with the probing questions as outlined in Table 3.

The two focus group discussions lasted 95 and 115 min, respectively. With permission of the participants, the audio recorded discussions were transcribed verbatim. The transcripts were anonymised by assigning numbers (e.g., participant 4). The social workers' observations of group dynamics were added to the transcripts to aid analysis and interpretation of the findings [46]. The transcripts were read by a social worker and a participant, who discussed the idiom with the researcher, to familiarise the researchers with the vocabulary and the syntax of the women, aiding the analysis and sense-making [48]. The transcripts were read as a whole. Meaningful sections of transcripts were highlighted and discussed with a social worker and a participant to propose ideas about the meaning and to consider what stood out in the transcripts. The data were analysed using inductive thematic analysis [49]. Codes were identified and recorded using an Excel sheet©. Codes were refined, combined and disaggregated and emerging themes were identified. The codes and emerging themes were discussed and agreed with a social worker and one of the participants. The social workers then discussed the transcripts with all the participants. No changes were made. The researchers were aware of the need to approach the analysis reflexively, putting aside their existing knowledge and assumptions of the topic so that the analysis remained close to participants' accounts, and acknowledging the potential impact of their own perspectives as white midwives and, western-born

Table 3

Topic guide focus groups.

<i>"What are your thoughts about perceiving yourself as vulnerable?"</i>
<i>"What are your thoughts about perceiving other members of your community as vulnerable?"</i>
<i>"How does it feel to be perceived as vulnerable?"</i>
<i>"Why do you think that pregnant women in this neighbourhood are vulnerable, or not?"</i>
<i>"Why do you think midwives/doctors perceive you as vulnerable because you have a migrant background?"</i>
<i>"How can you tell when midwives/doctors perceive you as vulnerable?"</i>
<i>"From your own experience, can you please describe a pregnant woman in your community who is vulnerable and explain why you think she is vulnerable?"</i>
<i>"What is your advice to midwives/doctors how to approach women pregnant women like yourself?"</i>

women with children. We did not use a specific theoretical framework during the analysis, but we aimed to approach the data from the perspective of the oppressed and not the oppressor [50].

3. Results

3.1. Phase I. Structured interviews

The clinical criteria vulnerability list showed a mean score of 3.7 (± 2.7), range 1–12 (min. 0 – max. score of 19) and the ACE showed a mean score of 2.1 (± 2.1), range 0–8 (min. 0 – max. score of 11). A third of the sample reported none of the criteria ($n = 31/34.8\%$) or adverse childhood experiences ($n = 33/37.1\%$). Approximately a fifth of the sample self-reported one criterium of vulnerability ($n = 15/16.9\%$) or adverse childhood experiences ($n = 20/22.5\%$). Nearly half of the sample self-reported two to 12 criteria of vulnerability ($n = 43/48.1\%$). Twenty women (22.5%) self-reported more than three positive ACE items. We structured the items of vulnerability and adverse childhood experiences in order of incidence, as reported by the participants (Table 4). Women's self-reported sense of vulnerability showed a mean VAS score of 4.2 (± 2.56), range 0–8.9 (min. 0 – max. 10).

Spearman (two-tailed) correlations, between the mean of the summed vulnerability criteria and women's self-reported sense of vulnerability VAS scores, were moderately statistically significant ($r .46, p .002$). There were moderate statistically significant Spearman correlations between the mean of the summed positive adverse childhood experiences and women's self-reported sense of vulnerability VAS scores (ACE) ($r .48, p < .001$). The vulnerability criteria and ACE items also showed a moderate statistically significant correlation ($r .42, p .002$).

3.2. Phase II. Focus group discussions

Five themes emerged from the analysis and illustrative quotations from the themes are added.

3.2.1. Look beyond who you think I am and see and treat me for who I really am

Participants perceived the use of the R4U as the domination of themselves by maternity care professionals. Participants desired to pursue the right to be human and not to be regarded and treated as a marginalised group or individual of society. Participants expressed that as long as they are regarded as a category more at risk for certain outcomes, they feel like being an individual in an abstract and separate category: "If I am not regarded as a woman, a pregnant woman, and the midwife does not relate to me on a person-to-person level and does not talk to me about how I perceive my pregnancy, what my life is like, how I cope, etc, I am not seen and treated as a person" (participant 15). Vulnerability should not be defined by ethnicity and/or postal code, i.e., demographic characteristics. This lacks individualisation and leads to feelings of devaluation as a person, woman and/or mother. Women wanted to be approached in a similar way as non-migrant, without having a label beforehand: "See me as a person, a woman, a mother . . . who I am and not where I come from or where I live . . . I am not a postal code." (participant 7). Participants perceived that often midwives talk about care options as a false generosity of humanitarianism. The participants wanted to be treated as any other pregnant woman or mother, irrespective of their background, postal code or circumstances. They reported that when midwives are available to answer questions, beyond the routine content of antenatal visits, they experienced an increased level of trust. This facilitates an open relationship with midwives, where women feel free to

Table 4
Criteria vulnerability and adverse childhood experiences.

Criteria vulnerability	% (n of women)
Current stressful situation (or things) in life	26.9 (24)
No/limited finances/financial resources	26.9 (24)
Strong feelings of insecurity	25.8 (23)
Past mental health issues	24.7 (22)
Excessive worries/ being a 'worrier'	23.6 (21)
Unplanned pregnancy	22.5 (20)
Present mental health issues	13.5 (12)
More than 5 concurrent physical complaints/ discomfort	9 (8)
Little or no self-confidence	6.7 (6)
No/limited partner support	6.7 (6)
Fearful of partner or other close relation or significant other	5.6 (5)
Traumatic previous birth experience	5.6 (5)
Not/insufficiently speaking the language (in this case Dutch) of the people of the country of residence	3.4 (3)
Sense of social isolation	2.2 (2)
No (access to) family or friends nearby	2.2 (2)
Feeling unsafe in the neighbourhood and/or living in dangerous circumstances	2.2 (2)
Lack of bonding/attachment with (unborn) child	2.2 (2)
Chronical illness or handicap of self-and/or significant others	1.1 (1)
Feelings of aversion towards pregnancy and/or motherhood	1.1 (1)
Adverse childhood experiences	% (n of women)
Separated/divorced parents	36 (32)
Physically neglected (e.g., lack of food, clothing)	32.6 (29)
Feeling unsafe/threatened by mother	29.2 (26)
Emotionally neglected (limited/lack of family love, support, connection and/or closeness)	24.7 (22)
A depressed or mental ill person in the household, including suicide	20.2 (18)
Parental dysfunctional behaviour (lack of boundaries/norms/values, conflicts, unpredictable behaviour)	19.1 (17)
Parental dysfunctional behaviour (emotional parental abuse/violence)	18 (16)
Physically harmed (physical abuse/violence)	13.5 (12)
Living with addicted adults, including parents (substance use)	7.9 (7)
Imprisoned household members	4.5 (5)
Sexually harmed (sexual abuse/violence)	4.4 (4)

communicate about their anxieties and fears. In communication with the midwife, women hear the message that medical factors are more valid than social or emotional issues. As long as clinical health outcomes dominate, women passively fight the restoration of their humanity – and therefore sometimes don't attend antenatal care.

3.2.2. Ownership of truth and knowledge

Women perceived that midwives and doctors have the need to control their health and birth outcomes: *"My health, my pregnancy and my baby are not their private property, they [healthcare practitioners] don't own me, nor do they own or know my family"* (participant 3). Women expressed the wish for midwives to be less authoritative and less ignorant: *"How can I talk to the midwife and feel that we have an honest conversation, when she projects her truth about me but does not want to learn from me or about me?"* (participant 22). With regard to vulnerability, participants perceived themselves to be rather similar to pregnant women with Dutch backgrounds living in similar but also in more affluent areas. They are convinced that among women from Dutch origin there are women like them: *"Dutch women are as mortal as everybody else. Nobody can claim to have exclusive ownership of life or death"* (participant 9). Participants sensed the execution of social control and power relationships by health and social professionals: *"We're others of the same and apparently our otherness needs to be controlled by others."* (participant 19). Women liked to be involved in a dialogue and to be regarded as owners of truth and knowledge: *"Who are you [midwife] telling me that I need it, ask me first and let's talk about it before you decide that I need X, Y or Z"* (participant 8).

3.2.3. Don't punish me for being honest

Sharing personal information with the midwife had sometimes led to interference of professional organisations such as child protection, causing apprehensiveness. Women had either experienced or witnessed child protection stepping in, after sharing personal details and information with the midwife, sometimes making living at home even more difficult. They felt punished for being honest when honesty had a boomerang effect on care and help-seeking: *"It is interfering not caring . . . the midwife listens to me that my husband is violent, then calls child protection without telling me and I am faced with the consequences . . . I'll never do that again . . . I was assessed, judged and reported and beaten . . . punished again. So much for being honest"* (participant 13). This leads to distrusting the midwife and/or other social/healthcare authorities and feeling to lose control and avoiding professionals or seeking care. Women were concerned that antenatal care can lead to authoritative measures. Antenatal care proved sometimes to be highly consequential for the women's wellbeing and help-seeking behaviour. Women contended that the way in which midwives or any other maternity care professionals treat them, had a significant impact on their appointment attendance by avoiding, delaying or 'missing' appointments and care.

3.2.4. Projection of fear

Women expressed that professionals' thoughts of (risk of) morbidity and mortality govern: *"It feels like doctors are friends with death, not with life, and try to control my thinking, what I need to do to avoid death and despair"* (participant 17). Women perceived that midwives associate the women's social and cultural identity with risk and fear: *"They're installing fear upon us because of who we are . . . terrifying"* (participant 11). Women also expressed that it seems that screening tools such as the R4U merely present the fears, doubts and assumptions of the midwives themselves rather than those of women, which in turn increases the fear of the women about being pregnant and giving birth: *"It is their perception of my reality that scares me (. . .) how the midwife perceives me has little to*

do with me, my hopes or my thoughts, but in fact only increase my feelings of fear and anxiety. If they think for me or without me, they kill my hopes and what I aspire for" (participant 7).

3.2.5. Coping with labelling

By using checklists to identify risk factors that categorise women as a so called 'vulnerable' group, made the participants feel less human and they felt to be regarded as a body, carrying a child, lacking meaning, humanity and generosity. In response, women tended to delay care as a mechanism to regain their humanity and avoid being labelled or categorised: *"Knowing to have a label beforehand makes me hesitant to go and see the midwife"* (participant 14). They felt an unjust social order embodied by clinicians and social carers as controllers of protocols, interventions, risks, death and illness. Women were aware that behaviour such as late booking or missing appointments might negatively influence outcomes. But their feelings of being so excluded from their own care due to protocols and guidelines, made them feel as 'incomplete' or 'imperfect' and 'unalterable': *"Apparently I am not perfect as I don't fit all the rules and assumptions of the ideal pregnant woman, at least, not according to their list"* (participant 13). They felt the choice is either to docily adapt, resign or to silently protest – late booking is an example: *"There is a reason I go and see the midwife for the first time when I am more than 24 weeks pregnant, I can be myself and hold control as long as possible"* (participant 1). Women wished to be engaged in the care process through a human relationship. Once a relationship has been established, vulnerability or aspects related to vulnerability, can be discussed: *"I want to be treated as any pregnant woman. Ask me how I feel, am I enjoying my pregnancy, am I looking forward to this baby? Instead of judging, assessing and categorising me, then we talk"* (participant 16).

4. Discussion

Data resulting from both study phases contributed equally to the dialogue about experiential knowledge of migrant women about vulnerability in pregnancy, if they sense themselves as vulnerable in the context of complex life factors and previous and/or current mental health [10,12,14–18], and what this means to them. This study seems to amplify the gap between pregnant migrant women's needs and the services available to them – providing contextual understanding with applied focus [32]. Although routine screening of vulnerability has been recommended [17,18,25], our findings suggest that clinical screening may not represent an exclusive solution. Despite having a migrant background, a third of the survey sample showed none of the clinical signs, suggesting that it can't be assumed that all migrant women are vulnerable based on previous and/or current complex life factors [6]. As recommended, midwives utilise an objective clinical approach towards vulnerability [10,12,14–18]. Conversely, women in our study employed experiential knowledge and approached vulnerability more subjectively. This illustrates the discrepancy between the woman's sense-making of her individual and personal knowledge, values, experience, situation, circumstances and feelings and the opposed need of the healthcare system to depend on screening tests and tools [51]. Correlating the results of both objective and subjective measures showed alignment between the different approaches of vulnerability. Our results suggests that the meaning of midwives and of pregnant migrant women are likely to be congruent when it comes to the perception of vulnerability. The lived experiences of the migrant women in phase II of the study revealed their underlying experiential knowledge of antenatal vulnerability as a phenomenon [32]. The use of research outcomes as a source for screening guidelines and high-risk care pathways, utilises a system-focused approach while exploring women's experiential knowledge is

woman-focused. It is known that objective measures can contribute to the ability of researchers and decisionmakers to examine maternal and newborn health across settings and populations. Our findings, however, suggest that it seems critical that existing criteria, measures and benchmarks are evaluated for allowing the incorporation of experiential knowledge [52]. This can be achieved through training of healthcare practitioners, obtaining an open attitude towards others and attaining skills such as active listening [53]. We believe that incorporating experiential knowledge benefits women as it seems to ensure and enhance the engagement, ownership and empowerment of women as key players in the antenatal care process [54]. With this study we hope to encourage maternity service providers to involve childbearing women in validating checklists by calling upon their experiential knowledge. The women in our study indicated that these rather emancipatory aspects require a nourishing relationship. For the midwife to trust the woman's self-perceived report of vulnerability and acknowledging her experiential knowledge and her own action upon reality, requires a woman-midwife relationship of trust, reciprocity, meaning, humanity and generosity and individualised care. A caring relationship where medical risk factors do not prevail, and contextual vulnerability issues are taken into account with similar importance [4,6]. These aspects have been recognised in earlier studies to contribute to pregnant migrant women's satisfaction with care and positive care experiences [10,13,31,55]. The women in our study very much enhanced humanity, communication and interaction in the relationship with the midwife, congruent with the definition and meaning of woman-centred care [4] but also aligning with qualitative findings in earlier studies among migrant women [10,15,30,55]. While healthcare policies and practitioners are focusing on reducing mortality and morbidity through high-risk care pathways, the human relationship is likewise recognised as a mechanism for contributing to positive perinatal outcomes, reducing mortality and morbidity [1].

The findings of this study have high clinical relevance when we consider the reliability of pregnant migrant women's experiential knowledge of vulnerability. Currently, women have to answer sensitive questions during their booking visit about, for instance, a history of sexual abuse, current experiences of domestic violence or about reduced emotional wellbeing. When a woman and midwife meet for the first time and there is not yet an established relationship or bond of trust, truthful answers might not be forthcoming via direct questioning and thus important information might be missed [56]. Embracing the idea of women scoring their sense of vulnerability is a simple and easy to administer measure during antenatal care. A high score offers the midwife to revisit the topic and once a relationship has been established, more direct questions can be asked – addressing women's experiential knowledge. Moreover, asking a pregnant woman whether she perceives herself as vulnerable, withholds an implicit invitation to talk about sensitive and personal issues. Women in our study were clear that an open and trusting relationship is a prerequisite for sharing personal information. This should be formally endorsed and encouraged through education, protocols, policies and procedures. As vulnerability is a complex and contextual phenomenon, it might very well be impossible to detect or classify this with the use of screening [15,57,58], encouraging to not let the dialogue between the woman and the midwife be replaced by screening instruments and box ticking, threatening to cause a distance between the midwife and the individual experience and experiential knowledge of the woman [59].

Changing midwives' routine care management is not easy, especially when caring for women experiencing multiple psychosocial needs can contribute to midwives' emotional stress [60]. It might be that midwives do not feel equipped with the required

knowledge and skills for dealing with vulnerability. Reshifting and expanding knowledge and skills might take time and effort initially but will benefit midwives and women in the long-term [61,62]. The willingness to embrace women's experiential knowledge, beliefs, dignity and preferences with a simultaneous reflection on ineffective professional routines and culture, contributes to the development of an impact-driven woman-centred care professional within the bigger picture of respectful maternity care [1–3,63–65].

Women were very transparent why they delay maternity care and relate this more to a lack of human and generous care, ill-treatment, perceived lack of control over their own bodies and pregnancies, then to maternal age, language issues, being unfamiliar with the healthcare system or an unwanted pregnancy [55,66,67]. The dominant focus on clinical outcomes over social and emotional aspects also contributes to late attendance. Women described that 'expecting trouble' has become the hallmark of their antenatal care, leading to fear, concern and protest among women [68,69]. Midwives should be very aware of the mechanisms of late attendance [6]. As midwives are great believers of physiological processes, they encourage women to be in control of their pregnancies and to trust their own feelings and body signals. However, there seems to be a disparity between this philosophy and clinical focus as described in our study. The boundaries of woman-centred care are defined by control, either the woman's or the midwife's level of feeling and being in control [4]. In our study, non or late attendance are the woman's control mechanisms. Can we really blame women when their experiential knowledge is disregarded or dismissed, and risk-screening and indexation and classification of vulnerability are regarded as the golden standard and allow the facilitation of control by the healthcare system and communicating threat cues? Additionally, due to normalisation of risk-screening, women might not be aware of it, which endangers the fundament of informed consent and facilitating medical and social control of human experiences [70]. Also, midwives might perceive risk-screening of vulnerability as an accepted part of the maternity care system [7,8].

A number of limitations are apparent in this study. Although we aimed to explore women's experiential knowledge, phase I included 19 items resulting from the literature. If we want to truly explore women's perspectives in future research using the 19 criteria, we need to ask pregnant and postpartum migrant women about the relevance, comprehensibility and comprehensiveness of all items [37]. During phase I, the participants simultaneously scored the 19 criteria of vulnerability and the ACE. The ACE items refer to the participant's life before the age of 18 while the 19 criteria refer to the participant's current life. Albeit that the time period being referred to is different, 6.7% of the participants were between 16–18 years of age, maybe causing some overlap in reports of factors. However, because of the small subsample, we believe that the effect is marginal. In addition, both the 19 criteria and the ACE include questions that refer to abuse, which might have contributed to agreement between items addressing the topic, specifically when abuse is a continuing issue in a woman's life [71]. Establishing construct validity of the 19 criteria, such as factor analytic methods, are to be recommended for collecting any future data [37]. The self-selective nature of our study might have led to sampling bias, including participants with a higher proficiency of the Dutch language, having called upon women who were more profoundly integrated in Dutch society. Also, the impromptu character might have persuaded women to participate. For the focus group discussions, we relied on the retrospective memories of women. This could have caused recall bias, although it is known that women have a good recollection of their pregnancy, birth and received maternity care even years after they have given birth [72]. We are aware that generalisability of our findings is

affected because of the small sample size of the phase I study as well as the samples for both phase I and II included only non-western migrant women – not fully representing the Dutch community of pregnant migrant women and mothers [24].

5. Conclusion

Our study suggests that the experiential knowledge of pregnant migrant women regarding personal vulnerability aligns with the perceptions of researchers, policymakers and midwifery practitioners. Women's self-identification of the extent of their vulnerability coincides with the sum of factors that contribute to vulnerability based on clinical sets of criteria. Because experiential knowledge of migrant women of vulnerability during pregnancy is congruent with the criteria of screening systems used by midwives and the literature, enhances that midwives can rely on women's self-perception, instead of using scoring systems. However, this can only be achieved through an established woman-midwife relationship exerting humane interaction. Although the limitations of this study have to be considered, the findings very much fit the woman-centred care concept, with a perception towards experiential knowledge relevant for every childbearing woman.

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7. Ethical statement

Ethical approval was sought from METC Erasmus MC (Ref. No. MEC 2018-037). Participation was voluntary and informed consent for participation and dissemination of the study results was obtained from the participants at an individual level according to Dutch law. Data were analysed anonymously.

8. Conflict of interest

None declared.

CRedit authorship contribution statement

Yvonne J. (Fontein)Kuipers: Conceptualization, Methodology, Formal analysis, Data curation, Writing - original draft, Supervision, Funding acquisition. **Eveline Mestdagh:** Validation, Resources, Writing - review & editing, Project administration, Funding acquisition.

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References

- [1] H.T. Nguyen, Patient centred care: cultural safety in indigenous health, *Aust. Fam. Physician* 37 (12) (2008) 990–994.
- [2] J. Phiri, E. Dietsch, A. Bonner, Cultural safety and its importance in midwifery practice, *Coll. J. R. Coll. Nurs. Aust.* 17 (3) (2010) 105–111.
- [3] R. Kamrul, G. Malin, V. Ramsden, Beauty of patient-centred care within a cultural context, *Can. Fam. Physician* 60 (4) (2014) 313–315.
- [4] Y. Fontein-Kuipers, R. de Groot, A. Van Staa, Woman-centered care 2.0: bringing the concept into focus, *Eur. J. Midwifery* 2 (5) (2018) 1–12, doi:<http://dx.doi.org/10.18332/ejm/91492>.
- [5] S. Blume, In search of experiential knowledge, *Eur. J. Sci. Res.* 30 (1) (2017) 91–103.
- [6] A. Katz, B.-J. Hardy, M. Firestone, A. Lofters, M. Morton-Ninomiya, Vagueness, power and public health: use of 'vulnerable' in public health literature, *Crit. Public Health* (2019) 1469–3862.
- [7] M.A.S. de Wit, W.C. Tuinebreijer, J. Dekker, A.J.T.P. Beekman, W.H.M. Gorissen, A.C. Schrier, Depressive and anxiety disorders in different ethnic groups, *Soc. Psychiatr. Epidemiol.* 43 (2008) 905–912.
- [8] K.M. Kirk, S. Suvarierol, Emancipating migrant women? Gendered civic integration in the Netherlands, *Soc. Polit. Int. Stud. Gen. State Soc.* 21 (2) (2014) 241–260.
- [9] S. Timmermans, G. Bonsel, R. Steegers-Theunissen, J. Mackenbach, E. Steyerberg, H. Raat, H. Tiemeier, A. Hofman, E. Birnie, C. Looman, V. Jaddoe, E. Steegers, Individual accumulation of heterogeneous risks explains perinatal inequalities within deprived neighbourhoods, *Eur. J. Epidemiol.* 26 (2) (2011) 165–180.
- [10] M.-C. Balaam, K. Akkerjordet, A. Lyberg, B. Kaiser, E. Schoening, A.-M. Frederiksen, A. Ensel, O. Gouni, E. Severinsson, A qualitative review of migrant women's perceptions of their needs and experiences related to pregnancy and childbirth, *J. Adv. Nurs.* 69 (9) (2013) 1919–1930.
- [11] B.N. Manktelow, L.K. Smith, S.E. Seaton, P. Hyman-Taylor, J.J. Kurinczuk, D.J. Field, P.W. Smith, E.S. Draper, MBRACE-UK perinatal mortality surveillance report, UK perinatal deaths for births from January to December 2014, The Infant Mortality and Morbidity Studies, Department of Health Sciences, University of Leicester, Leicester, 2016.
- [12] M. Knight, D. Tuffnell, S. Kenyon, J. Shakespeare, R. Gray, J.J. Kurinczuk (Eds.), *Saving Lives, Improving Mothers' Care – Surveillance of Maternal Deaths in the UK 2012–2014 and Lessons Learned to Inform Maternity Care from the UK and Ireland Confidential Enquiries into Maternal Deaths and Morbidity 2009–2014*, National Perinatal Epidemiology Unit, University of Oxford, Oxford, 2016.
- [13] F. Fair, L. Rabel, H. Watson, V. Vivilaki, M. van den Muijsenbergh, H. Soltani, the ORAMMA team, Migrant women's experiences of pregnancy, childbirth and maternity care in European countries: a systematic review, *PLoS One* 15 (2) (2020)e0228378.
- [14] A. Choté, G. Koopmans, W. Redekop, C. de Groot, R. Hoefman, V. Jaddoe, A. Hofman, E. Steegers, J. Mackenbach, M. Trappenberg, M. Foets, Explaining ethnic differences in late antenatal care entry by predisposing, enabling and need factors in the Netherlands. The Generation R Study, *Matern. Child Health J.* 15 (6) (2011) 689–699.
- [15] L. Briscoe, T. Lavender, L. McGowan, A concept analysis of women's vulnerability during pregnancy, birth and the postnatal period, *J. Adv. Nurs.* 72 (10) (2016) 2330–2345, doi:<http://dx.doi.org/10.1111/jan.13017> Epub 12016 Jun 13013.
- [16] Y. Fontein-Kuipers, E. van Limbeek, M. Ausems, R. de Vries, M. Nieuwenhuijze, Responding to maternal distress: from needs assessment to effective intervention, *Int. J. Public Health* 62 (4) (2017) 441–452, doi:<http://dx.doi.org/10.1007/s00038-016-0910-0>.
- [17] A. Posthumus, E. Birnie, M. van Veen, E. Steegers, G. Bonsel, An antenatal prediction model for adverse birth outcomes in an urban population: the contribution of medical and non-medical risks, *Midwifery* 38 (2016) 78–86.
- [18] J. Lagendijk, E. Steyerberg, L. Daalderop, J. Been, E. Steegers, A. Posthumus, Validation of a prognostic model for adverse perinatal health outcomes, *Sci. Rep.* 10 (2020) 11243.
- [19] A. Gagnon, F. Carnevale, P. Mehta, H. Rousseau, D. Stewart, Developing population interventions with migrant women for maternal-child health: a focused ethnography, *BMC Public Health* 13 (471) (2013).
- [20] J. Loh, J. Klug, Voices of migrant women: the mediating role of resilience on the relationship between acculturation and psychological distress, *Aust. Community Psychol.* 24 (2012) 59–78.
- [21] S. Woolhouse, J. Brown, B. Lent, Women marginalized by poverty and violence: how patient-physician relationships can help, *Can. Fam. Physician* 50 (10) (2004) 1388–1394.
- [22] M. Barnes, *Care in Everyday Life; An Ethic of Care in Practice*, The Policy Press, Bristol, UK, 2012.
- [23] J. Tronto, *Caring Democracy: Markets, Equality, and Justice*, New York University Press, New York, USA, 2013.
- [24] CBS, *Hoeveel mensen met een migratieachtergrond wonen in Nederland? Centraal Bureau voor Statistiek, The Hague, Netherlands, 2020* Available from: <https://www.cbs.nl/nl-nl/dossier/dossier-asiel-migratie-en-integratie/hoeveel-mensen-met-een-migratieachtergrond-wonen-in-nederland> [Retrieved: 1 November 2020].
- [25] S. Denktas, J. Poeran, S. van Voorst, A. Vos, L. de Jong-Potjer, A. Waelput, E. Birnie, G. Bonsel, E. Steegers, Design and outline of the healthy pregnancy 4 all study, *BMC Pregnancy Childbirth* 253 (2014), doi:<http://dx.doi.org/10.1186/1471-2393-14-253>.
- [26] Peristat II: EURO-PERISTAT project in collaboration with SCPE, EUROCAT and EURONEONET. European perinatal health report. Better statistics for better health for pregnant women and their babies in 2004. 2008. Available from: www.europeristat.com.
- [27] Stuurgroep Zwangerschap en Geboorte, Een goed begin. Adviesrapport Stuurgroep zwangerschap en geboorte [Steering Committee Pregnancy and Birth. A Good Start. Advisory Report] VWS, The Hague, Netherlands, 2009.

- [28] J. de Graaf, M. de Groot, M. van der Hulst, L. Bertens, E. Steegers, Mothers of Rotterdam: a new medical and social support programme for vulnerable pregnant women, *Early Childhood Matters, Breakthrough Ideas*, 2017, pp. 40–43. July issue. Available from: <https://earlychildhoodmatters.online/2017/mothers-of-rotterdam-a-new-medical-and-social-support-programme-for-vulnerable-pregnant-women/>.
- [29] R.M. Lee, *Doing Research on Sensitive Topics*, Sage, London, 1993.
- [30] C. Webb, Feminist research: definitions, methodology, methods and evaluation, *J. Adv. Nurs.* 18 (1993) 416–423.
- [31] L.R. Woliver, *The Political Geographies of Pregnancy*, University of Illinois Press, Urbana, 2002.
- [32] J. Schoonenboom, R. Johnson, How to construct a mixed methods research design, *Köln Z Soziol Suppl* 2 (69) (2017) 107–131.
- [33] K. Twamley, S. Puthussery, A. Macfarlane, S. Harding, S. Ahmed, J. Mirsky, Recruiting UK-born ethnic minority women for qualitative health research – lessons learned from a study of maternity care, *Res. Policy Plann.* 27 (1) (2008) 25–38.
- [34] J. Macleish, M. Redshaw, Peer support during pregnancy and early parenthood: a qualitative study of models and perceptions, *BMC Pregnancy Childbirth* 15 (257) (2015).
- [35] R.B. Dell, S. Holleran, R. Ramakrishnan, Sample size determination, *ILAR J.* 43 (2002) 207–213.
- [36] N. de Groot, G. Bonsel, E. Birnie, N. Valentine, Towards a universal concept of vulnerability: broadening the evidence from the elderly to perinatal health using a Delphi approach, *PLoS One* 14 (2) (2019) e0212633.
- [37] L. Mokkink, C. Prinsen, D. Patrick, J. Alonso, L. Bouter, H. de Vet, C. Terwee, *COSMIN Methodology for Systematic Reviews of Patient-reporter Outcome Measures (PROMS)*, Amsterdam Public Health research institute, VU University Medical Center, Amsterdam, Netherlands, 2017.
- [38] V. Felitti, R. Anda, D. Nordenberg, V. Edwards, M. Koss, J. Marks, Relationship of childhood abuse and household dysfunction to many of the leading causes of deaths in adults. The Adverse Childhood Experiences (ACE) Study, *Am. J. Prev. Med.* 14 (1998) 245–258.
- [39] D. Ford, M. Merrick, S. Parks, M. Breiding, L. Gilbert, V. Edwards, S. Dhingra, J. Barile, W. Thompson, Examination of the factorial structure of Adverse Childhood Experiences and recommendations for three subscale scores, *Psychol. Violence* 4 (4) (2014) 432–444.
- [40] C. Peterson, C. Florence, J. Klevens, The economic burden of child maltreatment in the United States, 2015, *Child Abuse Negl.* 86 (2018) 178–183.
- [41] M. Nguyen, E. Heberlein, S. Convington-Kolb, A. Gerstner, A. Gaspard, K. Eichelberger, Assessing adverse childhood experiences during pregnancy: evidence towards a best practice, *AJP Rep.* 9 (1) (2016) e54–e59.
- [42] C. Pierannunzi, S. Hu, L. Balluz, A systematic review of publications assessing reliability and validity of the Behavioral Risk Factor Surveillance System (BRFSS), 2004–2011, *BMC Med. Res. Methodol.* 49 (2013).
- [43] M. Smith, N. Gotman, K. Yonkers, Early childhood adversity and pregnancy outcomes, *Matern Child Health* 20 (4) (2016) 790–798.
- [44] A.-L. Elo, A. Leppänen, A. Jahkola, Validity of a single-item measure of stress symptoms, *Scand. J. Work Environ. Health* 29 (6) (2003) 444–451.
- [45] Y. Fontein-Kuipers, E. van Limbeek, M. Ausems, R. de Vries, M. Nieuwenhuijze, Using intervention mapping for systematic development of a midwife-delivered intervention, *Int. J. Womens Health Wellness* 1 (2) (2015).
- [46] D.F. Polit, C.T. Beck, *Nursing Research: Generating and Assessing Evidence for Nursing Practice*, 10th ed., Lippincott, Williams & Wilkins, Philadelphia (PA), 2017.
- [47] E. Ternström, I. Hildingsson, H. Haines, C. Rubertsson, Pregnant women's thoughts when assessing fear of birth on the Fear of Birth Scale, *Women Birth* 29 (2016) e44–9.
- [48] J. Smith, P. Flowers, M. Larkin, *Interpretative Phenomenological Analysis*, Sage Publications, London, 2009.
- [49] V. Braun, V. Clarke, Using thematic analysis in psychology, *Qual. Res. Psychol.* 3 (2) (2006) 77–101.
- [50] E.V.A. Garcia, The duality of being both oppressor and oppressed in different places, *INNOVA Res. J.* 2 (3) (2017) 80–90.
- [51] B. Hofman, On the value-ladenness of technology in medicine, *Med. Health Care Philos.* 4 (3) (2001) 335–345.
- [52] H.P. Kennedy, M. Cheyney, H. Dahlen, S. Downe, M. Foureur, C. Homer, E. Jefford, A. McFadden, M. Michel-Schuld, J. Dandall, H. Soltani, A. Speciale, J. Stevens, S. Vedam, M. Renfrew, Asking different questions: a call to action for research to improve the quality of care for every woman, every child, *Birth* 45 (2018) 222–231.
- [53] E.-M. Castro, T. Van Regenmortel, W. Sermeus, K. Vanhaecht, Patients' experiential knowledge and expertise in health care: a hybrid concept analysis, *Soc. Theory Health* 17 (1) (2019) 307–330.
- [54] J. Gifford, What Makes Change Successful in the NHS? A Review of Change Programmes in NHS South of England, NHS South of England, Newbury, 2012.
- [55] M.-C. Balaam, K. Akerjordet, A. Lyberg, B. Kaiser, E. Schoening, A.-M. Frederiksen, A. Ensel, O. Gouni, E. Severinsson, A qualitative review of migrant women's perceptions of their needs and experiences related to pregnancy and childbirth, *J. Adv. Nurs.* (2013) 1919–1930.
- [56] R. Small, C. Roth, M. Raval, T. Shafiei, D. Korfker, M. Heaman, C. McCourt, A. Gagnon, Immigrant and non-immigrant women's experiences of maternity care: a systematic and comparative review of studies in five countries, *BMC Pregnancy Childbirth* 14 (152) (2014).
- [57] C.J. Viveiros, E.K. Darling, Perceptions of barriers to accessing perinatal mental health care in midwifery: a scoping review, *Midwifery* 70 (2019) 106–118.
- [58] NICE, *Pregnancy and Complex Social Factors: A Model for Service Provision for Pregnant Women With Complex Social Factors*. Clinical Guideline [CG110], National Institute for Health and Care Excellence, London, 2010.
- [59] R. Grol, J. Grimshaw, From best evidence to best practice: effective implementation of change in patients' care, *Lancet* 36 (2003) 1225–1230.
- [60] L. Mollart, V.M. Skinner, C. Newing, M. Foureur, Factors that may influence midwives' work-related stress and burnout, *Women Birth* 26 (1) (2013) 26–32.
- [61] E. Mestdagh, O. Timmermans, B. Van Rompaey, A cross-sectional study of midwives' proactive behavior in midwifery practice, *Ann. Nurs. Res. Pract.* 4 (1) (2019) 1031–1038.
- [62] E. Mestdagh, O. Timmermans, Y. Fontein-Kuipers, B. Van Rompaey, Proactive behaviour in midwifery practice: a qualitative overview based on midwives' perspectives, *Sex. Reprod. Healthc.* 20 (2019) 87–92.
- [63] Y. Fontein-Kuipers, R. de Groot, E. van Beeck, S. van Hooft, A. van Staa, Dutch midwives' views on and experiences with woman-centred care – a Q-methodology study, *Women Birth* 32 (2019), doi:<http://dx.doi.org/10.1016/j.wombi.2019.01.003> e567–575.
- [64] T. Windau-Melmer, *A Guide for Advocating for Respectful Maternity Care*, Futures Group Health Policy Project, Washington, DC, 2013.
- [65] C. De Labrusse, A. Ramelet, S.J. MacLennan, Patient-centered care in maternity services: a critical appraisal and synthesis of the literature, *Womens Health Issues* 26 (1) (2016) 100–109.
- [66] B. Hatherall, J. Morris, F. Jamal, L. Sweeney, M. Wiggins, I. Kaur, A. Renton, A. Harden, Timing of the initiation of antenatal care: an exploratory qualitative study of women and service providers in East London, *Midwifery* 36 (2016) 1–7.
- [67] K. Heetkamp, I. Peters, L. Bertens, M. Knapen, An unwanted pregnancy and language proficiency level are associated with first antenatal visit after the first trimester: results from a prospective cohort study, *Midwifery* 89 (2020) 102784.
- [68] J.A. Lothian, The journey of becoming a mother, *J. Perinat. Educ.* 17 (4) (2008) 43–47.
- [69] J.A. Lothian, Safe, healthy birth: what every pregnant woman needs to know, *J. Perinat. Educ.* 18 (3) (2009) 48–54.
- [70] C. Johnson, The political "nature" of pregnancy and childbirth, *Can. J. Polit. Sci.* 41 (4) (2008) 889–913.
- [71] C. Smith, T. Ireland, A. Park, Intergenerational continuities in intimate partner violence: a two-generational prospective study, *J. Interpers. Violence* 26 (18) (2011) 3720–3752.
- [72] M. Rijnders, H. Baston, Y. Schönbeck, K. van der Pal, M. Prins, J. Green, S. Buitendijk, Perinatal factors related to negative or positive recall of birth experience in women 3 years postpartum in the Netherlands, *Birth* 35 (2008) 106–117.