

# Online Group antenatal care: reaching out to Eritrean refugees. A mixed method study

Suze Jans

suze.jans@tno.nl

TNO

Matty Crone

Maastricht University

Anne Bedaux

Stichting CenteringZorg

Amy Weldeselase

Stichting CenteringZorg

Marlies Rijnders

TNO

---

## Research Article

**Keywords:** Group antenatal care, online antenatal care, Eritrean refugee women, cultural mediation, maternal health equity

**Posted Date:** October 15th, 2026

**DOI:** <https://doi.org/10.21203/rs.3.rs-10502385/v1>

**License:** © ⓘ This work is licensed under a Creative Commons Attribution 4.0 International License.

[Read Full License](#)

**Additional Declarations:** No competing interests reported.

---

# Abstract

## Background

Eritrean refugee women in the Netherlands face multiple barriers to accessing equitable antenatal care, including language barriers, limited health literacy, and cultural differences. Group antenatal care (gANC) has been shown to improve knowledge, empowerment, and care experiences, and was therefore introduced for Eritrean-born women, facilitated by an experienced gANC midwife and Tigrinya speaking cultural mediator. Prompted by the COVID-19 pandemic, this model was adapted to an online format. This study evaluated online gANC tailored to Eritrean-born women.

## Methods

A mixed-methods evaluation was conducted of eighteen online gANC groups delivered nationwide between April 2022 and November 2023. Data were collected using facilitator diaries documenting attendance, topics discussed and group interactions. Questionnaire-guided telephone interviews were conducted six months postpartum (n = 40) by Tigrinya-speaking interviewers. Quantitative data were analysed descriptively, and qualitative diary data were analysed thematically.

## Results

Participants reported improved understanding of pregnancy, childbirth, and maternity care system, increased confidence to communicate with healthcare providers, and greater awareness of their rights. Group discussions facilitated exploration of culturally embedded beliefs and sensitive topics, including lifestyle practices, female genital mutilation, and domestic violence. The presence of a cultural mediator supported culturally safe care and trust-building. While short-term peer connection was fostered, sustained community building appeared limited in the online format. Following completion of the study, adjustments were implemented, including focus on postnatal care and parenting, in response to participants' expressed need for opportunities to meet each other. Facilitators report an increase in social interaction after these adjustments. However, overall impact remains to be evaluated in future research.

## Conclusion

Online gANC offers a promising, culturally sensitive approach to improving access to, engagement with, and equity in antenatal care for Eritrean refugee women. Further research is needed to optimise model fidelity and examine its impact on empowerment, social connectedness and perinatal outcomes.

## BACKGROUND

In 2025 Eritreans made up the largest group of refugees in the Netherlands (CBS, 2025) and it is estimated that of the 48,000 Eritrean refugees in the Netherlands, about 25% consists of young women between the ages of 13 and 30 (Pharos, 2024). Pregnancy is common in this group. Given the often-

traumatic experiences in Eritrea and horrific adversities experienced during displacement, many women suffer from psychological trauma and post-traumatic stress disorder (Pharos, 2024, ESS 2017). In addition, contraceptive use is limited and both abortion and female genital mutilation (FGM) are relatively common. Eritrean women often have limited English or Dutch language and health skills; therefore communication with healthcare providers can be complicated (Jacob, 2018; Oreel, 2018; Pharos, 2024, 2019, Gebreyesus 2020). Combined with the lack of social trust, limited European life experience and basic life skills and the characteristics of a closed community, it becomes difficult for Eritreans to connect with Dutch society and to request support, as they are often unaware of their (basic) rights (Hornbach 2026), making them more vulnerable than others.

Belihu et al. showed that East African countries of birth, in particular Eritrea and Sudan, were associated with adverse perinatal outcomes, highlighting the critical need to optimize antenatal healthcare provision for these women (Belihu 2016). However, it remains difficult for midwives and obstetricians to effectively engage with this group (Martens 2018).

Previous studies in the Netherlands show that the maternity care system in the Netherlands does not adequately meet the needs of pregnant Eritrean women (Jacob 2018, Martens, 2018). Together with considerable cultural differences, this often leads to late entry into care and suboptimal care for Eritrean pregnant women (Jacobs 2018). Studies among pregnant refugees in the Netherlands highlight a need for accessible information about pregnancy and healthcare in the host country, as well as for (female) healthcare professionals who are attentive to their (psychological) well-being. Additionally supportive 'mother groups' are important for fostering social connections and facilitating peer-to-peer information sharing (Goosens 2010, Jacob, 2018, Pharos 2024).

## Group Antenatal Care

Centering-based Group Antenatal Care (gANC) is a client-centred healthcare model replacing one-to-one antenatal care with regular group sessions of 8–12 pregnant women with the same gestation. Regular antenatal checks are carried out by a midwife or doctor and are combined with interactive learning methods and open discussions about women's concerns during their pregnancy while also fostering peer support and community building. With this integrated approach women are more actively involved in their own health, enabling them to discuss and better understand the outcomes of the health assessment itself (Lazar 2021, Rijnders 2019, Grenier 2022). The model offers health care providers insight in what women already know and what they need, allowing them to provide more personal, psychosocial and supportive antenatal healthcare by actively involving participants. Moreover, the model draws upon the collective wisdom and knowledge present in the group. The unfolding group dynamic supports feelings of autonomy and competence and results in lasting bonds (Kweekel 2016). Studies show that gANC improves perinatal health outcomes, childbirth preparation, and breastfeeding initiation rates (Rijnders 2019, Wagijo 2021). Moreover, the model is associated with improvements in social support, confidence, decision making skills, and care satisfaction, as well as stress reduction (Heberlein 2016; Homer 2012; McNeil 2012; Novick 2012, Rijnders 2019, Sadiku et al 2023, Wagijo 2021). To

improve quality of care as well as pregnancy outcomes, gANC was successfully introduced in the Netherlands in 2011 (Rijnders 2019, Wagijo 2021).

Like many other non-Western countries, Eritrean society has a strong collective focus, whereby the interest of the community is put above that of the individual (Pharos 2024). The narrative outlined above combined with empirical evidence and model characteristics, led to the introduction of gANC specifically adapted for Eritrean women in Amsterdam, the Netherlands (Martens 2018), facilitated by an experienced gANC midwife and a trained Eritrean cultural mediator. However, the COVID-19 pandemic abruptly suspended all physical gANC groups in the country, giving rise to additional anxiety and stress amongst pregnant women. This prompted a rapid and successful transition to online group care meetings (Jans 2021). Online gANC was also initiated for pregnant Eritrean-born women. While recruitment for online gANC sessions proved more accessible for this group as it enabled participation from women outside the regional area, concerns arose regarding additional challenges such as limited non-verbal communication, technical or internet related issues and potential lower digital skills. An initial assessment showed that knowledge about pregnancy-related topics was gained, that women felt supported and a sense of connection was fostered among the participants (TNO 2022). Online gANC continues to be available for Eritrean women despite the lifting of COVID restrictions and the lack of funding. However, apart from the initial assessment, there has been no comprehensive evaluation of the topics discussed during online gANC and how these topics are addressed, or how Eritrean women experience these sessions as part of their overall antenatal care. Examining both the content of the sessions and women's experiences will provide insight into the usefulness and added value of online care sessions in addition to the individual antenatal checks.

## **METHODS**

### **Design**

We carried out an evaluation of online gANC for Eritrean women with a mixed method design, collecting data about the online groups by means of written diary entries of the facilitating midwife and an oral questionnaire carried out by Tigrinya speaking interviewers.

### **Online gANC for pregnant Eritrean women**

The online version of gANC followed the Centering-based gANC methodology, meaning that the role of the care provider is not traditionally informative-didactic, but instead facilitating (Rising 1998).

Topics were chosen based on the content of physical gANC groups for Eritrean women and the Care Standard for Centering-based group care during the COVID-19 pandemic (Jans 2021, TNO 2022).

Information about the availability of the online groups, was distributed through the communication channels of the Dutch Centering Healthcare Foundation and the newsletter of the Dutch Midwives

Organisation, KNOV. Social media, including LinkedIn was used to inform the wider public as well as other (health) professionals. A manual and fact sheet were available to inform maternity care providers in the Netherlands about the sessions for this specific group with the request to refer pregnant Eritrean-born women to the online sessions. Women were invited to participate in nine online sessions of two hours duration each. The customary tenth (postnatal) session was omitted in the online offer. The online sessions were facilitated by an experienced gANC midwife and an Eritrean cultural mediator. The sessions were free of charge and existed alongside regular antenatal care from their own primary care or hospital midwife or obstetrician. Before the start of the online sessions, the cultural mediator approached each woman for further instructions on how to participate and to ensure participants knew how to access ZOOM, the video communication application and its features such as the break-out room, white board and polls.

## Sample

A total of 18 online gANC groups with 273 Eritrean pregnant women from all over the Netherlands, were held between April 2022 and November 2023. Data were collected from 12 of those 18 groups.

Women were included in the online groups, when they self-identified as Eritrean, were pregnant at the time and had access to a smartphone or computer with internet-connection. There were no restrictions based on resident status, age or language skills. Women joined at different gestations of pregnancy but with a maximum difference of 2–3 months between gestations within any particular group.

## Data collection

Group facilitators were provided with a data collection sheet and one of the facilitators kept a diary to collect process data after online sessions. Collected data consisted of number of women attending each session, description of subjects discussed, summary of the content of the discussions, summary of questions, answers and comments made by participants.

To support the process data and diary entrees, Tigrinya speaking interviewers conducted telephone interviews guided by a questionnaire, between June and August 2022. The questionnaire was based on two existing questionnaires used in the European H2020 project on the implementation of Centering-based gANC (Martens et al. 2022). In collaboration with group care facilitators and the Eritrean cultural mediator, some answering options were adjusted to be more culturally sensitive, such as type of education and the descriptions of feelings of support which were changed into common Eritrean expressions. The questionnaire (additional file 1) was translated into Tigrinya and tested by the three Eritrean interviewers for clarity and applicability among five pregnant Eritrean women. The results of the try-out were discussed in an online meeting with the Eritrean interviewers, the online gANC midwife, the cultural mediator and a researcher (MR) and adjusted accordingly. All Eritrean women (n = 71) who had participated in online gANC at the end of June 2022, were invited by the group facilitators for this

questionnaire-guided telephone interview. The answers were recorded in Dutch on a paper copy of the questionnaire.

## Analysis

The diary entries were analysed (MR, SJ) using content analyses with an inductive approach. The reliability of the identified codes and themes was assessed by a member check involving one of the group facilitators. Throughout the study, we continuously reflected on the analytic process to arrive at consensus through investigator triangulation.

Descriptive analyses of quantitative data such as characteristics of participants and standardized answering options in the questionnaire were performed using SPSS version 27. We used the SQUIRE 2.0 checklist as guidance for writing the current article (Goodman et al 2016) (additional file 2).

## Ethical considerations

Oral information about online gANC, its voluntary nature and confidentiality was provided in Tigrinya at the start of the online sessions. This information was also shared in Tigrinya in the WhatsApp group which was established as a routine component of gANC. Individual consent to participate in the online sessions was not obtained, nor was it deemed necessary, as participation formed part of routine antenatal care. Oral informed consent for participation in the interview study was obtained and audio-recorded from all participants at the start of each interview. Participants were informed that participation in the interview study was entirely voluntary and that they could withdraw from the interview at any time without consequences.

This study was part of the larger GC\_1000 project funded by the European Commission's Horizon 2020 Research and Innovation Programme No. 848147. The GC\_1000 project received approval from the Medical Ethics Review Committee (METC) of Leiden University Medical Center (reference number N20.157/Dj/dj).

## RESULTS

### Group data

In total, 208 Eritrean pregnant women enrolled in the first twelve online groups of whom 174 (84%) participated, with a mean attendance rate of 6.2 (range 4.3-8.0) women per session. Nine percent of this group participated only once. Almost 80% of the pregnant women attended four or more meetings.

To allow the facilitators to gain some experience in online gANC, only the data of groups 3 to 10 was used. The content discussed per meeting was noted in the diaries together with written entries about subjects discussed and a general description of the discussion, including noteworthy quotes as reported by the facilitators. More than half (53.6%) of the group participants were primiparous women, about a

third (29.8%) were resident in the Amsterdam region and average gestational age at the first online meeting was 23 weeks (range 8–35 weeks).

**Evaluation of topics and discussions during gANC** The outcomes of the data extracted from the diary are described in five themes illustrated by quotes from the diary entries, highlighting the themes and women's experiences with online gANC:

## Theme 1. Rights and practical necessities

In the Netherlands, parents are expected to arrange essential postpartum care, including a maternity care nurse who visits the home for eight days to support mother and baby, while the midwife retains overall medical responsibility. They must also prepare practical items such as a thermometer and gauze swabs. Participants demonstrated a clear understanding of these requirements and felt confident in making the necessary arrangements as illustrated by the following quote:

It was a very fun and educational meeting. I didn't know you had to arrange a maternity care nurse during your pregnancy for the postnatal week. I didn't even know what it was. Now I have learned what it is and how to arrange it.

### [Diary entry group 10]

The sessions also cover Dutch laws on birth registration and paternity acknowledgement for unmarried parents, as these affect parental rights and the child's surname. Many Eritrean parents are unfamiliar with these regulations and often assume midwives handle both processes. Greater awareness appeared to boost confidence as illustrated by the following quote:

*"Today I am very happy that I learned something about acknowledgement of paternity. It went wrong with my two previous children. I'm going to check with the municipality now to see what's going on."*

### [Diary entry group 6]

Participants appeared to be unaware of their legal right to an interpreter, social and financial support and information on how to access these services with some of them feeling too afraid to ask related questions partly due to language barriers for which one group ends up finding a solution:

*"It's nice to know your rights, that you can ask for an interpreter. If that doesn't happen, you can ask for help, like call A [the cultural interpreter]. You can also start a conversation: tell the midwife that it is my right, why don't you arrange an interpreter. But this is often difficult due to our language barrier."*

*Let's ask the midwife to send us a voice message/text with an explanation for the attending midwife on call to hire an interpreter."*

### [Dairy entry group 5]

In all groups except one, national policy regarding Covid and Pertussis vaccinations was discussed. It is a little-known fact amongst the Eritrean community that vaccinations are recommended but not

mandatory. By introducing the subject to the group, participants felt more confident asking questions and making personal choices:

*"I think it is important that the whooping cough vaccination is not mandatory, I didn't really understand that from the [one-on-one] midwife, but I didn't dare to say that." [woman group 7]*

Thank you, I have learned a lot, the vaccination is a personal choice, I now understand that it is safe and sensible, so I will be vaccinated with whooping cough vaccination.

## **[Diary entry group 8]**

## **Theme 2. Prevention and lifestyle**

Lifestyle topics such as nutrition, alcohol use and stress were always discussed in the groups. From the discussions many misconceptions emerged about nutrition, especially concerning sugars, fish and cultural dietary customs. The diary entries also show that women seemed to gain new knowledge and insights through the online gANC:

Cola [Coca-Cola]: helps against anaemia, it is prescribed by doctors in Eritrea. What I have learned... I like coke but now I know too much coke is not good.

## **[Diary entry group 5]**

Especially the use of alcohol (Suwa, Eritrean homemade beer) was an enlightening topic for both the midwife and the women. In almost every group with Eritrean participants, the group discussions show that they had no idea the homemade beer contains alcohol and is therefore potentially harmful for the baby.

*Woman: "Suwa...I make it myself, it's delicious. I just made it, it's still fresh. The other one just finished... My mom does it every time. "*

*Midwife: "What's in it?"*

*Woman: "Vegetable yeast and grains."*

*Midwife: "Is it correct that you put that away for a while and it starts to bubble?"*

*And at a wedding: men drink a lot of Suwa, what happens to them?"*

*Women all together: "They get drunk!"*

## **[Diary group 6]**

Suwa was really a surprise: I didn't even know it counted as alcohol; I just drank it.

## **[Diary entry group 9]**

Using an opening activity where everyone is invited to introduce possible minor discomforts of pregnancy, is a customary way to start the discussion in gANC: It encourages participants to talk about existing complaints, providing the midwife with an opportunity to address misconceptions whilst empowering women to support each other with tips. Moreover, as reported in some of the diaries, the subject naturally led to discussions about distinguishing between minor discomforts and actual significant signs and symptoms that required attention from a health professional.

*Glad we talked about iron infusion, I actually wanted to decline it because it wasn't explained to me properly, I was afraid it wasn't right. But now I understand why it's necessary, and I'm definitely going to do it.*

## [Diary entry group 6]

*Baby movements mean the baby moves. I always thought it wanted to get out, now I understand the other reasons.*

## [Diary entry group 4]

From the discussions it emerged that women did not always understand the information received from their regular health professional. For example, there was confusion about the different telephone numbers that some midwives and hospitals use depending on the urgency of the call.

*The [hospital] midwife said that we are available 24 hours, but I don't know what for."*

## [Diary entry group 4]

The following diary entry shows that women really learned something from the session:

*With high blood pressure you really must call the midwife, I didn't know what blood pressure was either, that's clear now. Headaches and swollen feet are symptoms of high blood pressure.*

## [Diary entry group 9]

## Theme 3. (Culturally) sensitive issues

The facilitators encouraged open discussions on culturally sensitive subjects in all groups, enabling participants to address potentially harmful practices, such as female genital mutilation (FGM), circumcision and uvulectomy, which are all still practiced in Eritrea. It is a commonly held belief by many Eritrean women that male circumcision is essential for male fertility, and they consider it mandatory or highly important due to cultural beliefs about its health benefits and social expectations (Tesfamariam et al 2021, Unicef 2021).

*I thought that boys who were not circumcised had many complaints, but that is not the case*

## [Diary entry group 4]

Can they [uncircumcised boys] enjoy sex? Will they not die?

## [Diary entry group 6]

It surprised them to hear that Dutch men are not circumcised. As this quote reported in the diary shows, the open discussion on these culturally sensitive topics enabled some of them to realize that beliefs can be false and knowledge may be incomplete:

*If Dutch men are not circumcised, it may not be true that you cannot have children. Dutch men also have children...*

## [Diary entry group 7]

Participants expressed varied opinions about FGM. Most did not seem to support the practice for their daughters and appeared to have some awareness of the Dutch legal framework which prohibits FGM. Although women in the groups seem to recognise its disadvantages, knowledge gaps remain.

*What I heard is that there are complications with childbirth, you can die [both during the circumcision and childbirth], you can enjoy sex less. I did not know the types of female circumcision and risks.*

## [Diary entry group 4]

Traditional uvulectomy for babies and young children is widely practiced in sub-Saharan countries including Eritrea and can cause serious side effects and even lead to death in children (Yirdaw et al 2022). Fear of upper respiratory tract obstruction caused by a large uvula and the idea that it cures illness such as a sore throat which is considered extremely dangerous in Eritrea, is the main reason for the practice.

Women were unfamiliar with the difference between the uvula and the tonsils, which led to misunderstandings with health professionals.

*I have to laugh because I used to tell the [well-baby clinic, health visitor] nurse that the uvula caused problems for my daughter because she had to vomit all the time and they never understood me. I also asked if the uvula could be removed, they did not understand that at all, they said "then she will die". It is never explained to us, it is good that it is explained to us well, then we understand why you should not remove it.*

## [Diary entry group 6]

*In Eritrea we say that a uvula drops down, sometimes not, but if you have complaints, it has dropped down again, but I have now learned that this is not possible!*

## [Diary entry group 3]

Women are often considered inferior to men in Eritrean society and domestic violence is common (van Reisen et al., 2018). Domestic violence is a standardized subject in gANC; and providing gANC online is no cause for exception (Jans et al 2021). By asking questions the midwife stimulated participants to think about different perspectives, as the following diary entries show:

*Midwife: How do you indicate that you don't feel like sex?*

*Women in group 3: If you don't feel like it, you must have a good reason – stress, headache, tiredness*

*Midwife: when your husband doesn't want sex, do they have to give you a good reason?"*

*Women in group 5: [laughter in the group] ...no!*

*Woman in group 3: In our community it is normal, a man who doesn't beat his wife is a pussy.*

*Woman in group 6: You get beaten for a reason; you must have done something wrong. You can learn from these mistakes.*

*Midwife: Are you allowed to hit your husband?*

*Women in group 6: [giggles and laughter] No, we are not raised like that! What a good question, if we all think a man hitting his wife is normal than I am allowed to hit him as well...But it is better to talk!*

## [Diary entry group 6,]

Differences between Eritrea and the Netherlands were discussed, as well as what participants' views on the effect of domestic violence on children and where to seek help. The existence of a domestic violence support hotline was new to most participants. The diary-reported discussions show that talking about relations and domestic violence triggered participants to think about how they want to raise their own children.

*Actually, we don't talk to our partner. We really should, but we don't. We didn't see our parents do it either. We would like to give freedom to our children: that you can ask all questions, talk about feelings.*

And

*It's so clear how you explain it. A child who experiences violence passes on violence. A child who receives love passes on love.*

*[Both Diary entries from group 3]*

Participants appeared to value the discussion of sexuality during pregnancy and appeared to be quite open about the subject and the prevention of sexually transmitted diseases (STD). They expressed that they liked to discuss what they had learned about sexuality, with their husbands.

*Making love was also very important to discuss, otherwise you don't dare to make love for nine months fearing that you will harm the baby. You really have to tell this to every woman; a lot of relationships break down here because the man cheats.*

*[Diary entry group 6]*

#### *Theme 4. Preparedness for birth*

Given the significant differences between the Dutch and Eritrean healthcare systems, it is important for parents to learn about the Dutch system and to prepare for childbirth and infant care in the Netherlands. These topics were addressed across several sessions, covering choices regarding birth location, associated costs, required items, recognizing labour onset, when to contact the midwife or hospital, birthing positions, and possible complications or interventions. In two online groups an obstetrician joined the sessions to answer questions.

In addition, women talked in small groups (so-called online break-out rooms) to discuss any remaining concerns. This often led to a wide range of questions, allowing the midwife to address what mattered most to the group. Participants expressed that knowledge gained helped them feel better prepared and able to make the right choices.

*It feels like I'm consciously pregnant now, even though I've already given birth twice in the Netherlands, only now do I understand how everything works. There was no communication before. Now I'm more aware of everything.*

*[Diary entry group 5]*

*Everything was fine, how the contractions work and the process of dilation, why you have pain, has now become clear to me.*

*[Diary entry group 7]*

*For me everything was interesting, I liked it so much, I didn't know what an epidural was. Now I can make a better choice based on pros and cons.*

*[Diary entry group 6]*

During the discussions participants educated each other about birthing customs in the Netherlands. Moreover, it appeared to even be reciprocal as they also inform the participating obstetrician about Eritrean birthing customs.

*Breathing – in the Netherlands you have to keep breathing when you have pain, not scream.*

*[Diary entry group 4]*

*We made ourselves really popular in the Netherlands with all our screaming [laughter by all participants]. Explain to others [directed at the obstetrician] why we want to keep our cross around our neck during childbirth and also during a caesarean section. Otherwise, we feel like we are abandoning God, just when we need it most.*

*[Diary entry group 9]*

Topics most often discussed related to the postnatal period are neonatal screening, role of well-baby clinics, male and female circumcision, support and family planning. Breastfeeding was only noted once as a topic in the diary. Most participants intended to breastfeed, making this subject less of a priority for the midwife.

Support after birth was often discussed in relation to stress. In line with group care guidelines, the topic starts by asking women who they think will help them after birth, allowing more sensitive questions to emerge such as “how does it feel to ask for help?” and “what can you do when you do not have a support network?”.

Family Planning was discussed using online break out rooms and asking participants to name types of birth control, the questions they may still have about birth control, which methods they prefer and why and which methods are safe with breast feeding. One of the misconceptions often expressed was that Intrauterine devices (IUD) make you infertile. During the session other topics such as the menstrual cycle, fertility after birth also emerged.

*Everything was interesting today, specifically that blood doesn't keep accumulating [in the body] when you use contraception if you don't get your period. I thought [before] why else you get fat... [woman group 1]*

*I had no idea what kind of hormones contraception methods contain, with which you do or don't get your period anymore.*

*[Diary entry group 7]*

*I got extensive information about birth control, and what can or cannot be done with breast feeding*

*[Diary entry group 4]*

In two groups transition to parenthood was discussed. What do you want your children to learn from you, what do you want to pass on from your upbringing and what you do not want to pass on, are questions posed to the online groups. Participants expressed feelings of importance about their children having freedom of speech, a better education and as new parents they wanted to learn different ways to raise their children.

*What I want to pass on is helping the elderly, religion, culture, respect. What I want to do differently is: listen to the needs of my children and give them freedom, not beat them.*

*[Diary entry group 8]*

*I had little education, I didn't take it seriously, I want to stimulate this more in my child.*

And

*I want to pass my love on to my child, but I don't want to cut my child off quickly in conversation. I experienced this very differently, because I was not allowed to express my opinion.*

*[Both Diary entries group 9]*

#### *Theme 5. Satisfaction with Care*

At the end of the last session participants are asked two questions:

- How connected do you feel and what is it that makes you feel connected?
- What is the most important thing they take home from the sessions?

Almost all participants indicated they felt very connected with the others because of communal learning and the open discussions allowing feelings to emerge. Participants expressed how this contributed to feeling freer and more self-assured, such as in their contact with the midwife/health care provider or other women:

*Centering has increased my knowledge, so that I dare to talk more with my midwife. I feel more secure. I also dare to talk more with other pregnant women.*

*[Diary entry group 7]*

*That we can talk to each other, perhaps because of shame or oppression, we were not raised that way, now we dare. Discussing topics we never dared to discuss before*

*[Diary entry group 4]*

*It's nice to share with each other what causes stress, nice that we talk about it so openly, we share feelings that we always kept to ourselves, that's also a relief.*

*[Diary entry group 6]*

When asked to provide the most important take home message, women described the positivity resulting from the sessions and feeling empowered and more conscious of their rights.

*Centering: we didn't know a lot of things, and that's why we said yes, yes...now we know that we can make our own choices, and we don't just say yes anymore.*

*[Diary entry group 6]*

## Interviews

The questionnaire-guided interviews took place at six months postpartum (average 6.97 months, [SD2.65]). Of the 71 invited women, 40 participated in the interviews (response rate of 56%). Most participants were primiparous (57.5%), had a mean age of 27.2 (SD 4.17). The majority had health insurance, permanent residency (90%) and good to sufficient command of the Dutch language (62.5%). Most participants had received some form of education (90%) (Table 1).

Table 1  
Characteristics of women interviewed (N = 40).

| <b>Parity</b>                         | <b>n</b>  | <b>% or mean, [sd]</b> |
|---------------------------------------|-----------|------------------------|
| <b>Primiparous</b>                    | <b>23</b> | <b>57.5</b>            |
| <b>Age mother (yrs.)</b>              |           | 27.2 [4.17]            |
| <b>Gestation at intake (months)</b>   |           | 2.51 [1.46]            |
| <b>Health Insurance*</b>              |           |                        |
| Yes                                   | 36        | 90                     |
| No                                    | 2         | 5.0                    |
| Don't know                            | 1         | 2.5                    |
| Missing                               | 1         | 2.5                    |
| <b>Civil status</b>                   |           |                        |
| Married /living with partner          | 17        | 42.5                   |
| Single (with or without children)     | 23        | 57.5                   |
| <b>Residence status</b>               |           |                        |
| Permanent residency / Dutch passport  | 36        | 90.0                   |
| No, application in progress           | 2         | 5                      |
| No, residency has been denied         | 1         | 2.5                    |
| Missing                               | 1         | 2.5                    |
| <b>Dutch Language Skills</b>          |           |                        |
| Good                                  | 4         | 10                     |
| Sufficient                            | 21        | 52.5                   |
| Not good                              | 9         | 22.5                   |
| None                                  | 6         | 15                     |
| <b>Education</b>                      |           |                        |
| Never attended school                 | 2         | 5                      |
| Elementary school (groups 1–5)        | 1         | 2.5                    |
| Secondary School (groups 6–8)         | 16        | 40.0                   |
| High school certificate (groups 9–12) | 16        | 40.0                   |
| Any education after group 12          | 3         | 7.5                    |
| Other                                 | 1         | 2.5                    |

| Parity             | n         | % or mean, [sd] |
|--------------------|-----------|-----------------|
| <b>Primiparous</b> | <b>23</b> | <b>57.5</b>     |
| Missing            | 1         | 2.5             |

*\*Everyone living or working in the Netherlands is legally required to have health insurance. Refugees staying in reception centers are covered under a specific refugee insurance scheme.*

Most Eritrean women who participated in online gANC sessions reported being well prepared for the choices available to them during childbirth, regularly asking questions during their visits, and understanding the answers they received. Most women experienced emotional support from their partner during pregnancy (60%), followed by the online gANC facilitators (48%), family members (30%), other women in the group (23%), neighbours and friends (23%) and to a lesser extend from other care providers such as midwives and obstetricians etc. (14%) (table 2). Approximately half of the women reported regular to frequent contact with other pregnant women outside the sessions during pregnancy. Contact with group members was less frequent after birth with half of the women reporting that they never had contact with other women from the group.

Table 2  
Experienced (emotional) support

| <b>Experiences with care</b>                                                                     | <b>gANC, N = 40</b> |          |
|--------------------------------------------------------------------------------------------------|---------------------|----------|
|                                                                                                  | <b>n</b>            | <b>%</b> |
| <b>Asking the midwife questions during online gANC</b>                                           |                     |          |
| Never (not during any visit)                                                                     | 1                   | 2.5      |
| Sometimes (at less than a quarter of any of the visits)                                          | 6                   | 15       |
| Regularly (between a quarter and half of all the visits)                                         | 18                  | 45       |
| Often (during more than half of all the visits but not every time)                               | 12                  | 30       |
| Always (at every visit)                                                                          | 3                   | 7.5      |
| Missing                                                                                          | -                   | -        |
| <b>How often did you understand the answers to your questions?</b>                               |                     |          |
| Never (not during any visit)                                                                     | 1                   | 2.5      |
| Sometimes (at less than a quarter of any of the visits)                                          | 4                   | 10       |
| Regularly (between a quarter and half of all the visits)                                         | 13                  | 32.5     |
| Often (during more than half of all the visits but not every time)                               | 6                   | 15       |
| Always (at every visit)                                                                          | 16                  | 40       |
| Missing                                                                                          |                     |          |
| <b>Did you feel prepared for the choices during birth that are available in the Netherlands?</b> |                     |          |
| Yes, very well prepared                                                                          | 26                  | 66.7     |
| Yes, well prepared                                                                               | 13                  | 33.3     |
| No, not well prepared                                                                            | 0                   | 0        |
| No, not at all prepared                                                                          | 0                   | 0        |
| <b>Perceived support</b>                                                                         |                     |          |
| <b>Experienced emotional support during pregnancy*</b>                                           |                     |          |
| I felt like I was in my own country                                                              | 12                  | 30       |
| I was taken care of (e.g. by your husband, family, friends...)                                   | 20                  | 50       |
| I was respected                                                                                  | 23                  | 58       |

| <b>Experiences with care</b>                                                   |  | <b>gANC, N = 40</b> |          |
|--------------------------------------------------------------------------------|--|---------------------|----------|
|                                                                                |  | <b>n</b>            | <b>%</b> |
| I was supported                                                                |  | 23                  | 58       |
| I was understood                                                               |  | 29                  | 73       |
| I was invited                                                                  |  | 28                  | 70       |
| I was prayed for                                                               |  | 18                  | 45       |
| I was trusted                                                                  |  | 18                  | 45       |
| I was accepted                                                                 |  | 18                  | 45       |
| <b>Who gave you emotional support during pregnancy? *</b>                      |  |                     |          |
| Partner                                                                        |  | 24                  | 60       |
| Family                                                                         |  | 12                  | 30       |
| Friend(s)                                                                      |  | 5                   | 13       |
| Neighbours                                                                     |  | 4                   | 10       |
| Women in the online Centering group                                            |  | 9                   | 23       |
| Facilitator(s) of the online Centering group                                   |  | 19                  | 48       |
| Midwife                                                                        |  | 3                   | 8        |
| Doctor (obstetrician)                                                          |  | 1                   | 3        |
| Other health professional                                                      |  | 1                   | 3        |
| <b>Interaction with other pregnant women outside sessions</b>                  |  |                     |          |
| <b>Contact with other group members during pregnancy</b>                       |  |                     |          |
| Often (every week)                                                             |  | 17                  | 42.5     |
| Regularly (2–3 times a month)                                                  |  | 5                   | 12.5     |
| Sometimes (1x per month)                                                       |  | 1                   | 2.5      |
| Very occasionally (less than once a month)                                     |  | 2                   | 5.0      |
| Never                                                                          |  | 15                  | 37.5     |
| <b>How often do you interact with group members now (6 months postpartum)?</b> |  |                     |          |
| Often (every week)                                                             |  | 2                   | 5.0      |
| Regularly (2–3 times a month)                                                  |  | 3                   | 7.5      |

| Experiences with care                      | gANC, N = 40 |      |
|--------------------------------------------|--------------|------|
|                                            | n            | %    |
| Sometimes (1x per month)                   | 1            | 2.5  |
| Very occasionally (less than once a month) | 3            | 7.5  |
| Never                                      | 21           | 52.5 |
| Missing                                    | 10           | 25   |

*\*More than one answer possible*

## DISCUSSION

This mixed-method evaluation provides insights into the first year of online Centering-based gANC for Eritrean-born women in the Netherlands. The findings suggest that online gANC is a feasible and valued approach which addresses important informational, cultural and emotional needs of this group. Participants expressed online gANC to be a positive experience and during the sessions showed an increased understanding of pregnancy, childbirth, and the Dutch maternity care system, alongside growing confidence to engage with health care providers and to exercise their rights within maternity care. Women also confirmed that they were well prepared for the choices available to them during birth. Diary data also revealed previously unrecognised misunderstandings and deeply rooted cultural misconceptions in relation to practices such as traditional uvulectomy.

Consistent with the core principles of Centering-based gANC, participants appeared to benefit from a woman-centered and participatory learning environment that encouraged dialogue, reflection, and mutual support (Martens et al 2022). The diary entries illustrate how the online group format enabled participants to voice questions and share experiences that are often left unspoken in routine individual antenatal care visits. In particular, misunderstandings related to lifestyle behaviours, pregnancy-related symptoms, and maternity care were openly explored and addressed. Discussions of culturally embedded beliefs, such as those related to Suwa beer, further highlight the added value of gANC facilitated by both a midwife and a cultural mediator.

The presence of a Tigrinya-speaking cultural mediator seems to be central to facilitating culturally safe care, supporting not only accurate communication but also trust-building, enabling women to engage in discussions about sensitive topics such as FGM, domestic violence, and gender roles. Culturally safe care is one of the three key dimensions of equity-oriented healthcare (Brown et al 2018) and is reinforced, alongside trauma-informed care, woman & family centered care and continuity of care, by the systematic review of Jameel et al (2026). Moreover, diary entries suggest that online gANC contributed to feelings of empowerment, reflected in increased confidence to ask questions, make informed decisions,

and interact more assertively with care providers. Although these findings are promising, further research is needed to confirm the extent to which online gANC contributes to empowerment outcomes. These findings also align with the broader literature on gANC, indicating that group care allows for deeper exploration of psychosocial and cultural issues than is typically possible in time-limited one-to-one appointments, as well as identifying empowerment, active participation and trust as key mechanisms through which group care influences women's experiences (Mehay 2024, Kweekel 2017). For refugee and migrant women who often experience fragmented care and communication barriers, this empowerment is particularly relevant to the delivery of equitable and respectful maternity care (Jameel et al 2026).

Model fidelity in gANC refers to how closely the implementation of the model adheres to its original design and core components of health assessment, interactive learning and social support or community building. This is important as it has been shown to directly impact the effectiveness of the model (Gresh et al 2025). In the current study, the health assessment, arguably the most difficult component to deliver online, was provided by the regular individual antenatal care provider rather than within the group sessions, and therefore online gANC for Eritrean refugees did not completely adhere to the core components of gANC. However, an earlier pilot study conducted in the Netherlands during the COVID-19 pandemic, demonstrated that the online format is feasible and a more recent study from the United States showed that virtual antenatal care models do indeed have clinical value (Rijnders et al 2019, Bertozzi et al 2026). The online setting offers valuable insights into the lived experiences, beliefs, and concerns of Eritrean refugees. However, the extent to which it reinforces the reciprocal learning process, fundamental to woman-centered maternity care, remains unclear as the care provider who carries out the antenatal health assessment was not the same as the midwife facilitating the online groups (Lazar et al 2021). Although, some network forming and community building was achieved with participants connecting via WhatsApp groups outside the sessions, these connections appeared to have diminished by six months postpartum. While online gANC clearly addresses an important need and was able to reach a large and geographically dispersed group of participants, further research is required to better understand how fidelity to core components can be optimised in online formats. Following completion of the study, adjustments were implemented, and participants are now also invited for postnatal and parenting groups, in response to participants' expressed need for continuing opportunities to meet each other. Facilitators report an increase in social interaction and mutual engagement after these adjustments. However, the overall impact remains to be evaluated in future research.

Several limitations should be considered when interpreting our findings. The process data relied on diary entries written by the facilitating midwife and may therefore have been subject to selective reporting. Some discussions took place in Tigrinya, and required translation, which may have resulted in variations in the level of detail captured over time. In addition, the interviews were conducted by members of the Eritrean community. Given that Eritreans form a close-knit community in the Netherlands, this may have increased the likelihood of socially desirable answers. Despite these limitations, the use of multiple data sources and triangulation strengthens confidence in the overall findings.

Overall, this evaluation suggests that online Centering-based gANC can play a valuable role in providing accessible, culturally sensitive, equitable and woman-centered antenatal care for Eritrean refugees. For midwives, this model offers an opportunity to address complex informational and psychosocial needs while fostering trust and empowerment, albeit not with their own antenatal care provider. Further research should explore strategies to enhance model fidelity, especially regarding sustained peer support and the integration of health assessments into online group care rather than alongside care, and to investigate the effect of online gANC on empowerment and pregnancy outcomes.

## CONCLUSION

Online gANC tailored to Eritrean women is a feasible, acceptable and valued approach that addresses critical gaps in information, empowerment and cultural safety. While our data show that sustained peer support appears more difficult to maintain online, the model shows clear potential for improving (social) engagement and equity in maternity care for refugee populations. Integrating structured health assessments and exploring hybrid or locally anchored community-building strategies as well as offering participants continuing care in parenting groups, may further enhance impact. These findings support the inclusion of culturally adapted online group care in national maternity care strategies for underserved migrant communities.

## DECLARATIONS

### **Ethics approval**

Oral information about online gANC, its voluntary nature and confidentiality was provided in Tigrinya at the start of the online sessions. This information was also shared in Tigrinya in the WhatsApp group which was established as a routine component of gANC. Individual consent to participate in the online sessions was not obtained, nor was it deemed necessary, as participation formed part of routine antenatal care. Oral informed consent for participation in the interview study was obtained and audio-recorded from all participants at the start of each interview. Participants were informed that participation in the interview study was entirely voluntary and that they could withdraw from the interview at any time without consequences.

This study was part of the larger GC\_1000 project funded by the European Commission's Horizon 2020 Research and Innovation Programme No. 848147. The GC\_1000 project received approval from the Medical Ethics Review Committee (METC) of Leiden University Medical Center (reference number N20.157/Dj/dj).

### **Consent for publication**

N/a

### **Availability of data and materials**

The datasets generated and analysed during the current study are not publicly available due to privacy issues and ethics but are available from the corresponding author on reasonable request. Data are in controlled access data storage of TNO, GC\_1000 project lead located in The Netherlands.

### **Competing interests**

The authors declare that they have no competing interests.

### **Funding**

This study was part of the larger GC\_1000 project which received funding from the European Union's Horizon 2020 research and innovation program under grant agreement No 848147. Part of this project was also supported by the Dutch Healthcare Authority (NZA) and the local organization of community midwives in Amsterdam.

### **Author Contributions:**

SJ: Conceptualisation, data curation, formal analysis, methodology, validation, visualisation, writing (both original draft, review& editing).

MC: Conceptualisation, Funding acquisition, investigation, methodology, supervision, writing, review & editing.

AB: Conceptualisation, data curation, validation, review & editing.

AW: Conceptualisation, data curation, validation, review & editing.

MR: Conceptualisation, Funding acquisition, data curation, methodology, project administration, supervision, validation, writing, review & editing.

### **Acknowledgements**

We gratefully acknowledge all participants in the online gANC sessions, particularly the women who participated in the postpartum interviews, and the Eritrean translators whose support was essential in conducting these interviews.

### **Authors' information**

MR is the vice-chair of Group Care Global as well as advisor to the board of the Dutch Centering health care foundation.

AB is a registered trainer with the Dutch Centering Healthcare Foundation

## **REFERENCES**

1. Arabin B, Baschat AA. Pregnancy: An Underutilized Window of Opportunity to Improve Long-term Maternal and Infant Health-An Appeal for Continuous Family Care and Interdisciplinary Communication. *Front Pediatr.* 2017;5:69.
2. Belihu FB, Davey MA, Small R. Perinatal health outcomes of East African immigrant populations in Victoria, Australia: a population based study. *BMC Pregnancy Childbirth.* 2016;16:86. 10.1186/s12884-016-0886-z. . PMID: 27113930; PMCID: PMC4845379.
3. Bertozzi L, Perry MF, Galeon T, Kubsh A, Von Kohorn I, Hooley IJ. Duration of virtual maternity program engagement and neonatal outcomes: A multistate retrospective cohort study. *Pregnancy.* 2026;2:e70243. <https://doi.org/10.1002/pmf2.70243>.
4. Browne AJ, Varcoe C, Ford-Gilboe M, et al. Disruption as opportunity: Impacts of an organizational health equity intervention in primary care clinics. *Int J Equity Health.* 2018;17:154. <https://doi.org/10.1186/s12939-018-0820-2>.
5. CBS. Statistieken Nederland. Most asylum requests from Eritreans for first time since 2026. July 2025. Available from Most asylum requests from Eritreans for first time since 2016 | CBS. Last accessed 05-05-2026.
6. Davis EP, Narayan AJ. Pregnancy as a period of risk, adaptation, and resilience for mothers and infants. *Dev Psychopathol.* 2020;32(5):1625–39.
7. ESS. Expert-Unit Social Stability. How local authorities can address tensions and polarisation within and around the Dutch-Eritrean community. Dutch-Eritrean Community Guide (Handrieking Nederlands-Eritrese Gemeenschap. Hoe in gemeenten om te gaan met spanningen en polarisatie in en rondom de Nederlands-Eritrese gemeenschap). Ministry of social affairs and employment; March 2024.
8. Ferrier J, Kahmann M, Massink L. Jullie Nederlanders hebben voor alles een systeem.' Handreiking voor ondersteuning van Eritrese nieuwkomers bij hun integratie. Utrecht: Kennisplatform Integratie & Samenleving; 2017. Last accessed 30-01-2023.
9. GC\_1000. <https://groupcare1000.com>. Last Accessed 03-10-2023.
10. Gebreyesus T, Gottlieb N, Sultan Z, Ghebrezghiabher HM, Tol W, Winch PJ, Davidovitch N, Surkan PJ. Barriers to contraceptive careseeking: the experience of Eritrean asylum-seeking women in Israel. *Ethn Health.* 2020;25(2):255–72. Epub 2017 Dec 28. PMID: 29284285.
11. Goodman D, Ogrinc G, Davies L, Baker GR, Barnsteiner J, Foster TC, Gali K, Hilden J, Horwitz L, Kaplan HC, Leis J, Matulis JC, Michie S, Miltner R, Neily J, Nelson WA, Niedner M, Oliver B, Rutman L, Thomson R, Thor J. Explanation and elaboration of the SQUIRE (Standards for Quality Improvement Reporting Excellence) Guidelines, V.2.0: examples of SQUIRE elements in the healthcare improvement literature. *BMJ Qual Saf.* 2016;25(12):e7. PMID: 27076505.
12. Grenier L, Onguti B, Whiting-Collins LJ, Omanga E, Suhowatsky S, Winch PJ. Transforming women's and providers' experience of care for improved outcomes: A theory of change for group antenatal care in Kenya and Nigeria Randomized Controlled Trial. *PLoS ONE.* 2022;17(5).

13. Homer CS, Ryan C, Leap N, Foureur M, Teate A, Catling-Paull CJ. Group versus conventional antenatal care for women. *Cochrane Database Syst Rev*. 2012;11:CD007622.
14. Heberlein EC, Picklesimer AH, Billings DL, Covington-Kolb S, Farber N, Frongillo EA.
15. Qualitative Comparison of Women's Perspectives on the Functions and Benefits of Group and Individual Prenatal Care. *J Midwifery Womens Health* 2016 Mar-Apr;61(2):224–34.
16. Jacob Y. Eritrese vrouwen in de geboortezorg. Verkenning onder Eritrese vrouwen en professionals die hen bijstaan tijdens zwangerschap en na geboorte. Utrecht: Pharos 2018. Retrieved via <https://www.pharos.nl/kennisbank/eritrese-vrouwen-in-de-geboortezorg/>
17. Jameel A, Pope N, Hearn F, Tuteja A, Riggs E. Understanding equity-oriented maternity care for women of refugee background in high-income countries: a qualitative systematic review. *Int J Equity Health*. 2026;25(1):106. 10.1186/s12939-026-02848-5. . PMID: 42010559; PMCID: PMC13097718.
18. Kweekel L, Gerrits T, Rijnders M, Brown P. The Role of Trust in CenteringPregnancy: Building Interpersonal Trust Relationships in Group-Based Prenatal Care in The Netherlands. *Birth*. 2017;44(1):41–7.
19. Lazar J, Boned-Rico L, Olander EK, McCourt C. A systematic review of providers' experiences of facilitating group antenatal care. *Reprod Health*. 2021;18(1):180. 10.1186/s12978-021-01200-0. . PMID: 34493314; PMCID: PMC8425020.
20. Martens M. Interview met verloskundige over nieuwe aanpak voor zwangere Eritrese vrouwen in Amsterdam. VNG. 2018. Retrieved from <https://vng.nl/artikelen/interview-met-verloskundige-over-nieuwe-aanpak-voor-zwangere-eritrese-vrouwen-in-amsterdam>
21. Martens N, Crone MR, Hindori-Mohangoo A, Hindori M, Reis R, Hoxha IS, Abanga J, Matthews S, Berry L, van der Kleij RMJJ, van den Akker-van Marle ME, van Damme A, Talrich F, Beeckman K, Court CM, Rising SS, Billings DL, Rijnders M. Group Care in the first 1000 days: implementation and process evaluation of contextually adapted antenatal and postnatal group care targeting diverse vulnerable populations in high-, middle- and low-resource settings. *Implement Sci Commun*. 2022;3(1):125. 10.1186/s43058-022-00370-7. . PMID: 36424641; PMCID: PMC9694875.
22. McNeil DA, Vekved N, Dolan SM, Siever J, Horn S, Tough SC. Getting more than they realized they needed: a qualitative study of women's experience of group prenatal care. *BMC Pregnancy Childbirth*. 2012;12:17.
23. Mehay A, Motta GD, Hunter L, et al. What are the mechanisms of effect of group antenatal care? A systematic realist review and synthesis of the literature. *BMC Pregnancy Childbirth*. 2024;24:625. <https://doi.org/10.1186/s12884-024-06792-6>.
24. Novick G, Sadler LS, Kennedy HP, Cohen SS, Groce NE, Knafl KA. Women's experience of group prenatal care. *Qual Health Res*. 2011;21(1):97–116.
25. Oreel I. Factsheet Gezondheid Jeugd in Eritrea. Kennisdelingsprogramma Gezondheid Statushouders; 2018.
26. Pharos. (2022). Factsheet. Eritrese Vluchtelingen (Eritrean refugees). Available from [factsheet-eritrese-vluchtelingen.pdf](#) Last accessed 03-02-2026).

27. Pharos. Eritrese vluchtelingen (Eritrean refugees). Utrecht: Pharos. April 2024. Available from <https://www.pharos.nl/factsheets/eritrese-vluchtelingen/> Last accessed 05-05-2026.
28. Phillippi JC, Myers CR. Reasons women in Appalachia decline CenteringPregnancy care. J Midwifery Women's Health. 2013;58:516–22.
29. Rijnders M, Jans S, Aalhuizen I, Detmar S, Crone M. Women-centered care: Implementation of CenteringPregnancy® in The Netherlands. Birth. 2019;46(3):450–60.
30. Rijnders M, Jans S, Groesen K. Centering in the times of the COVID-19 pandemic. The practicing midwife. Jan 2021.
31. Sadiku F, Bucinca H, Talrich F, Molliqaj V, Selmani E, McCourt C, Rijnders M, Little G, Goodman DC, Rising SS, Hoxha I. Maternal satisfaction with group care: a systematic review. AJOG Glob Rep. 2023;4(1):100301. PMID: 38318267; PMCID: PMC10839533.
32. Tesfamariam S, Tesfai F, Hussien L, et al. Traditional medicine among the community of Gash-Barka region, Eritrea: attitude, societal dependence, and pattern of use. BMC Complement Med Ther. 2021;21:68. <https://doi.org/10.1186/s12906-021-03247-9>.
33. TNO. (2020a). Factsheet landelijke online Centering Pregnancy voor Eritrese zwangeren (CPE). 2018. Beschikbaar via <https://centeringzorg.nl/wp-content/uploads/2020/12/Factsheet-Eritrese-zwangeren-CPEA4-02.pdf>
34. TNO. (2020b). Totstandkoming van online zorg voor Eritrese zwangeren in coronatijd. 29 Aug. 2018. Beschikbaar via <https://centeringzorg.nl/wp-content/uploads/2021/02/Verslag-TNO-Totstandkoming-van-online-zorg-voor-Eritrese-zwangeren-in-coronatijd.pdf>
35. TNO. 2022 ZonMw eindrapportage Projectnummer: 636602009.
36. Unicef. Case study on ending female genital mutilation in the State of Eritrea. Unicef, 2021.
37. Wagijo MR, Crone MR, van Zwicht BS, van Lith JMM, Schindler Rising S, Rijnders MEB. CenteringPregnancy in the Netherlands: Who engages, who doesn't, and why. Birth. 2022;49(2):329–40.
38. Yirdaw BW, Gobeza MB, Tsegaye Gebreegziabher N. Practice and associated factors of traditional uvulectomy among caregivers having children less than 5 years old in South Gondar Zone, Amhara Region, Ethiopia, 2020. PLoS ONE. 2022;17(12):e0279362. 10.1371/journal.pone.0279362. . PMID: 36548273; PMCID: PMC9778602.

## Supplementary Files

This is a list of supplementary files associated with this preprint. Click to download.

- [AddFile1QuestionnaireEritreanwomen.docx](#)
- [Addfile2SQUIRE2checklistcompleted.docx](#)