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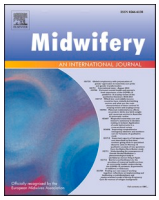

Involving women with limited English proficiency in group antenatal care: Findings from the integrated process evaluation of the Pregnancy Circles pilot trial

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ABSTRACT

Problem In the United Kingdom, poor experiences and outcomes of antenatal care among women with limited English proficiency (LEP) are widely documented.

Background: Group antenatal care aims to address some limitations of traditional care by combining health assessment, information sharing and peer support, but the inclusion of women with LEP in mixed-language groups has not been explored.

Aim: This qualitative study used observations and interviews to explore whether linguistic diversity could be incorporated into group antenatal care (Pregnancy Circles). Women with LEP were invited to take part in mixed-language groups in a large urban NHS trust as part of the Pregnancy Circles pilot trial (ISRCTN66925258 Retrospectively registered 03 April 2017; North of Scotland Research Ethics Service 16/NS/0090).

Findings: Three Pregnancy Circles including women with LEP were implemented. Linguistically integrated groups required additional resources (time, interpreters, midwifery skills). Four themes emerged: 'Interpreting as helping', 'Enhanced learning', 'Satisfaction and belonging' and 'Complex lives'.

Discussion: Women with LEP accessing interpreting in Pregnancy Circles reported high levels of satisfaction, contrasting with reported experiences in traditional care. Three theories of effect emerged as relevant for women with LEP: social support.

Abbreviations: gANC, Group antenatal care; LEP, Limited English proficiency; PC, Pregnancy Circles; BHA, Bilingual Health Advocates; PLS, Peer language support.

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Introduction

Internationally, language barriers are linked to reductions in the quality and safety of healthcare (Al Shamsi et al., 2020; Rechel et al., 2013). Supporting pregnant women/birthing people[1] who do not speak the host country's language is a growing issue in high-income countries with significant migration (Rechel et al., 2013). In the UK, 9 % of the population have a main language other than English, of which 25 % have limited English proficiency (LEP) i.e. speak English 'not well' or 'not at all' (Office for National Statistics (ONS) 2022). Migrants with LEP report poorer health than those who speak English 'well' or 'very well' (35 % v 12 %) (Office of National Statistics (ONS) 2015). Recent migrants have higher rates of non-attendance for antenatal care and increased risk of maternal and neonatal mortality (Rayment-Jones et al., 2019; Centre for Maternal and Child Enquiries (CMACE) 2011–Knight et al., 2020). In 2010 the National Institute for Health and Care Excellence (NICE) recommended using interpreters and longer appointments for women with LEP (National Institute for Health and Care Excellence (NICE) 2010) and identified the need for research into different models of service provision. However, to date few studies on LEP have focused on models of care (Bridle et al., 2021). Below we explore how group care might address some of these challenges.

Group antenatal care

Group antenatal care (gANC) aims to address some of the limitations of traditional care by combining health assessment, information sharing and peer support. Originally established as Centering Pregnancy™ (Massey et al., 2006), gANC brings together 6–12 women due around the same time for 2-hour group sessions facilitated by two professionals providing continuity. Facilitated discussions enhance opportunities for peer learning and social support and women carry out their own checks (e.g. blood pressure), encouraging them to take an active role in their own health. Women receive a brief one-to-one clinical check with the midwife within the group space, providing an opportunity for private discussion.

Systematic reviews have found that gANC is clinically safe, enhances experiences of care and improves outcomes such as preterm birth, breastfeeding, smoking cessation, psycho-social wellbeing and attendance for women at higher risk of complications (Byerley and Haas, 2017; Catling et al., 2017).

In England, a bespoke model of Centering-based gANC called Pregnancy Circles (PC) was developed **for implementation within the NHS** (M Wiggins et al., 2018).

The Research for Equitable Antenatal Care and Health (REACH) Programme is testing whether PC can improve access, experience and outcomes of antenatal care for women living in areas of high socio-economic, ethnic and linguistic diversity in England. The feasibility study found that PC was acceptable to midwives and women from diverse backgrounds (Hunter et al., 2019; Hunter et al., 2018). The timing and content of Pregnancy Circles followed NICE guidelines on antenatal care (National Institute for Health and Care Excellence (NICE) 2021), with topics addressed using interactive activities and facilitated discussions to ensure that both statutory topics (health during pregnancy, preparation for birth, infant feeding etc.) and topics of importance to women are addressed.

A realist review of gANC literature exploring what works, for whom, in what circumstances identified six possible theories of effect: active participation in health, health education, satisfaction with care, social support, peer learning and health professional development and well-being, with empowerment emerging as an overarching mechanism (Mehay et al., 2023). We theorised that several elements of gANC might act as mechanisms for improving care specifically for women with LEP, including additional time with midwives (16 h compared to 3–4 h in traditional care), peer support, continuity of care, and self-checking (Appendix 1). However, including women with LEP in mixed-language groups posed some practical challenges.

Using interpreters in group care

Women in the feasibility study expressed a preference for socio-demographically and linguistically mixed groups but some midwives expressed concerns about managing interpreters in groups (Hunter et al., 2019; Hunter et al., 2018). Evidence on using interpreters in gANC is limited and mixed. For example, interpreters are reported to change group dynamics, slow down sessions and trigger didactic teaching, but also to enhance women's learning and cultural understanding. No studies were identified reporting on the use of interpreters in mixed-language groups (Ahrne et al., 2022; Yelland et al., 2016).

Research aims

As part of the integrated process evaluation conducted within the pilot randomised controlled trial of pregnancy circles we aimed to explore how linguistic diversity could be incorporated into gANC (M Wiggins et al., 2018; Sawtell et al., 2023). Our objectives were:

- To examine the attendance, experience and satisfaction with PC for women with LEP, facilitators and English-speaking participants
- To understand the preferences and provision of interpreting services in PC to explore how PC mechanisms of effect might function for women with LEP

This paper reports on these findings. The main findings of the pilot trial are reported elsewhere (Sawtell et al., 2023).

Methods

Design

The pilot randomised controlled trial took place in an inner-city acute NHS trust with three maternity services in areas of high socio-economic, cultural and linguistic diversity. Each service ran one PC (M Wiggins et al., 2018). Participants randomised to PC received their antenatal care in eight two-hour group sessions from 16 weeks' gestation, following national guidelines for primiparous women (National Institute for Health and Care Excellence (NICE) 2021), with one post-natal reunion. PC were facilitated by two midwives trained in group facilitation. Face-to-face interpreting was provided by Bilingual Health Advocates (BHA) who worked for the service, drawn from the local community, whose role includes cultural mediation and signposting to local services. Full pilot trial details are reported elsewhere (M Wiggins et al., 2018).

Procedures

All women in the designated areas with a due date within two weeks of the 40-week session were eligible to participate, including first and subsequent births and those assessed as low or high-risk of complications. To enhance participation by women with LEP, the recruitment team used bilingual research staff, BHA and telephone interpreting. Women could be recruited up to 20 weeks' gestation to capture 'late bookers'. Participants were randomised to the intervention (PC) or control (traditional care: 20-minute individual clinic appointments). Women indicated to their booking midwives if they needed an interpreter.

[1] Throughout this article we refer to 'women' because no participants in this study identified themselves as trans men, but many issues discussed are relevant to birthing people with LEP.

Data collection

Demographic information (ethnicity, country of birth, parity, language ability) was extracted from baseline questionnaires completed at recruitment. Women were asked to identify whether they spoke English 'very well', 'well', 'little' or 'no' English. Attendance data was recorded by midwives after each PC session.

All the women who took part in PC, and all participating midwives and support staff, were invited to a face-to-face interview arranged at a convenient time and place. A topic guide was developed from the aims and objectives of this study (Sawtell et al., 2023). Women with LEP were interviewed by a bi-lingual researcher or an English-speaking researcher using a BHA or telephone interpreter. Observations of PCs where an interpreter was present were carried out focusing on the interactions between the women with LEP, interpreters, facilitating midwives and others in the group to identify issues relevant to the implementation of mixed-language Pregnancy Circles. Data collection took place between July 2017 and March 2018.

Data analysis

Anonymised interview transcripts and observation field notes were uploaded to NVivo11. Reflexive thematic analysis (Braun and Clarke, 2019) using a framework devised from feasibility study findings and the aims of the pilot trial was applied to explore patterns of shared meaning across the dataset. Four of the interviews were initially coded separately by three authors from different professional backgrounds (midwifery, anthropology and social science) to explore different potential interpretations of the data and develop a richer understanding, tying in with Braun & Clarke's conceptualization of themes as stories about patterns of shared meaning (Braun and Clarke, 2019). One author then coded the remaining data, allowing new codes to emerge. Constant comparison and examination of deviant cases helped develop key themes.

Ethics

Due to an administrative oversight, registration for this pilot trial was applied for during the six-week recruitment period but prior to programme intervention, data collection and data analysis (ISRCTN66925258. Retrospectively registered 03 April 2017). This study was approved by the North of Scotland Research Ethics Service (REC 16/NS/0090 07.10.2016). Robust processes were followed to ensure consent and confidentiality in compliance with the Data Protection Act 2018 and the Caldecott Principles (M Wiggins et al., 2018; Sawtell et al., 2023).

Findings

Seventy-four women were recruited to the pilot trial (M Wiggins et al., 2018). Recruitment was conducted by research midwives in the antenatal booking clinic who had been briefed on the trial protocol and encouraged to provide study information to the diverse range of pregnant women who were eligible to participate; 38 were randomised to the intervention, of whom 27 participated. Ten women consented to be interviewed, including four with LEP. Women interviewed reflected the ethnic mix of participants in the pilot trial (Asian 5, White Other 2, White English/Irish 2, Black 1). Six interviewees were multiparous, and half were born outside the UK. Seven facilitating midwives and four support staff agreed to be interviewed (Table 1). Two PC sessions where language support was needed were observed (PC1 and PC2).

Characteristics of interpreting arrangements in Pregnancy Circles

Nine women allocated to the intervention self-identified as having LEP in the baseline questionnaire, with at least two allocated to each PC, but only two (both in PC1) informed the midwives at booking that they needed an interpreter. As a result, only PC1 booked BHAs in advance. Subsequently, midwives identified five additional women who they felt required language support, which was dealt with differently in each Circle (Fig. 1). Two women whose baseline questionnaire indicated that they had LEP were never identified by midwives as needing language support during the Circles.

Table 1
Characteristics of participants interviewed in Pregnancy Circles pilot trial.

Participants	Number
Women with LEP (spoke 'little' or 'no' English)	4
English-speaking women (spoke English 'well' or 'very well', one of whom provided peer language support (PLS)	6
Bilingual Health Advocate	1
Facilitating Midwives	7
Other professionals who facilitated Circles (e.g. Health Visitor; breastfeeding specialist)	3
Total	**21**

Qualitative findings

Over 200 codes were identified and categorised into fifteen subthemes and four overarching themes: 'Interpreting as helping', 'Enhanced learning', 'Satisfaction and belonging' and 'Challenges to inclusion' (Fig. 2).

Interpreting as helping

Interpreting was essential to mixed-language PC, commonly described as 'helping' ('*We helped one another'; 'that way we help'; 'she helped me'*). Interpreting was described as having both practical ('*translate*'; '*talking for her*') and facilitative elements ('*explain*'; '*support*'), For example, one interpreter reflected:

> *Translating is one thing, but making the patient understand is something else.*(BHA)

Interpreters could be seen as either a barrier or a conduit between midwives and women, mediated by the midwives' confidence with group facilitation. For instance, a small minority of midwives felt that interpreting interfered with the flow of the sessions:

> *I know we are supposed to be inclusive, however I found it to be quite distracting… you are speaking and then you've got the interpreter speaking… it seemed like it took, kind of, like forever.*(MW4)

Experienced midwives who took a more facilitative approach, however, easily assimilated interpreters into the group, with one midwife stating:

> *I had no problem with* [the mixed language group] *at all, having worked in community for many years, so it was, it was OK. It's a normal part of life.*(MW1)

Successful interpreting in groups deviated from 'call and response' norms of traditional clinic appointments, requiring interpreters to become part of group dynamic without distracting the group, developing techniques such as simultaneous interpreting and note-taking. Both midwives and interpreters had to adapt to this new approach:

> *The first interpreter was very good, but the second interpreter kind of, took away from the Circle because they started their own conversation… but if you're, um, an experienced facilitator, you will pull them back…*(MW3)

> *I used to take notes so when the conversation finished, I always kept asking the questions that my patient wanted to ask.*(BHA)

One unexpected development was women in PC2 choosing informal peer language support (PLS) despite offers to book a BHA by midwives.

PREGNANCY CIRCLE 1 (PC1): Bilingual Health Advocate (BHA)
Two BHA were booked for women who self-identified as needing interpreters. A third woman was perceived by midwives as needing language support and she sat with the BHA who spoke her second language. When the midwife requested a BHA in her primary language they were told none was available.

PREGNANCY CIRCLE 2 (PC3): Peer Language Support (PLS)
Two women speaking the same language were perceived as needing language support but had not self-identified as needing an interpreter. Midwives offered to book a BHA on several occasions but the women declined, choosing to rely on informal peer language support (PLS) from other women in the group who spoke their language.

PREGNANCY CIRCLE 3 (PC3): No language support
Two women were perceived as needing language support but had not self-identified as needing interpreters. Midwives reported that they did not *'have facilities for interpreters'*. One woman with LEP was able to *'get by'* with a little English, but the other, who spoke no English, was directed back to traditional care. After attending a traditional clinic appointment she asked to return to the Circle but the midwives said no.

Fig. 1. Types of interpreting in the Pregnancy Circles.

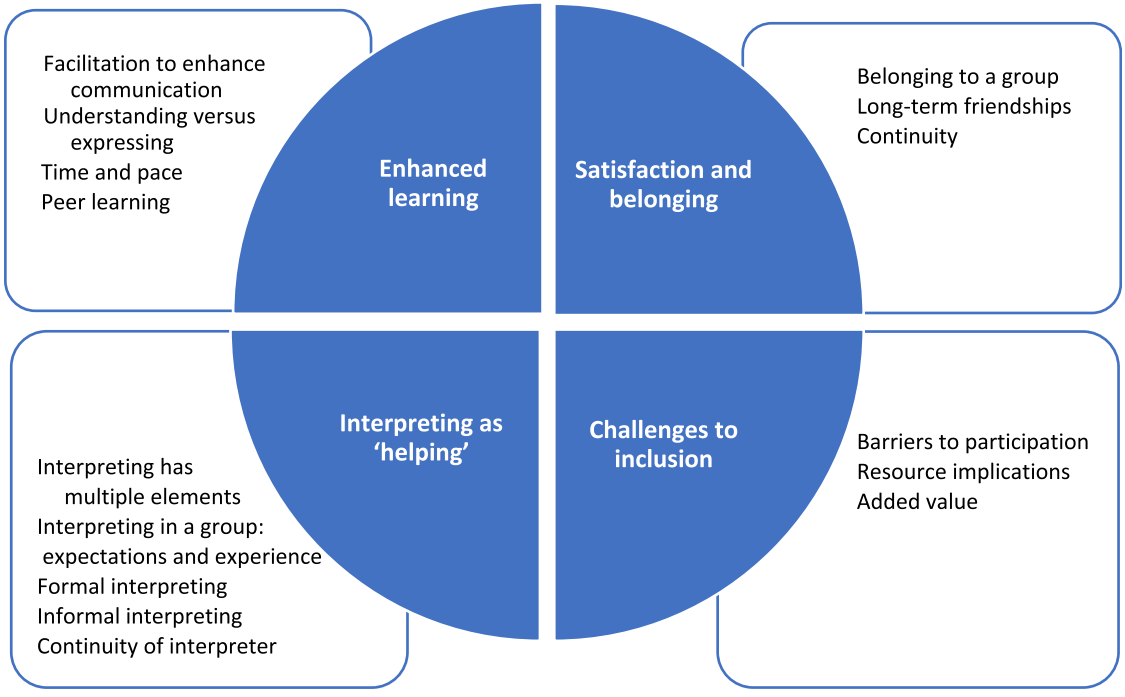

Fig. 2. LEP themes and sub-themes identified from the qualitative data collected from the Pregnancy Circles pilot trial.

One woman who provided PLS reported enjoying taking on this role, which appeared to conferred a level of status within the group. This was reflected by both the women and through researcher observations:

> *…yeah, we are willing to help her and that way we help, like every session we help, you know, whoever doesn't speak English…*(W3/PLS)

> *One is evidently the 'group leader'. She is very outgoing and takes control, entering with a very confident 'Good morning everybody!'… The 'group leader' looks after and translates for the other women. She makes an effort to draw in the two English women.*(Observation PC2)

Midwives in PC2 appeared wary of using PLS, not inviting them to join the one-to-one checks and preferring to rely on women's limited English. One stated that women with LEP understood '*more than they let on*' and could follow *'the important stuff'*. Not using the peer interpreters resulted in a more didactic communication style ('*tell*'; '*instruct*'):

> *It doesn't mean that they can't* [understand], *some of them can understand and I find they can carry out whatever duties… You give them instructions.*(MW2)

> *The flow of information* [is] *mainly from the midwife… there is not much interaction… No one is translating for the women who don't speak much English, there is no time/space for this.* (Observation PC2)

In contrast, women's perception of '*important*' communication went beyond the tick-box clinical information and practical instructions some midwives focused on, encompassing wider learning and relationship-building which required broader discussions facilitated by

interpreters. For example:

Everyone was… talking, everyone was opening, everyone was relaxing. (W5/LEP)

There was two Eastern European girls and there was a girl from Bangladesh, I'm trying to remember now, there was a girl from somewhere in Africa and then there was, I think a Portuguese lady… [we discussed] *what culturally they do, in their cultures… I think, kind of like, those are the important things'. (*W8)

Women with LEP in PC2 were uniformly positive about receiving language support from their peer, reporting that this was not just about practical translation, but about a broader concept of 'help', as one might receive from a friend or family member who really cared. For example:

When I didn't understand, there was another person, a sister there, I asked her and she helped me.(W2/LEP)

Both Bilingual Health Advocates and Peer language supporters reported on the importance of having continuity as an interpreter to build trust ('comfort') and develop relationships within the group:

I hear from my patient as well 'You know, when I see the same face, I am comfortable and I also I know her and I know who she is'…(BHA)

The midwife, she asked her… 'shall I call anyone who is really professional and they can help you for the translator?'. She said 'I am really comfortable with them, so they can help me'…(W3/PLS)

We found that both formal (BHA) and informal (PLS) interpreting could work within the groups, 'helping' women with LEP to understand and to integrate into the group. Continuity of interpreters enabled relationship-building, enabling interpreters to go beyond literal translation to provide wider support and 'comfort'. Simultaneous interpreting changed the flow of group care sessions, requiring adaptations from facilitating midwives, but resulted in deeper genuine engagement and learning for women with LEP.

Enhanced learning

Enhanced learning, in particular understanding what to expect from NHS maternity services and being able to have their questions answered, was identified as a key benefit of PC for women with LEP who were acutely aware of the extent to which their lack of English could act as barrier. Translators and women reflected on this, for example:

…being in a foreign country, you don't know the language, you don't know the procedure, you don't know what's going to happen… if people will talk to you, about you, between them, each other. It's really stressful. (BHA)

To be honest it changed my, they changed my everything, they changed my thoughts, they changed my expectations, they changed everything and I… didn't miss even one, you know, even one session.(W3/PLS)

Mechanisms supporting enhanced learning for women with LEP included accessing information in their own language via interpreters, the midwives' facilitative approach, having more time for questions and learning from their peers. Facilitation skills (woman-led discussions, interactive activities, relationship-building) are central to group care and enhanced communication and enjoyment for women with LEP, for instance:

You ask questions to get them talking, once one starts talking then the others will join in.(MW3)

It was the way they spoke English, slowly, making sure we understood at each step, writing on the board and demonstrating.(W2/LEP)

…they give you snacks and then water, everything and they are fun and we are doing so many fun things.(W3/PLS)

Interpreting was reported to have slowed down the pace of PC1, with facilitators speaking more slowly and clearly than they would have in an English-only group to enable simultaneous translation, but this was felt to be worthwhile as it enhanced the ability of interpreters to do their work:

T*hey were speaking clearly, slowly… you have time to translate, to process.*(BHA)

It was notable that English-speaking women in the Circles did not report resenting the time taken for interpreting:

I think that everyone took it on board, that they obviously don't understand English, they have a translator… one of the things [in the group guidelines] *was 'letting everyone be part of it' so, in our case, we got them involved in it, if they didn't understand you would explain it again, or we would slow down for the translator to explain for them to take part in it.* (W9)

Women with LEP were perceived to be quieter overall within the groups and one midwife worried that they would not be able to follow group discussions:

*One of them had seven babies already but she didn't speak very much so I felt like, I felt like maybe she had a lot of things to say, but she didn't say anything, maybe it's the language thing…(*W8)

…there are going to be group conversations going on and the interpreter's not going to be able to channel and hone into everything that they are saying.(MW5)

Despite these perceptions, women with LEP expressed high levels of satisfaction with the quality and quantity of information they received in PCs:

If I did not understand anything and I asked them, they explained to me and so I will understand what it means.(W5/LEP)

Participants were able to find satisfaction through using interpreters in ways which worked best for their needs, and distinguished between the importance of being facilitated to receive information (asking questions, understanding) and expressing themselves (sharing stories). For example:

I used the interpreter because I understand, I understand English, the interpreter was only to express myself, because it is hard for me to speak English.(W10/LEP)

They develop, in a different way, maybe the communication may be less, or little, but they can communicate. Women, they understand each other. (MW6)

While utilising translators was important to enhance understanding for women with LEP, it was the continuity of care offered in this model which enhanced trust and increased the women's confidence in the information being shared. They reported feeling empowered to ask questions, and challenging previously held beliefs and informing their choices about care.

The midwife is a very important role… [she] *paid a lot of attention to me, she always explained things.*(W10/LEP)

They were able to ask many questions… They were making them, my patient and all of the girls, feeling like they are a group of friends and not professionals and patients. (BHA)

Having more time with midwives was also an important factor in facilitating learning for women with LEP:

We had two hours so in two hours you are going to discuss about everything.(W5/LEP)

Women with LEP viewed midwives as their primary source of information, and peer discussions were also an important mechanism for

learning, both because they learned from their lived experiences, and because their peers would articulate relevant questions which individual women might have forgotten or feel too shy to ask. One woman reflected, for example:

> *If someone else asked the group about something, just listening to them talking, I got some experience… if I went single, by myself, to the midwife like that, I would forget the question, but listening to another person talk and discuss, I instantly remember my concerns… if I was on my own, I probably would not have understood what the nurse says.*(W1/LEP)

Peer learning, mediated through the WhatsApp groups, also appeared to reduce women's need to access unscheduled professional services:

> *Maybe with the midwife, midnight, one o'clock you don't, with anything that happens, you can't call them, you had to call the emergency, but in the group sometimes there is no need of calling emergency, no need through the pregnancy. So if you go to the chat, your friends, through the Circle, they tell you that, advise you what to do.*(W5/LEP)

The element of checking their own blood pressure and urine during the PC sessions enhanced women's understanding of their own bodies and built confidence for women with LEP:

> *Next,* [blood] *pressure. That, too, they showed us how, and we put it on and after two, three days of showing how, we did it ourselves*!(W1/LEP)

> *They just pick it up… They were doing the* [self-checks] *brilliantly… it makes you feel happy yourself.*(MW6)

Women with LEP consistently reported that the group model enhanced their learning. This went beyond the simple use of interpreters to include how the information was delivered (using interactive methods, slowing down for translation), who delivered it (continuity of midwives, building trust) and feeling empowered (self-checking, asking questions, learning from peers).

Satisfaction and belonging

All the women with LEP expressed high levels of satisfaction with their care, describing the group as '*friends*' and '*a second home*'. This had anticipated, unanticipated and potentially long-term impacts for both women and midwives.

Midwives and women reported that group cohesion developed despite language differences. Women with LEP were perceived to make a conscious effort to integrate:

> *I must admit that they, the non-English speaking, would have their little groups at the beginning… when they were waiting for us to start the full group, but once, when they all sat together, they don't sit together which was surprising.*(MW1)

Belonging to a group was a key benefit of the model for women with LEP as it meant that they had greater support from more people than if they had received one to one care. The group, and having a sense of belonging, was important. For instance:

> *I don't think that with one-to-one care I would have got as good a care as I did. Because I wouldn't have had the group, you see, in the group with 10–12 people, everyone is talking with each other about their issues, helping each other…*(W1/LEP)

> *During my pregnancy times, there are times when I am bored or have a headache, so the time I spent being social together, all of us gathered in the group, talking, listening to others… I liked that.*(W2/LEP)

Seeing Circles work for women with LEP, and the ability to include interpreters, took some midwives by surprise. Anticipated challenges in how the group might bond were not borne out in practice. For instance:

> *They* [gelled], *they did, if they didn't gel, they wouldn't come and remember we had high risk women, we had women that didn't speak English.*(MW2)

> *They bonded very well as a group, from the first day. I was really quite shocked at that… they were always very happy to come.*(MW1)

Setting up WhatsApp groups for each PC was an important element which helped to build this sense of belonging in the group during the pregnancy and postnatal journey for the women. For example:

> *We have our group, chat group in WhatsApp so we talk, even until now we are still in contact… So each of us was sending a baby picture and wishing everyone Happy Christmas.*(W5/LEP)

> *We had a WhatsApp group… later, after the baby was born, we shared problems and answers and got knowledge.*(W1/LEP)

> *They kept in touch with each other, so they were knowing about what's happening with each other before we did.* (MW1)

Some long-term friendships also observed to develop, often based on shared identities (e.g. the peer language supporters and women with LEP in PC2). The positive impact these new relationships had on women traditionally seen as 'vulnerable' and isolated increased midwives' job satisfaction. They felt that this model allowed them to help women who had greater need of support and stronger social bonds than others. For instance:

> *Some women who are vulnerable… we have quite a high migrant population here that are very transient, this would be their little family.*(MW7)

> *I think those women are those who need this kind of* [care]… *They are friends, they are really, really good friends and seeing that, was amazing, yeah… it makes you feel happy yourself.*(MW6)

Challenges to inclusion

Attendance rates were lower for women with LEP compared to English-speaking women both in Circles and standard care (Sawtell et al., 2023). In Circles, women with LEP were more likely than English-speakers to miss 4 sessions or more (67 % v 50 %) and to have unavoidable reasons for non-attendance, including booking late (missing the first session) or delivering early (missing late sessions).

Facilitating midwives reported that some healthcare professionals assumed PC was inappropriate for some women based on language or religion, perhaps based on a belief that women with complex needs could not receive personalised care in a group. This bias became a barrier to their participation, with practitioners unfamiliar with PC reassigning them in for traditional appointments instead:

> *The other spoke no English at all, she came for two sessions and then… the hospital midwives kept pulling them back.*(MW3)

Despite these perceptions by some healthcare professionals, none of the women with LEP interviewed expressed concerns about the group model, or about privacy issues.

Compared to English-speaking Circles, having mixed groups was perceived by midwives as requiring more resources in terms of time for sending out reminders and follow-up:

> *The* [X]*-speaking woman did not come….* [The midwife] *tried to call her… and tried to visit her at home, however, the address was not right. She told me she knocked at ten doors looking for her and nothing.* (Observation PC1)

One midwife mentioned concerns about the cost of booking a face-to-face interpreter for two hours when the woman might not attend. Other midwives felt that they could not request interpreters (PC3) or did request one and were rebuffed (PC1). Not having interpreters was a significant barrier for women with LEP:

She turned up with her husband but she couldn't speak any English at all… and he couldn't attend because he was working… so she decided to go to a normal clinic and then a couple of weeks later she decided that she wanted to come back… she wanted to be part of [PC] *but she really couldn't speak any English and we didn't have facilities for interpreters.* (MW4/PC3)

Resource issues such as no facilities for childcare and limited access to interpreters affected women with LEP disproportionately. For women with LEP who were able to participate, however, the model offered 'added value' such as reducing isolation, widening cultural understanding and providing an opportunity to improve their English. For example:

She wanted to come even though she couldn't speak the language… she said to me 'I don't want, when I am down the street on my own, I cannot speak, so I am going to come to the group because I will learn to speak more'. (BHA)

Women with LEP reported sharing their learning within their wider communities:

She was looking forward to coming, she said 'It makes me confident and I also have my friends', you know? Because most of the girls, you don't discuss this with family, you know, pain and baby's moving… they could help their friends (BHA)

I tell so many family members and friends, at the moment, my two friends, they are pregnant as well and I already told them. (W2/LEP)

In this study, women with LEP had lower attendance to group care sessions compared to women who spoke English. While in some cases this may have been due to more complex lives (less stable housing, obstetric complications), the greatest challenge to inclusion appeared to be clinicians' bias (i.e. perceptions that the model was not appropriate for 'vulnerable' women) and systemic issues such as lack of interpreters or concerns about the cost of interpreting. Despite this, for the women with LEP who were able to take part, Pregnancy Circles appeared to confer added value beyond the intended maternity care, i.e. helping them learn English and spreading their learning to their wider communities.

Discussion

Language barriers are known pose specific challenges in maternity care (Rayment-Jones et al., 2021) and we found that cultural and organisational barriers faced by women with LEP included perceptions of waste (e.g. booking interpreters) and bias (about the suitability of women with LEP to take part in mixed-language groups). However, this study found that when interpreting services were available, including women with LEP in linguistically integrated Pregnancy Circles was feasible and acceptable, leading to enhanced learning and community support. Women with LEP appreciated both formal and informal interpreting, although midwives found engaging with peer interpreting more challenging. Continuity of interpreters and midwives was key to successful relationship-building and was valued by the interpreters as well as by the midwives. 'Relational continuity' emerged as an overarching mechanism of effect for women with LEP. The focus on interactivity and facilitation, which is central to the group care model (Massey et al., 2006), supported the integration of women with LEP, but moving away from didactic 'teaching' took confidence and experience. These findings are discussed in more detail below.

The values and structure of PC, in particular community-building, a facilitative approach by midwives and having more time for discussion and questions, supported improved learning and satisfaction for women with LEP, reflecting benefits of gANC reported by English-speaking women (Hunter et al., 2019; McNeil et al., 2012) and underserved communities (Ahrne et al., 2022; Novick et al., 2011). Women with LEP in our study reported 'added value' beyond these known benefits: in particular, improving their English and sharing new learning with their communities. Although they were perceived as quieter in groups than their English-speaking counterparts, women with LEP reported feeling involved and having their information needs met. Problem-orientated groups can promote deep learning even when not all participants contribute to the same level (Elwyn et al., 2001). Effective communication has been shown to result in positive experiences of maternity care for women with LEP (Heys et al., 2021).

Our findings indicate that receiving care alongside mixed language peers extended learning and support both within and beyond Circles (via WhatsApp). Somali women receiving gANC with an interpreter in the Swedish Hooyoo Project reported that they would have preferred mixed ethnicities to their single-language group1919. In our study the development of friendships made Circle sessions something to look forward to. Enabling peer support is a key policy priority in the shift to personalised healthcare in the UK and informal online support groups have been found to improve knowledge and reduce anxiety and isolation (England, Aug 1, 2022). Rayment-Jones et al. identified social support as an important, if often overlooked, element of safe maternity care (Rayment-Jones et al., 2020).

Access to interpreting was essential for meaningful participation in mixed-language groups, including for women with 'little' English. Both women and midwives underestimated the need for language support. Women's reluctance to request interpreters may stem from a desire to improve their English (Hunter et al., 2019; Rayment-Jones et al., 2021). Some midwives lacked confidence in managing interpreters in a group and expressed concerns about cost and availability of interpreters. Other studies have demonstrated that midwives also lack confidence when working with interpreters one-to-one and may be unaware that face-to-face interpreting can be cheaper than telephone interpreting (Bridle et al., 2021; Higginbottom et al., 2019).

The NHS has a responsibility to provide free interpreting to ensure equity (Office for Health Improvements and Disparities 2023). In this study a lack of interpreting in one group was a barrier to participation and encouraged didactic information-giving, which reduces the effectiveness of gANC (Gaudion et al., 2011). Rayment-Jones et al's study of interpreting services in maternity found that specialist models of care were beneficial but not sufficient to protect women with LEP without appropriate interpreting, contributing to inequalities in outcomes (Rayment-Jones et al., 2021). In this study, continuity of interpreter was central to a sense of 'comfort' for women with LEP and helpful for Bilingual Health Advocates to plan their work and to develop relationships. Interpreting, whether by BHA or PLS, slowed down the pace of sessions but worked well when midwives were confident facilitators. English-speaking women accepted the adaptations needed to support peers with LEP. The additional time needed for interpreting has also been recognised in traditional care (National Institute for Health and Care Excellence (NICE) 2021; Office for Health Improvements and Disparities 2023).

An unexpected finding of this study was women's choice of peer interpreting in PC2, which could be seen as an organic extension of the peer support element of gANC, harnessing the expertise in the group. Taking on the role of PLS appeared to be acceptable, and indeed empowering for some women, resonating with McLeish and colleague's work on volunteer community doulas (Spiby et al., 2015). International guidelines advise against using friends or family as interpreters to protect women from coercion and to give them the opportunity to disclose private issues, but acknowledge women's right to choose (National Institute for Health and Care Excellence (NICE) 2021; Office for Health Improvements and Disparities 2023; US Department of Justice 2022). Women have reported being suspicious of the quality and confidentiality of interpreters, trusting family or friends more (Yelland et al., 2016; Rayment-Jones et al., 2021). Volunteer doula programmes using peer interpreting can enhance the experience of maternity care for vulnerable women (Birthrights and Birth Companions 2019; McLeish and Redshaw, 2015). Riggs et al. (2017) found that the relationship women developed

with bi-cultural interpreters who, like BHA, are drawn from the community, was central to the effectiveness of single-language gANC 2020. In our study the participants who took on the role of peer language supporters had the advantage of being able to offer interpreting support not only during PC sessions, but in between as they were part of the WhatsApp group.

Women with LEP in this study faced a range of challenges to participation related to social complexity. Migrant status is a known barrier to accessing traditional maternity care, reflected in late booking and lower attendance rates (Rayment-Jones et al., 2021; Higginbottom et al., 2019). Staff bias was another barrier which stood in sharp contrast to positive experiences of PC reported by women with LEP. Studies exploring the experiences of women from underserved backgrounds seeking maternity care in high-income settings have found that complex life factors and stigmatising attitudes compound poor experiences of maternity care (Heys et al., 2021; Higginbottom et al., 2019). Systemic bias within the NHS has been shown to lead to lower expectations and the underuse of interpreters99. Midwives' attitudes may be modifiable with targeted training focused on the drive to reduce health inequalities (England, Aug 1, 2022).

Theoretical models situate midwifery as relational and woman-centred. Group care fits this model with its focus on relationship-building, enquiry-based learning and peer support. Findings from this study were mapped against the six theories of effect identified in the realist review (Appendix 2). Those with the greatest resonance for women with LEP in this study were 'social support', 'health education' and 'satisfaction with care'. Core mechanisms included community building, midwives' facilitation techniques and having more time. Including women with LEP in PC also enhanced 'health professional development and wellbeing'.

'Relational Continuity' emerged as an overarching theory of effect in our study, covering continuity of carer, of interpreter and of peers, potentially functioning as an explanatory concept for the impact of group care on women with LEP (Fig. 3).

The realist review exploring mechanisms argued that empowerment in group care should focus on broader paradigmatic shifts in relationships and the redistribution of power to women and communities (Mehay et al., 2023). This study suggests that relationship-building may be a particularly important mechanism for the empowerment for women with LEP, acting as an explanatory concept for improving health outcomes in this group. Bridle at al's (Bridle et al., 2021) exploration of UK midwives' experiences of caring for women with LEP identified continuity of midwife and interpreter as a key theme. Midwife-led continuity of carer models have been shown to improve the experiences of women from minority ethnic groups (Beake et al., 2013; McCourt and Pearce, 2000) and maternal and neonatal safety (Rayment-Jones et al., 2020; Sandall et al., 2016).

Strengths and limitations

A strength of this study is that it is the first to explore mixed-language gANC. It is also the first to posit potential theories of effect of group care for women with LEP, contributing to a wider understanding of what works for whom in what context.

Limitations include the heterogeneity of the three Pregnancy Circles studied, making it difficult to identify patterns, especially around models of interpreting. The small size of the study excluded an exploration of cultural, ethnic or other factors which might impact women's experiences. No women with LEP who left the Circles could be interviewed, so caution is needed when interpreting these findings.

Conclusion

Mixed-language PC can improve maternity care for women with LEP through the underlying structure, ethos and flexibility of the model, but require additional time, skills and resources. Service-level and organizational barriers, including perceptions of wasted resources and bias, need to be addressed at the planning stage. This study found that midwives with confidence and facilitation skills were able to manage linguistically integrated Circles without detriment to English-speaking group members but a didactic approach and inadequate use of interpreting services in one Circle limited opportunities for learning.

The high levels of satisfaction reported by women with LEP in PC contrasts with reported experiences of traditional antenatal care in the literature. We theorise that this is due to the increased opportunities for learning and relationship-building, fostering trust, social support, empowerment and engagement in care.

Learning from this study informed the design of the full RCT of Pregnancy Circles (Wiggins et al., 2020) which is in progress, testing the effectiveness of this model in improving maternal and neonatal outcomes.

CRediT authorship contribution statement

Octavia Wiseman: Writing – review & editing, Writing – original draft, Visualization, Methodology, Investigation, Formal analysis, Data curation. **Christine McCourt:** Writing – review & editing, Supervision, Methodology, Formal analysis, Conceptualization. **Anita Mehay:** Writing – review & editing, Project administration, Methodology, Investigation, Formal analysis. **Giordana da Motta:** Writing – review & editing, Investigation. **Helliner Robinson:** Resources, Project administration, Investigation. **Kade Mondeh:** Writing – review & editing, Resources. **Lorna Sweeney:** Writing – review & editing, Project administration. **Meg Wiggins:** Writing – review & editing, Methodology, Conceptualization. **Mary Sawtell:** Writing – review & editing, Project administration, Methodology. **Angela Harden:** Writing – review & editing, Methodology, Funding acquisition, Conceptualization.

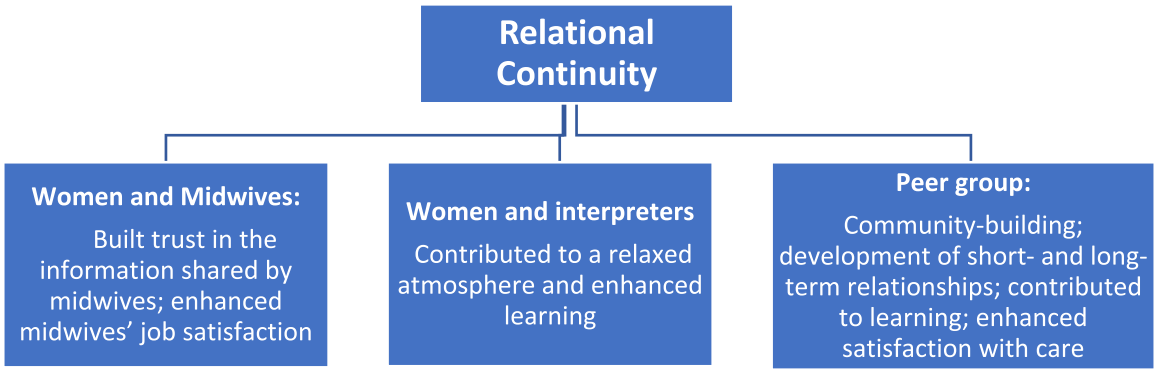

Fig. 3. Overarching theory of effect for women with LEP receiving group care in the NHS.

Declaration of competing interest

All the authors declare that they have no relevant financial or non-financial competing interests to report.

This is an original work which has not been previously published and is not currently under consideration by another journal.

All the authors have seen and approved the manuscript being submitted and abide by the copyright terms and conditions of Elsevier.

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Appendix 1. Theorised mechanisms of effect of gANC for women with LEP

Theorised mechanism of effect	Description	Relevance for women with LEP
1. Social support	Bringing women together in a group and continuity of peers provides the opportunity for developing supportive relationships and building social capital. Furthermore, trust can form to share experiences and disclose concerns which can normalise pregnancy, encourage problem-solving, coping and resilience leading to reduced stress. This moves support to the community and reduces dependency on health services.	Women with LEP are more likely to be displaced from family and social support. Social integration and peer support could reduce isolation in areas with high levels of migration.
2. Peer learning	Learning is about content but also who is delivering the content. A facilitative approach allows learning to occur through peers who are deemed to share similar characteristics as themselves. Information from peers is seen as more salient, relevant, and personalised therefore women are more likely to act on that knowledge. gANC highlights the value of different sources of expertise and peers can be positive role models.	Women with LEP may have limited opportunities to learn from peers who are familiar with UK maternity services outside of gANC. The PC feasibility study [14]highlighted that women were keen to meet women from different backgrounds who were going through pregnancy and also saw this as an opportunity to improve their English.
3. Active participation in healthcare	Learning occurs through taking an active participation in health and doing things for oneself. Self-checks, engaging in active discussions and problem-solving places women at the centre of their own health.	Empowering women to take more control over their health may be particularly beneficial for traditionally disempowered groups [38].
4. Health education	gANC allows more time to cover a broader range and depth of a health curriculum (16 h of follow-up appointments compared to 3–4 h in traditional care). This increased transaction of knowledge means women are more informed and will make better choices for their health.	Women with LEP may have greater information needs, including signposting to unfamiliar services, yet are less likely to access English-language parent education. Increased time with midwives and access to interpreters, available in gANC, is an important element of maternity care for women with LEP[5].
5. Satisfaction with care	A group setting exposes women to more time and continuity with a midwife, enabling more positive relationships which are based on trust to develop and leading to greater satisfaction with care, better management of risks, and increased engagement with health services generally. Furthermore, groups allow better joined up care where other health professionals and invited speakers can attend groups to provide information (i.e. health visitors).	Increased continuity of carer has been shown to enhance trust and disclosure for women with complex social needs, support personalised care planning and informed decision making by responding to individual needs[5].
6. Health professional development and wellbeing	Midwives report having enough time to be able to provide a better quality of care in gANC. They also develop their own knowledge directly from women and their colleagues' expertise. This increases midwives job satisfaction which in turn translates to better care and reduced burn-out[11,39].	Midwives may feel particularly frustrated about not having the time to provide the care needed by women with complex social needs. gANC gives them an opportunity to provide a higher quality of care, improving job satisfaction.

Appendix 2. Theories of effect and proposed mechanisms for the impact of group antenatal care on women with LEP in the United Kingdom: Findings from the Pregnancy Circles pilot study

Theory of effect**	Description**	LEP women findings*
Social support	Bringing women together in a group and receiving continuity of peers provides the opportunity for building supportive relationships and social capital. Furthermore, trust can form to share experiences and disclose concerns which can normalise pregnancy, encourage problem-solving, coping and resilience leading to reduced stress. This moves support to the community and reduces dependency on health services. Reference to social capital and community development.	Social support emerged as very important to women with LEP: Cultural exchange and social integration Sharing through WhatsApp (photos, problems, solutions, including postnatally) **The continuity of the group allowed it to 'gel' which was a source of belonging and enjoyment*** Potential for some long-term friendships Added value – supported learning English Women with English as 1st language also valued diversity in the group Peer language support (PLS) was perceived as positive by both for women with LEP and peer interpreters
Peer learning	Learning occurs through peers who are deemed to share similar characteristics as themselves. Information and messages from peers are seen as more salient, relevant, and personalised therefore women are more likely to act on that knowledge. Highlights the value of different sources of knowledge and expertise and that peers can be positive role models. This	Women with LEP perceived that learning came primarily from the midwives, but they appreciated that their learning was broadened by questions and stories from their peers. Learning from peer's discussions/questions in PC sessions: questions they might not have asked themselves

(*continued on next page*)

(*continued*)

Theory of effect**	Description**	LEP women findings*
	modelling leads to greater confidence to take control of their own health by viewing others' behaviours. Reference to social cognitive theory and theories of behaviour change.	**Getting to know women from different backgrounds in the group and friendships which developed** provided a new trusted source of information outside of PC sessions, including via WhatsApp. Added value: increased cultural understanding; sharing learning from gANC with their wider community
Active participation in health	Learning occurs through active participation in health and doing things for oneself where self-checks, engaging in active discussions, and problem-solving places women at the centre of their own health. Shared health activities and engaging in women-led, group-based discussions supported more equal and trusting relationships between women and midwives.	Women with LEP became confident in checking their own blood pressure and urine and treated this as routine rather than an exceptional part of the model. When asked, women reported enjoying self-checking – made them feel proud
Health education	A group setting allows more time for ANC education and to cover a broader range and depth of a health curriculum. Group ANC is theorised as a space to deliver behavioural strategies through specialised content (e.g., dental care, HIV support) and practical demonstrations to increase the transaction of 'expert' knowledge and support for women to make appropriate choices for their health. Reference to behaviour change theories.	Feeling more informed emerged as a strong theme for women with LEP This was the product not of didactic 'parent education' but of additional time, the availability of interpreting services and facilitative/peer-led information-sharing techniques. The facilitative approach used in gANC (non-verbal activities, woman-centred discussion etc.) enhanced learning for women with LEP 2-hour sessions allowed time for facilitators to slow down delivery of information. Women felt they had all their information needs met and spoke of having their questions answered (including ones they had not thought to ask) **Continuity contributed to women with LEP trusting the quality of the information provided by midwives** Having information interpreted into their language – **enhanced by continuity of interpreter which helped women relax and open up**
Satisfaction with care	A group setting enabled more time and continuity with a midwife and other healthcare professionals. Group ANC was seen as facilitating positive relationships between women and their healthcare provider, particularly where midwives are able to build relationships which are based on trust leading to greater satisfaction with care, better management of risks, and increased engagement with health services generally. Furthermore, groups allow better joined up care where other health professionals and invited speakers can attend groups to provide information (i.e., health visitors).	Women's satisfaction appeared to be primarily a product of building relationships: **Relationship building with bilingual health advocates/peer interpreters** Enjoying the atmosphere of the group and **building relationships, including some long-term friendships, within the group** (a break from real life) **Building relationships with their midwives**, in particular the kindness and time given by midwives allowing them to ask questions.
Health professional development and wellbeing	Midwives are able to provide richer and safer care with the increased time and continuity with women. Midwives in turn were theorised to deliver richer and safer care within group ANC models through more positive relationships with women as well as through gaining the opportunity to develop their own knowledge with colleagues. This increases midwives job satisfaction which in turn translates to better care provided and reduced burn-out.	Midwives reported that the impact of the model on women with LEP gave them job satisfaction - *I think those women are those who need this kind of [care]… They are friends, they are really, really good friends and seeing that, was amazing, yeah… it makes you feel happy yourself* (MW6)

*Highlighted sections under 'LEP women findings' are linked to the overarching mechanism of effect: 'relational continuity'
** Taken from REACH realist review[13]

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