

REVIEW ARTICLE

Facilitators and barriers to seeking and engaging with antenatal care in high-income countries: A meta-synthesis of qualitative research

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Abstract

Inadequate attendance to antenatal care has been associated with negative maternal and fetal outcomes, including stillbirth. This study aimed to identify facilitators and barriers to antenatal care attendance. A systematic search was conducted in March 2019 and updated in January 2021. Qualitative studies involving pregnant or postpartum women up to 12 months from high-income countries that provided data about facilitators and barriers to antenatal care attendance were sought. Meta-ethnography was used to inform this meta-synthesis. Fifteen studies were included in the analysis. Findings indicate that inadequate antenatal care attendance is influenced at different levels. Aspects like sociodemographic factors, difficulties navigating the health system, administrative delays, lack of flexibility and tailored care, constant change of carer and communication issues also act as barriers. These issues affect women's access to knowledge and the formation of women's beliefs and feelings towards seeking care. On the contrary, having a positive attitude towards the pregnancy, encountering empathetic healthcare professionals and availing of social support acted as facilitators. The reasons why women seek or delay attending antenatal care are multifactorial and can be explained using the Social Determinants of Health Framework. Any response needs to be taken across all levels of influence and not just focused on the individual. A better understanding of the barriers and facilitators to antenatal care might contribute to informing intervention or policy development addressing this issue.

KEYWORDS

facilitators, barriers, antenatal care, stillbirth, meta-synthesis, meta-ethnography, qualitative research

1 | INTRODUCTION

Within its continuum, antenatal care provides an opportunity for communication, health promotion, prevention, screening and diagnosis of diseases (Tunçalp et al., 2017). The WHO recommendations

on antenatal care include a minimum of eight contacts: five in the third trimester, one contact in the first trimester and two contacts in the second trimester (World Health Organization, 2016).

A previous study comparing the levels of utilisation of antenatal care in different countries concluded that the proportion of

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late attenders was low in Finland (4%), France (4%) and Italy (4%), moderate in Belgium (7%), Germany (8%), Norway (7%) and Sweden (9%), and high in Greece (18%), Ireland (29%) and Portugal (18%) (Hemminki & Blondel, 2001). These reported differences are linked with women from lower socioeconomic groups (Joseph et al., 2007; Spong et al., 2011), specific ethnic groups (Bingham et al., 2019; Nabukera et al., 2009; Spong et al., 2011) and are associated with women living in deprived areas (De Graaf et al., 2013).

Previous studies have associated inadequate attendance at antenatal care with negative maternal and fetal outcomes, including stillbirth (Blodel et al., 1993; Humphrey & Keating, 2004; Raatikainen et al., 2007; Stacey et al., 2012). Stacey et al. (2012) reported that women who attended less than 50% of the recommended antenatal visits, were 3 times more likely to suffer from late stillbirth and a trend analysis found a significant relationship between decreasing visits and an increase in the risk of stillbirth (Stacey et al., 2012). Further, the researchers also concluded that foetuses which were small-for-gestational age were more likely to be stillborn if they were not identified prior to birth reinforcing the importance of regular antenatal care attendance (Stacey et al., 2012). Lack of attendance at antenatal care could prevent healthcare professionals from identifying difficulties during pregnancy. Moreover, antenatal care is also an opportunity for healthcare professionals to provide women with vital information about their health (Tunçalp et al., 2017), which could lead to healthier lifestyles during the pregnancy decreasing the risk of adverse outcomes.

Previous research has demonstrated that women do not always use antenatal care services even when they are accessible, especially if they belong to ethnic minorities or marginalised groups (Downe et al., 2009). Additionally, other evidence suggests that women might not find the medicalised antenatal care model suitable for their needs, or else find themselves in unpleasant situations whilst seeking care and cease to attend the services (Downe et al., 2019). This evidence suggests that there are different reasons or barriers that women might be encountering when trying to access antenatal care, other than accessibility and affordability and that these need to be explored further.

Qualitative research allows the researcher to understand the nature, strength and interaction of the variables studied with a holistic perspective that preserves the complexities of human behaviour (Braun & Clarke, 2022). In our study, qualitative research helped us explore the values and beliefs that might be associated with the acceptability of antenatal care, in order to identify outcomes relevant to women. A meta-synthesis differs from a narrative review and a systematic literature review in that it involves a secondary analysis and re-interpretation, but based on previous findings instead of primary data (Finfgeld-Connett, 2018).

The aim of this meta-synthesis is to analyse and synthesise all the evidence drawn from qualitative research in order to identify facilitators and barriers to antenatal care in high-income countries. This might potentially inform the development of a behaviour change intervention to minimise barriers and facilitate access to antenatal care.

What is known

- Delaying or avoiding care during pregnancy can result in adverse pregnancy outcomes, such as stillbirth.
- Although there is evidence of the benefits of attending antenatal care, there are some women who continue to delay or avoid seeking care due to different reasons.

What this paper adds

- The reasons why women might not attend or engage in antenatal care are multifactorial and the personal barriers identified are only one such aspect.
- Factors associated with women, individual healthcare professionals, the healthcare system and the social environment have an influence on women's capability and willingness to attend antenatal care in high-income countries.

2 | METHODS

2.1 | Search strategy

We performed a comprehensive systematic search of the literature for all qualitative research that explored women's facilitators and barriers to seeking, attending, and complying with antenatal care during pregnancy. The databases searched were CINAHL, PsychINFO, Pubmed, SOCindex and Web of Science and the searches were conducted in March 2019 and then updated in January 2021.

Search terms were selected based on a preliminary scan of the relevant literature and the research aims. The search terms used were *facilitators, barriers, promoter, benefit, attitude, opportunity, determinant, promotion, intention, education, initiative, prevention, pregnancy, attendance, antenatal care, prenatal care and antenatal booking* (see Table S1).

2.2 | Study selection

Three members of the research team (TES, LL, SM) independently reviewed the titles and abstracts of the studies resulting from the database search.

Studies were included for further review if (1) they used a qualitative or mixed methods design, (2) they were written in English, (3) the participants were pregnant women or up to 12 months postpartum, (4) they were conducted in high-income countries; high-income countries were defined based on the World Bank Country Classification (Gross National Income per capita of \$12,696 or more in 2020) (The World Bank, 2021) and (5) included extractable data about facilitators and barriers to seeking, attending or compliance with antenatal care.

Studies were excluded if they did not include qualitative data or if they were not original research. The decision to exclude previous reviews and meta-synthesis was based on concerns about duplication of data. Studies that included different types of participants (e.g., healthcare professionals and pregnant women, partners and pregnant women) were only included if the data obtained from the pregnant women was differentiated from the rest. No year restrictions were applied (see Table S1).

2.3 | Data extraction of study characteristics

The characteristics of the studies were extracted and tabulated into a data extraction sheet by one author (TES). The following data were extracted from each study: country of publication, year of publication, aims, design, data collection method, sampling or recruitment strategy, consent process, number of participants, age of participants, pregnancy status, timing of data collection and method of data analysis.

2.4 | Quality assessment

Two authors (TES, SM) independently used the Critical Appraisal Skills Programme (CASP) for qualitative studies to assess the quality of the studies. Since the CASP tool does not explicitly include scoring, we decided to score as follows: 0 points for 'No', 1 point for 'Cannot tell', and 2 points for 'Yes'. The CASP tool is composed of 10 items assessing the validity of results, appropriateness of research design, aims and data collection methods, reflexivity and ethical issues and value of the analysis and findings of a study. Hence, the maximum score related to reporting quality that can be obtained with the CASP is 20 points.

Previous research in the area of quality appraisals has demonstrated a correlation between the value of a study as a source for synthesis and the quality of its reporting (Carroll et al., 2012), it was decided then that only high-quality studies would be kept for synthesis and those with a score under 10 were excluded (see File S1 for results of CASPs). Ethical approval for the study was not sought as it did not include human subjects.

To assess our individual review findings, we used the GRADE-CERQual approach. This approach facilitates the assessment of how much confidence can be placed in individual review findings from a synthesis of qualitative research (Lewin et al., 2018) (see Table S2).

2.5 | Process of synthesis

The synthesis of qualitative research was informed by meta-ethnography and we used the eMERGe reporting guidelines for meta-ethnography to write up this study (France et al., 2019). Meta-ethnography is an interpretative approach originally developed by

Noblit and Hare that facilitates 'putting together' all of the research available by translating qualitative studies into one another (Noblit & Hare, 1988). By doing so, the analyst (TES) translated the studies into one another's concepts, and into their own worldview, meaning that the synthesis will inevitably be partly a product of the author (Turner, 1980).

Noblit and Hare (1988) proposed a series of phases that overlap and repeat along with the conduction of the synthesis (see Table S3).

Phases 1 and 2 were completed through a systematic search of the literature detailed above (see Figure 1). Phase 3 involved reading the studies in depth in order to become familiar with them, during this phase data from the studies was extracted. To do so, each paper was read carefully and notes were taken identifying the different data that needed to be extracted by one author (TES). Once all the relevant study characteristics were identified, these were translated into our data collection sheet.

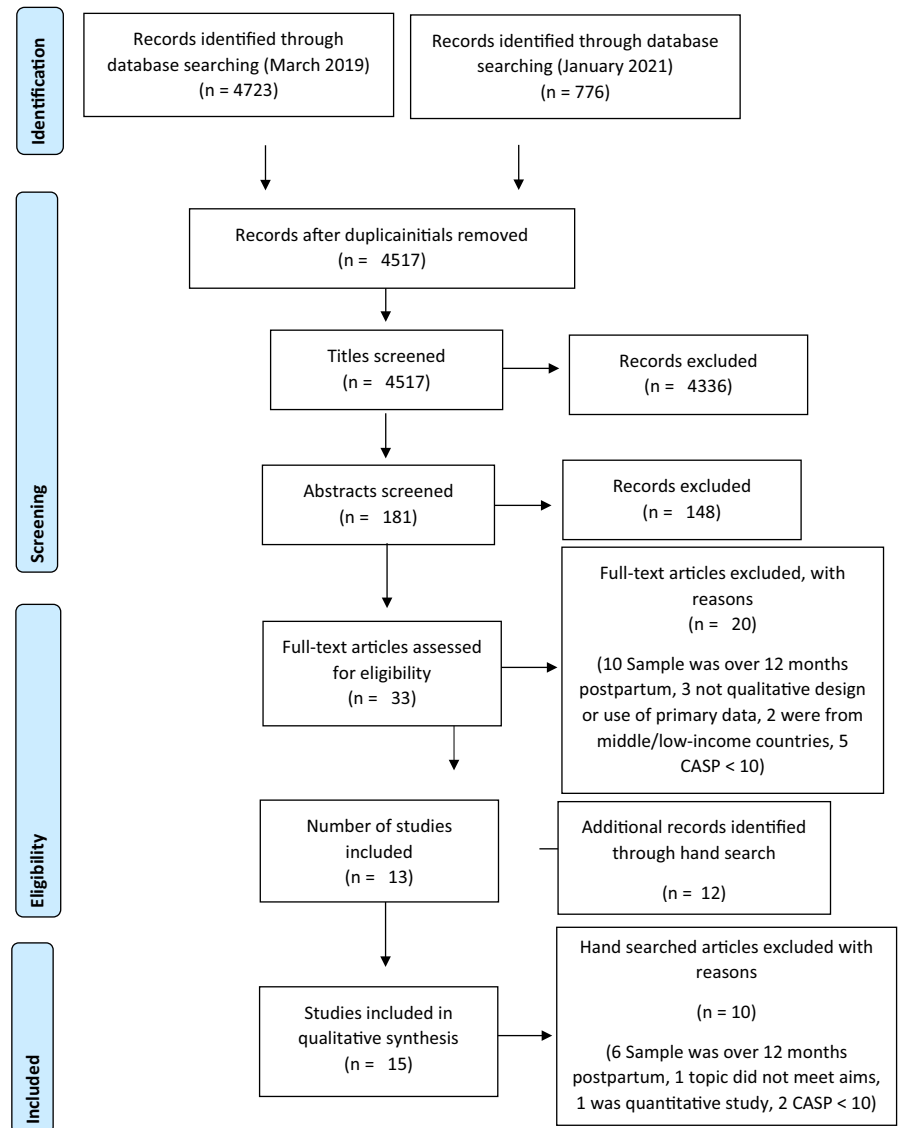
During Phase 4, the studies were imported into a Nvivo12 database to facilitate the identification of concepts and themes. One author (TES) conducted the line-by-line coding of the results and discussion section of each study, consulting with the rest of the team when in doubt. A second author (SM) coded a sample of the studies to ensure consistency in the coding process. As the coding progressed in each new study, we added to our list of codes or created new ones when necessary. Every sentence of the studies had at least one code applied.

The studies were comparable in that they were all contextualised in high-income countries which means that their antenatal healthcare systems could be comparable in terms of standards of care and resources; they share similar aims, exploring women's experiences during antenatal care and their samples are similar—pregnant or post-partum women, hence we considered they relate reciprocally.

Both first- and second-order constructs were extracted for analysis (Lee et al., 2015). We understand that our access to first-order constructs was limited by the fact that the data was already selected by the original authors. Hence, we utilised author statements and interpretations to obtain additional insights, context and explanations. In meta-ethnography, second-order constructs complemented by participants' narratives (first-order constructs) are the usable data. Very few studies included reflective statements that could have helped us to assess the influence of the author's background over their own interpretations. The key concepts explored in the analysis were related to factors that either facilitated or hindered access to antenatal care for pregnant women in high-income countries.

Once the initial coding was completed, the text added to each code was examined to check the consistency of interpretation and additional coding was performed when necessary. We obtained a list of concepts that were grouped into themes and categories using thematic analysis. These categories included 'Women's individual factors', 'Individual healthcare professionals', 'Healthcare-system' and 'Social environment'. These categories were created inductively based on the data obtained from the studies analysed, and not on

FIGURE 1 PRISMA flow diagram showing the process of inclusion of studies. From: Moher D, Liberati a, Tetzlaff J, Altman DG, the PRISMA group (2009). Preferred reporting items for systematic reviews and meta-analyses: The PRISMA statement. *PLoS med* 6(7): e1000097. doi:10.1371/journal.pmed100009



previous expectations or knowledge. The themes and categories were refined through discussions with all authors.

Phases 5 and 6 involved translating the studies into one another and synthesising those translations. The themes were further refined through the coding process to identify if the themes reflected the meaning of each individual study. For example, the code 'Worries about being pressured into termination by social services' developed into 'Worries about being pressured into termination' when, by adding more data to the code, it was clear that this phenomenon was influenced by many other sources besides social services. The initial codes and themes were examined and combined when they described similar findings. To establish the relationships between the different concepts we utilised concept maps stating the influence of each concept over the other, and these maps were discussed with the research team.

As the context of the studies was similar, we did not deem it necessary to create sub-groups of studies to preserve the context of the studies in the process of translation. Similar contexts are beneficial

for our study since the aim was to identify facilitators and barriers to antenatal care in high-income countries. We considered that with similar contexts, the more specific the identified facilitators and barriers would be. This may better inform the potential development of a context-specific intervention.

The influence of each study over each concept obtained after analysis is documented using references and quotes. The quotes are obtained from the primary study participants and by the primary author's explanations and interpretations, and those which more clearly exemplified the interpretations made were selected.

As the analysis progressed, through the interpretative integration of findings, it became evident that the results were explainable by the Social Determinants of Health Model (Dahlgren & Whitehead, 1991), which is discussed further in the discussion section.

The result of the translated concepts, their relationships and the primary data were used to create a line of argument, which is presented here (Phase 7).

3 | RESULTS

3.1 | Search outcome

The PRISMA Flow Diagram in [Figure 1](#) shows the process of inclusion of studies. The electronic databases searched identified 4517 studies. After screening titles and abstracts, a total of 4487 records were excluded and 33 studies remained eligible for full-text review.

A detailed review of the remaining 33 full texts was conducted with 13 studies meeting the inclusion criteria. Seven additional studies were reviewed for potential inclusion following hand searching the reference list of the 13 included studies and two additional studies were included. The final number of studies included for synthesis was 15 ([Figure 1](#)).

3.2 | Study characteristics

The characteristics of the studies included are shown in [Table 1](#). Of the 15 studies included for analysis, five were conducted in the UK, six in the USA, one in Sweden, one in Denmark, one in Switzerland and one in Ireland. The years of publication ranged from 1994 to 2020. Fourteen of the studies were qualitative and one study used mixed methods.

The studies used different data collection methods; 10 used semi-structured interviews, and five used focus groups.

The number of participants in the studies ranged from 9 to 48, with ages ranging from 16 to 43 years. Four of the studies included pregnant women only, five included postpartum women up to 12 months after birth only and six included both pregnant and postpartum women.

3.3 | Quality of studies and findings

The utilisation of the CASP tool revealed that most of the included studies scored high when reporting aims, justifying the use of qualitative methodology and reporting their findings and contribution to the field. However, most of the studies scored poorly regarding ethical issues and reflexivity.

Regarding the assessment of confidence in our review findings using the CERQual assessment tool, we can conclude that most of our findings scored high in level of confidence, and some of them obtained a moderate score. Most findings had minor or moderate concerns regarding methodological limitations. However, the studies contributing to these findings were assessed with the CASP tool and only high-quality studies were included in this synthesis. Hence, as per our judgement, these specific limitations do not have a lot of weight in the overall assessment of the finding using the CERQual tool. Additionally, some of the findings scored moderately regarding relevance since they only applied to a certain part of the population (e.g., specific socioeconomic background).

The limitations applicable to each finding, when relevant, have been exposed in the description of the theme, and can also be found in the CERQual assessment Analysis table ([File S2](#)).

3.4 | Synthesis

We were able to identify facilitators and barriers at four different levels within society. At each level, we can find both facilitators and barriers. [Figure 2](#) shows a graphic representation of the themes identified in this synthesis embedded into the Social Determinants of the Health Model.

3.5 | Women's individual factors

As barriers or facilitators associated with individual factors, we understand all those factors that have to do with the individual pregnant woman's cognitive, emotional and behavioural processes as well as her previous life experiences.

3.5.1 | Theme 1: Attitudes towards pregnancy and antenatal care

Emotional processes play a role in the decision making around seeking antenatal care. Having feelings of ambivalence towards the pregnancy ([Callaghan et al., 2011](#); [Daniels et al., 2006](#); [Haddrill et al., 2014](#); [Larsson et al., 2017](#); [Mehta et al., 2017](#); [Murphy Tighe, 2010](#); [Roman et al., 2017](#); [Ross, 2012](#)), denying the pregnancy ([Callaghan et al., 2011](#); [Daniels et al., 2006](#); [Haddrill et al., 2014](#); [Meyer et al., 2016](#)), feeling overwhelmed or unprepared to be a parent ([Haddrill et al., 2014](#); [Larsson et al., 2017](#); [Murphy Tighe, 2010](#)), worrying about social services involvement ([Callaghan et al., 2011](#); [Funge et al., 2020](#); [Haddrill et al., 2014](#); [Larsson et al., 2017](#); [Roman et al., 2017](#); [Sami et al., 2019](#)) and fear ([Haddrill et al., 2014](#); [Johnson et al., 1994](#)) play a very important role can act as a barrier for women to seek antenatal care. Our analysis identified that not having a planned pregnancy intensified these feelings and acted as an additional barrier ([Haddrill et al., 2014](#); [Hatherall et al., 2016](#); [Mehta et al., 2017](#); [Meyer et al., 2016](#); [Murphy Tighe, 2010](#); [Roman et al., 2017](#)).

Nonetheless, there are other types of feelings that can act as facilitators of antenatal care. These feelings are associated with the desirability of the pregnancy. Having positive feelings towards the pregnancy ([Daniels et al., 2006](#); [Haddrill et al., 2014](#); [Larsson et al., 2017](#); [Mehta et al., 2017](#); [Roman et al., 2017](#)), actively planning the pregnancy ([Daniels et al., 2006](#)) and conducting actions that promote bonding with the baby ([Ross, 2012](#)) were mentioned as facilitators.

The analysis identified there are also certain beliefs and attitudes can act as a barrier for women to access antenatal care as some women underestimate the value of antenatal care

TABLE 1 Characteristics of the included studies

Reference	Callaghan et al. (2011)	Daniels et al. (2006)	Dohererty et al. (2012)	Funge et al. (2020)	Hadrill et al. (2014)	Hatherall et al. (2016)	Johnson et al. (1994)
Country	UK	USA	UK	Denmark	UK	UK	USA
Year of publication	2011	2006	2012	2020	2014	2016	1994
Aims	Exploring late booker women's own accounts and perspectives on their relationship with NHS pregnancy care	Identify unique facilitators and barriers to low early prenatal care initiation amongst low socioeconomic Black women in Atlanta	Determine whether pregnant women's perceptions of current antenatal provision differed according to their socioeconomic deprivation background	Exploring undocumented immigrant women's experiences and their access to both formal and informal maternity care services in Denmark	Carry out a qualitative study with a broad range of late-booking women to gain a deeper understanding of the reasons why some women present late for antenatal care	Understanding what prevents or enables women living in an urban setting with high levels of diversity and social deprivation to begin a package of publicly-funded antenatal care early in pregnancy	Explore the reasons given for not seeking prenatal care by women delivering at this same hospital
Design	Qualitative study	Qualitative study	Qualitative study	Qualitative study	Qualitative study	Qualitative study	Qualitative study
Data collection method	Semi-structured interviews	Focus groups	Semi-structured interviews	Semi-structured interviews	Semi-structured interviews	Semi-structured interviews and focus groups	Semi-structured interviews
Recruitment	Purposive sampling from one maternity unit	Purposive sampling from a community health centre in Atlanta	Purposive sampling from one maternity unit	Women were recruited through the Health Clinic for Undocumented Immigrants	Purposive sampling from one maternity unit	Purposive sampling from one maternity unit, a health advocacy and a community-based organisation	Women were selected from a group of women who reported delivering without prenatal care
Consent process	Written informed consent	Written informed consent	Consent obtained. Form not specified	Written informed consent	Written informed consent	Written informed consent	Written informed consent
Number of participants	20	32	21	21	2	48	15
Age	16-43	16-36	17-40	20-42	15-37	20-34	20-32
Pregnancy status	Pregnant or within 6 months postpartum	Pregnant	Pregnant	Pregnant or up to 8 months postpartum	Pregnant	Pregnant or having given birth recently	Postpartum
Timing of data collection	Late 2006 and early 2008	December 2002-March 2003	January 2007-December 2008	January 2018-January 2019	September 2006 - July 2008	March 2011	January 1989-April 1989

(Continues)

TABLE 1 (Continued)

Reference	Callaghan et al. (2011)	Daniels et al. (2006)	Docherty et al. (2012)	Funge et al. (2020)	Hadrill et al. (2014)	Hatherall et al. (2016)	Johnson et al. (1994)
CASP score	17	14	16	12	16	14	10
Reference	Larsson et al. (2017)	Mehta et al. (2017)	Meyer et al. (2016)	Roman et al. (2017)	Ross (2012)	Ward et al. (2013)	Murphy Tighe, 2010
Country	Sweden	US	USA	US	UK	USA	Ireland
Year of publication	2017	2017	2016	2017	2012	2012	2010
Aims	Deepen the understanding of the meaning of caring in prenatal care from Swedish women's perspectives	Identify differences in barriers to and promoters of perinatal health in high versus low-utilising pregnant women of low socioeconomic background	Gain a detailed and distinctive understanding of the barriers to perinatal care in rural and peri-urban areas of Georgia	Explore the perceptions of Medicaid-insured women about the process of care during the perinatal period	Obtain women's explanations for health-related behavioural changes during pregnancy, and explore the influence of maternal-fetal attachment on these behavioural changes	Examine the experiences of racial discrimination during prenatal care from the perspectives of African-American women in a low-income neighbourhood.	To explore the attitudes of first-time mothers towards antenatal education from the perspective of attenders and non-attenders
Design	Qualitative study	Mixed-methods study	Qualitative study	Qualitative study	Qualitative study	Qualitative	Qualitative study
Data collection method	Semi-structured interviews	Semi-structured interviews	Semi-structured interviews	Focus groups	Semi-structured interviews and focus groups	Focus groups	Focus groups
Recruitment	Purposive sampling from one maternity unit	Purposive sampling from one maternity unit	The researchers posted flyers about the study in a variety of locations with distinctly different socio-demographics	Community health workers recruited women from a program for African American women	Purposive sampling from a parenting charity	Participants were recruited through a community-based organisation	Participants were recruited via their area public health nurse
Consent process	Written informed consent	Written informed consent	Verbal informed consent	Informed consent	Written informed consent	Verbal informed consent	No info

TABLE 1 (Continued)

Reference	Larsson et al. (2017)	Mehra et al. (2017)	Meyer et al. (2016)	Roman et al. (2017)	Ross (2012)	Sami et al. (2019)	Ward et al. (2013)	Murphy Tighe, 2010
Number of participants	10 women	40	24	21	9	33	31	16
Age	25–37	Mean age 25 y.o.	Not reported	20–34	26–35	21–40	Not reported	No info
Pregnancy status	1–2 months postpartum	Pregnant	Women had given birth within the last year	Pregnant or up to 12 months postpartum	Pregnant or within a mean of 8 months postpartum	Pregnant or up to 12 months postpartum	Women with a child less than 1-year-old	Women had given birth within the previous 6 months
Timing of data collection	Spring 2015	March–August 2014	Not reported	Not reported	May 2011	September 2015–February 2016	Not reported	Not reported

(Callaghan et al., 2011; Daniels et al., 2006; Haddrill et al., 2014; Hatherall et al., 2016; Johnson et al., 1994; Larsson et al., 2017; Mehta et al., 2017; Meyer et al., 2016; Murphy Tighe, 2010; Roman et al., 2017) and hence, reduce their motivation to start a process which can be quite challenging for some. An example of these beliefs and attitudes is related to the understanding that pregnancy is a normal life event (Callaghan et al., 2011; Haddrill et al., 2014; Hatherall et al., 2016; Larsson et al., 2017) and so medical attention is only necessary when feeling unwell (Haddrill et al., 2014; Hatherall et al., 2016; Johnson et al., 1994) and that women can take care of themselves (Daniels et al., 2006; Docherty et al., 2012; Haddrill et al., 2014; Hatherall et al., 2016; Murphy Tighe, 2010). Further, certain collectives have a history of mistrust in the healthcare system, with midwives and doctors in particular, and these beliefs also affect antenatal care attendance.

However, certain attitudes and beliefs act as facilitators to access antenatal care. Adopting an active role in their care (Docherty et al., 2012; Haddrill et al., 2014; Roman et al., 2017), viewing antenatal care as an opportunity for behaviour change (Mehta et al., 2017), and understanding the benefits of antenatal care (Daniels et al., 2006; Docherty et al., 2012; Haddrill et al., 2014; Hatherall et al., 2016; Larsson et al., 2017; Mehta et al., 2017; Meyer et al., 2016; Murphy Tighe, 2010; Roman et al., 2017; Ross, 2012) are attitudes and beliefs commonly reported in early attenders. Women perceived antenatal care as acting as a preventive measure (Roman et al., 2017), being a source of knowledge, support and reassurance (Daniels et al., 2006; Docherty et al., 2012; Hatherall et al., 2016; Larsson et al., 2017; Mehta et al., 2017; Meyer et al., 2016; Murphy Tighe, 2010; Roman et al., 2017; Sami et al., 2019) and acting as a distraction and means of socialisation and peer mentoring (Larsson et al., 2017; Murphy Tighe, 2010). Additionally, these women also reported high levels of trust in the system and their healthcare professionals (Callaghan et al., 2011; Larsson et al., 2017; Roman et al., 2017) (Table 2).

3.6 | Healthcare professionals and healthcare system

The attitudes or communication styles that one party adopts might have an influence over the other. This theme outlines the specific behaviours or attitudes adopted by healthcare professionals that might have influenced the women's perception of care and thus, their willingness to engage with antenatal services. Additionally, within this section, we examine barriers and facilitators that are associated with the organisation, functioning or management of the antenatal services or health services providers at an institutional level. All these aspects may also have an influence on the women's perception of their antenatal care process and can contradict or reinforce possible beliefs that they might have had before attending, and therefore, may influence their behaviour.

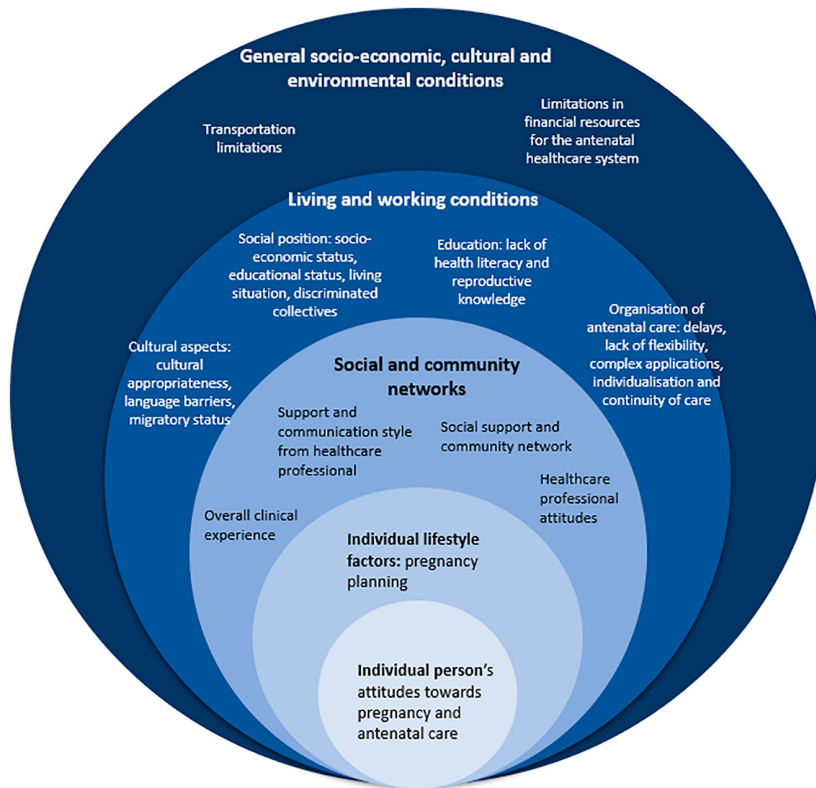


FIGURE 2 Synthesis findings embedded in the social determinants of health model (Dahlgren & Whitehead, 1991).

3.6.1 | Theme 2: Healthcare professionals' attitudes and behaviours

Many women in the studies, especially those from ethnic minorities, reported feeling judged (Callaghan et al., 2011; Daniels et al., 2006; Haddrill et al., 2014; Larsson et al., 2017) and stigmatised (Callaghan et al., 2011; Haddrill et al., 2014; Mehta et al., 2017; Meyer et al., 2016; Roman et al., 2017) by healthcare professionals attitudes. Further, some racist behaviours (Daniels et al., 2006; Mehta et al., 2017; Roman et al., 2017; Ward et al., 2013) and a feeling of inequality between patient and professional (Callaghan et al., 2011; Docherty et al., 2012) was also reported in several instances.

Lack of empathy or insensitivity from the healthcare professionals was also reported by several women in the different studies (Callaghan et al., 2011; Daniels et al., 2006; Hatherall et al., 2016; Roman et al., 2017). In some instances, women felt like they were not treated with respect, and that healthcare professionals were very task-oriented (Callaghan et al., 2011; Roman et al., 2017). When conducting our CERQual analysis, we identified relevant concerns relating to this finding as most of the contributing studies explore women of low socioeconomic backgrounds (see File S2).

However, in other cases, women also reported different attitudes that healthcare professionals adopted to facilitate the antenatal care process for them, these attitudes influenced the women's perception of their carers in a positive way and made them feel cared for and valued (Roman et al., 2017). Non-judgemental, honest, supportive and empathetic healthcare professionals were highly valued (Table 3).

3.6.2 | Theme 3: Communication with healthcare professionals

Communication issues in different forms were reported throughout all the studies. Women reported receiving contradictory messages (Hatherall et al., 2016; Larsson et al., 2017; Roman et al., 2017), having concerns dismissed (Docherty et al., 2012; Roman et al., 2017), feeling uninformed (Docherty et al., 2012; Johnson et al., 1994; Meyer et al., 2016; Roman et al., 2017), being confused due to the use of jargon (Docherty et al., 2012; Roman et al., 2017) and feeling frustrated since healthcare professionals would not do any prior health knowledge assessment (Docherty et al., 2012). This poor communication not only might have altered the women's subjective perception of their carer but also of the whole antenatal process and in some instances, it might have led women to disengage and lose interest in their antenatal care. Regarding the CERQual assessment of these findings, we encountered concerns regarding adequacy as only three studies strongly support this finding, however, there are others that provide limited data to support it (see File S2).

However, according to the women, other practices that healthcare professionals adopted promoted positive communication and also helped women through their antenatal care process. Healthcare professionals who engage in active listening and took time to address women's concerns (Meyer et al., 2016; Murphy Tighe, 2010) and empower them to participate in the decision-making process (Docherty et al., 2012; Murphy Tighe, 2010) were seen as very encouraging by women and facilitated trust (Table 4).

TABLE 2 Theme 1 attitudes towards pregnancy and antenatal care quote

Barriers	Facilitators
'Well, I didn't start mine right away 'cause I went straight to the abortion clinic like I said at the beginning I was unhappy, but I didn't kill the first ones so I can't do nothing but stick with it' (Daniels et al., 2006)	Many also created a bond by using more personal methods of feeling connected to the baby, such as naming or talking to the fetus (Ross, 2012)
'...it actually took me a few weeks to feel anything. I didn't feel anything, because it wasn't planned'(Roman et al., 2017)	'I go to the fridge...if I saw some cheese in there and I thought I'd quite like it but I can't have it, I'll...say to myself 'well I'm not going to have it because it's bad for the baby', and then in your head you'll be like 'can you hear me baby? I'm not having this and it's because of you!' (Ross, 2012)
The lack of preparation for pregnancy found in the study not only affected women's 'mindset' and delayed confirmation of the pregnancy, but also led to feelings of fear, depression and ambivalence amongst some women, particularly related to the consequences of the pregnancy, (Haddrill et al., 2014)	'You can always feel this presence, and you can almost, it sounds stupid, but bond with the baby, because you feel like you're together.'(Ross, 2012)
A small number of participants specifically noted that their pregnancy was unplanned; these women described they were 'in denial' about their pregnancy, and therefore did not seek PNC [prenatal care] during their first trimester (Meyer et al., 2016)	Access to antenatal care is heavily influenced by a woman's willingness to embrace her pregnancy and particularly the social aspects of the pregnancy (Haddrill et al., 2014)
An intuitive process of 'do it yourself antenatal care' was reported by some women which included self-checks and active self-care, in order to promote and monitor the healthy progress of their pregnancy, until they felt able to access care (Haddrill et al., 2014)	'It would frighten me not to have it. To go through a whole pregnancy without it. It would frighten me when I'm in the labor room. It's very important' (Daniels et al., 2006)
'... you are already experienced in giving birth. [] you'll know what to do and how to look after yourself' (Hatherall et al., 2016)	'So your baby will be healthy and normal and all this stuff. Even though something could be wrong you're going through the proper channels to insure you have a happy child. 'Cause I hear stories now from some girls and the things that were wrong with their babies when they were born it's like it scares me... But prenatal care is very essential to the baby' (Daniels et al., 2006)
'I had no reason to go. I had no need for it. I just didn't want it (Johnson et al., 1994)	'Prenatal care, it helps you feel a little bit safer, comfortable about what you're going through. Sometimes we get nervous. You don't know' (Roman et al., 2017)
'... booking late is not a big deal to me because, number one [it] is not, is not a disease. I'm not sick or anything so I knew what's wrong with me ...' (Callaghan et al., 2011)	
The women's responses suggested rather a differing set of priorities, a consideration of convenience and an assessment of the value of early care, linked to location, health and past experience (Haddrill et al., 2014)	

TABLE 3 Theme 2 Healthcare professionals' attitudes and behaviours quotes

Barriers	Facilitators
'Providers act like I don't know anything just because I am poor. I want to learn: didn't get nothing out of it; keep repeating; feel like I'm not smart enough to ask questions' (Roman et al., 2017)	'I mean, I just feel that they relate to a lot of things. You know say you going through things that you're dealing with, and when you find yourself in, you know, some type of crossroad, they help you, you know, try to navigate your situation. I mean, I just think they go above and beyond their duties' (Roman et al., 2017)
Whilst examples of obvious behaviours (such as the use of racial slurs) were described in some groups, other groups described more subtle forms of racism (such as providers' negative assumptions about them) (Ward et al., 2013)	
'She just came in and it's like she is so used to it and you are just another pregnancy, so she doesn't see you for an individual. She just does her thing and leaves' (Roman et al., 2017)	

3.6.3 | Theme 4: Unsatisfactory clinical experiences

Some women included in these studies changed their behaviour after being exposed to antenatal care (Callaghan et al., 2011; Daniels et al., 2006; Larsson et al., 2017; Mehta et al., 2017). Having an unsatisfactory clinical experience was reported by several women as a barrier to engage with antenatal services (Daniels et al., 2006; Docherty et al., 2012; Mehta et al., 2017; Roman et al., 2017). In this instance, women had the motivation to access antenatal care but the subjective perceptions that followed their negative experiences reduced their levels of motivation leading to

disengagement. Some of these negative perceptions were formed after experiencing rushed appointments (Docherty et al., 2012; Roman et al., 2017), feeling that positive care was conditional on insurance status or sociodemographic factors (Larsson et al., 2017; Mehta et al., 2017), feeling excluded from the decision making (Docherty et al., 2012; Meyer et al., 2016) or feeling that the whole process was a waste of time (Roman et al., 2017). Regarding the CERQual assessment, we attributed minor concerns in terms of relevance to this finding as most of the studies contributing to its focus on women from low socioeconomic backgrounds (Table 5) (see File S2).

TABLE 4 Theme 3 Communication with healthcare professionals quotes

Barriers	Facilitators
<p>'She did not spend a lot of time in the room. It did make me feel like you couldn't get your questions in. They immediately answered and then shoot you down. You know, when you are a pregnant woman, you are sincerely concerned about this health problem, because you are experiencing something that you feel is not normal and for it to just be immediately dismissed, it makes you feel like well, why did I even say anything' (Roman et al., 2017)</p> <p>'They didn't really go over what to expect or what to do when this happens. They didn't really go over how the day would be, I guess' (Meyer et al., 2016)</p> <p>'The woman that we spoke to, she was going on about you know about protein in your urine or whatever and all this stuff and I just didn't have a clue what you're talking about. It is all very, I know they must do it all the time (Docherty et al., 2012)'</p>	<p>'The way she talked, the way she attend to you, you understand. That make you feel ... really feel good, you know' (Callaghan et al., 2011)</p> <p>'She told me just about basically the different options of like how to have your baby about whether you wanted consultant led or midwife led and explained the difference between the two... so I kind of made a choice that I was just going to go with midwife led (Docherty et al., 2012)'</p> <p>For engagement to be present we sought evidence of a case perceiving good communication with health professionals, perceiving a value in the quality and relevance of educational information and evidence of shared decision making (Docherty et al., 2012)</p>

TABLE 5 Theme 4 Unsatisfactory clinical experiences quotes

Barriers
<p>'It was kind of a waste of time, to sit there all that time, and then, you know, be rushed out; pretty much I didn't get anything accomplished with that. You know, I guess it's okay to know that your baby is doing fine or whatever' (Roman et al., 2017)</p> <p>Most indicated the provider was not in the room long enough, they didn't get enough information, sometimes did not get questions answered, and often ended up feeling like they were leaving with nothing (Roman et al., 2017)</p> <p>Another mother regretted not discussing her desire for a vaginal delivery prior to labor, and said, 'It's something I would have appreciated more discussion about prior to the moment when that needed to happen. [...] That] decision was made really kind of around me, as opposed to with me, which was frustrating' (Meyer et al., 2016)</p>

3.6.4 | Theme 5: Organisation of antenatal care

The analysis shows that in some cases, women had the motivation to seek antenatal care and understood its value, however, they found several institutional barriers in their way that delayed their booking date. Examples of this are administrative delays (Callaghan et al., 2011; Hadrill et al., 2014; Johnson et al., 1994; Meyer et al., 2016; Roman et al., 2017) or problems with the referral process (Callaghan et al., 2011; Hatherall et al., 2016; Roman et al., 2017). Other women reported that the lack of flexibility in the appointments (Funge et al., 2020; Mehta et al., 2017; Murphy Tighe, 2010; Roman et al., 2017) meant antenatal appointments clashed with their other commitments, which impeded their access. Women reported that they would have preferred a system that allowed for more flexibility or walk-in services (Mehta et al., 2017), and in cases where this was available, it was reported as a facilitator for antenatal care engagement.

Some women found that the application to access antenatal care was too complex and required a lot of effort (Hatherall et al., 2016; Johnson et al., 1994; Meyer et al., 2016; Roman et al., 2017; Sami

et al., 2019; Ward et al., 2013); in this case, women were willing to access antenatal care early but the application process itself was delaying them. This issue was especially relevant in the studies conducted in the US, where women needed pregnancy confirmation from a provider to be able to access the government insurance program Medicaid (Roman et al., 2017). Other women reported not having enough information to access the different services available (Docherty et al., 2012; Funge et al., 2020; Hatherall et al., 2016; Johnson et al., 1994). In contrast, availing of extra professional support for help through this process was highly valued by some women (Roman et al., 2017).

Some women also reported that there was a lack of individualised care within the antenatal system. Women felt part of a production line, '*just another pregnancy*', and in some instances, felt that their individual needs were not met (Callaghan et al., 2011; Docherty et al., 2012; Hadrill et al., 2014).

Lack of continuity of carer (Callaghan et al., 2011; Mehta et al., 2017; Meyer et al., 2016; Roman et al., 2017; Sami et al., 2019) was another issue frequently reported by the women participating in the different studies. This lack of continuity in some instances is related to an interruption in insurance coverage (Mehta et al., 2017; Meyer et al., 2016; Roman et al., 2017), resulting in frustration for the women affected. For some women, not seeing the same healthcare worker in each visit hindered their ability to build rapport and open up to them. This drove some women to avoid antenatal care services and attend their general practitioners only for their care. The studies showed that providers who facilitated the continuity of carer (Callaghan et al., 2011; Larsson et al., 2017; Meyer et al., 2016) prompted better trusting relationships and promoted engagement with antenatal care (Callaghan et al., 2011; Meyer et al., 2016) (Table 6).

3.7 | Social environment

As previously mentioned, the barriers identified after analysing the included studies affect the process of antenatal care from different

TABLE 6 Theme 5 Organisation of antenatal care quote

Barriers	Facilitators
<p>'It does take a long time because they don't take women without a GP at the hospital, so to get to the hospital she needed to get a GP, register with a GP, get an appointment and for her to be referred to the hospital it takes time. GP requires proof of address, some bill or something. And she did not have that address because they moved just recently so she was waiting for proof to come' (Hatherall et al., 2016)</p> <p>'I think that with the Welfare, you have to have predetermination, and I didn't do something right. I went to the doctor's office, and they couldn't see me because I didn't know how to get on Medicaid until I got there. Then I had to reschedule and wait for them to get like the verification that I had it' (Roman et al., 2017)</p> <p>Women felt powerless to get early PNC, even when some reported that they had a prior high-risk pregnancy to the person scheduling appointments (Roman et al., 2017)</p> <p>'... the second time I went it was a different doctor that was probably a locum or something and then the third time I went it was another doctor ... and that's three times' (Callaghan et al., 2011)</p>	<p>'I didn't call. I just figured since I'm around this area and I'm feeling that pain for 2 days now, why not just come over' (Mehta et al., 2017)</p> <p>'My SB CHW connected me to everything else that I needed and she would just call me, like sign her up (daughter) and everything I needed. When we were into the appointment, she would like call the person and do this step, doing the work, everything' (Roman et al., 2017)</p> <p>'The only reason I did—I got in [accepted for Medicaid] is because my CHW was on my case. She was just e-mailing like, you know, hey, what's the hold up' (Roman et al., 2017)</p> <p>All of the mothers and key informants described the importance of seeing few providers consistently throughout their pregnancy to provide continuity of care (Meyer et al., 2016)</p>

TABLE 7 Theme 6 Cultural aspects quotes

Barriers	Facilitators
<p>...but if the midwife in at the hospital says, 'You are not Danish. you can go home or pay' I will think: I am not Danish, but I need help with my baby. I am a human being' (Funge et al., 2020)</p> <p>'I thought I was going to die. It didn't come abruptly. I felt more and more pain ... But I knew we could not go to the hospital. But when I reached the point of thinking it's hospital or death, we went. I couldn't be deported if I was dead, you know. Dead people don't have passports' (Funge et al., 2020)</p> <p>The women feared that the debt could increase their risk of deportation or affect their chances of attaining residence permits in the future. It also caused worries of whether they would be refused care during birth or be given inadequate care. Furthermore, they worried whether they would end up with unmanageable bills afterwards</p>	<p>'Honestly, they are so friendly here, and it's so nice to see that people really want to help you, even though you are foreign ... and even though you don't have residency. You don't have nothing, but you have the clinic. And know that they won't report you to the police. It feels very safe' (Funge et al., 2020)</p> <p>'...I solely depend on this place. If I could not go here, where would I go?' (Funge et al., 2020)</p>

levels in society. In this category, the barriers identified are related to the general socio-economic, cultural and environmental context where a woman lives.

3.7.1 | Theme 6: Cultural aspects

Women from different cultural backgrounds reported issues related to cultural inappropriateness (Docherty et al., 2012; Johnson et al., 1994) or language barriers (Funge et al., 2020; Haddrill et al., 2014; Hatherall et al., 2016; Sami et al., 2019). Once again, these issues hindered the possibility of forming a trusting relationship with their carer, which in many instances led women to seek care in their own communities or to travel home for their care (Haddrill et al., 2014; Hatherall et al., 2016).

Some of the studies included in the analysis looked at the experiences of migrant women in high-income countries. Women felt discriminated against due to their status as an immigrant (Funge et al., 2020; Sami et al., 2019), and in some cases, felt the need to justify their right to care (Funge et al., 2020).

Women with an illegal status were afraid of being deported if they attended antenatal care, and they were also afraid of being separated from their babies (Funge et al., 2020).

Due to their illegal immigrant status, some women had uncertainties about their ability to afford care, which led them to believe that they only should access care in emergencies or in labour (Funge et al., 2020). Additionally, the lack of familiarity with the health system within the country increased their difficulties in accessing care (Funge et al., 2020; Sami et al., 2019).

Women found that availing of health clinics held specifically for immigrant women facilitated their access to care (Funge et al., 2020; Sami et al., 2019) as they felt safe there. Many women, were entirely dependent on these clinics as their only resource for their care, which was a source of concern (Funge et al., 2020).

In many instances, however, these health service-related barriers were possible consequences of reduced funding or resource limitations. In several of the studies, women reported interruptions in their care due to the closure of their clinics or a delay in their booking due to a lack of providers in their area. These issues correlate with the social environment in which those services are being provided (Table 7).

3.7.2 | Theme 7: Social position and lifestyle factors

The social position and lifestyle factors are defined here as all those aspects associated with a specific way of living or socio-economic status. By social position or economic status, we consider factors such as income, access to education, occupation, living conditions, access to health services and access to housing that will have an impact on a person's lifestyle (Dahlgren & Whitehead, 1991).

Aspects like homelessness (Daniels et al., 2006), intimate partner violence (Mehta et al., 2017; Murphy Tighe, 2010), living in deprived areas (Docherty et al., 2012) or having low economic resources (Callaghan et al., 2011; Daniels et al., 2006; Haddrill et al., 2014; Johnson et al., 1994; Mehta et al., 2017; Roman et al., 2017) have been identified as barriers for antenatal care attendance. Most of the time, women living in these conditions do not have their basic needs of survival covered and need to focus their efforts on their more immediate concerns (Hatherall et al., 2016; Heazell et al., 2016; Mehta et al., 2017; Murphy Tighe, 2010). Therefore, seeking antenatal care is not a priority for them (Hatherall et al., 2016; Johnson et al., 1994; Mehta et al., 2017; Murphy Tighe, 2010; Roman et al., 2017).

Additionally, the analysis showed that the social discrimination of certain collectives within the society also acted as a barrier for many women. It was reported in different studies that teenage women (Haddrill et al., 2014; Meyer et al., 2016), substance users (Haddrill et al., 2014), women from ethnic minorities (Daniels et al., 2006; Mehta et al., 2017; Roman et al., 2017; Ward et al., 2013) or women from lower socioeconomic status (Ward et al., 2013) faced additional challenges when trying to access antenatal care. In some instances, women felt their care was of lower quality based on their insurance status (Meyer et al., 2016; Roman et al., 2017; Ward et al., 2013).

TABLE 8 Theme 7 Social position and lifestyle factors quotes

Barriers	Faacilitators
'I was mainly worried about my children eating, I didn't worry about myself' (Mehta et al., 2017)	The early initiators were older, with an average age of 24 (ranging from 21 to 36), had higher household income (Daniels et al., 2006)
'It hinders work, to miss work could be a problem when there's not enough money if you miss work' (Johnson et al., 1994)	Women who reside within areas of low socioeconomic deprivation may be more likely to engage with antenatal service (Docherty et al., 2012)
'It's difficult because I don't have a job. I get money from Welfare. I get food stamps. I get WIC. I've had plenty of times where it's been times where I've had no electricity. Right now, I need a hot water heater. I still need to figure out how to make arrangements with the water company and the gas company' (Mehta et al., 2017)	
For example, one woman began to describe the better clinic that her friend (who had private insurance) was able to attend, but that, because they were the only Black girls in the waiting room, 'we waited longer than anybody else' (Ward et al., 2013)	
'It's not gonna change. It's not, cause it's been like this forever. You learn to go last. No matter how much people talk about it, it is the same.... yes it is, it's been like that forever...That's how it is (Ward et al., 2013)'	
Several mothers felt they had access to fewer providers and medical technologies than women with private insurance, which decreased their overall satisfaction with their PNC experiences (Meyer et al., 2016)	

Conversely, there are some lifestyle factors or social position-related factors that act as facilitators to access antenatal care. Having a higher educational level (Daniels et al., 2006; Docherty et al., 2012), a higher economic status (Daniels et al., 2006; Docherty et al., 2012), a steady living situation (Daniels et al., 2006), being older (Daniels et al., 2006; Docherty et al., 2012) and being a first-time mother (Haddrill et al., 2014) are factors associated with better attendance and compliance with antenatal care. Women in more favourable socioeconomic positions are more likely to have less immediate concerns and so they can focus on seeking care during their pregnancy. Furthermore, women with greater access to education and information might be more aware of the different risks during pregnancy and the importance of antenatal care (Table 8).

3.7.3 | Theme 8: Social support and community network

In this theme, social support is understood as social external influences that might have an influence on a woman's ability and willingness to change her behaviour, and that can also accentuate or alleviate the influence of other types of barriers. These people could be either family, partner, members of the community or professional aids assigned to them.

An absence of social support heavily influenced women's decisions to attend antenatal care (Daniels et al., 2006; Funge et al., 2020; Haddrill et al., 2014; Johnson et al., 1994; Mehta et al., 2017; Sami et al., 2019). In some cases, this lack of support was due to fear of disapproval within the woman's community (Daniels et al., 2006) or family (Daniels et al., 2006; Haddrill et al., 2014). According to Haddrill et al. (2014), it is necessary that women obtain a certain

TABLE 9 Theme 8 Social support and community network quotes

Barriers	Facilitators
'Like I said, I just moved to Phoenix, they (family) didn't really give a shit. It's just me and my problem for me to deal with, nobody else' (Johnson et al., 1994)	'The girls at my other job they are so supportive about the situation 'cause they know I really didn't want to have any more kids, but they are very supportive, and my mom and stepmom very supportive and my stepmom had her first child at 13. My stepmom, she's a very good listener. Very good for advice (Daniels et al., 2006)'
'I'm the only one of my friends that got kids. They mad at me right now. They do not want me to have no more kids. They're like 'Give it up' (Daniels et al., 2006)	

TABLE 10 Theme 9 Transportation issues quotes

Barriers
'It's just a process that goes along with getting there. Either driving, getting on the bus, something. A lot of the times I can't drive myself and I so then I have to park so far away because every spot around here is like you have the pay the meter or if you park in the hospital parking lot you have to pay them and that's an issue for me, having to pay for everything' (Mehta et al., 2017)
'Didn't have someone to take me' (Johnson et al., 1994)
This was particularly frustrating for women without the transportation, time, and money to travel to their provider's new location (Meyer et al., 2016)

level of approval within their social circle before they can accept the pregnancy and hence, seek antenatal care (Haddrill et al., 2014).

On the contrary, availing of social support from the baby's father, the community and the family (Daniels et al., 2006; Haddrill et al., 2014; Mehta et al., 2017) combined with a positive reaction facilitates the process of acceptance for the pregnant woman and promotes engagement (Table 9).

3.7.4 | Theme 9: Transportation issues

Availability and cost of transportation (Funge et al., 2020; Meyer et al., 2016; Murphy Tighe, 2010; Roman et al., 2017) to attend antenatal care was also reported as a barrier. Some women reported not having any means to access their providers, and even those who were provided with private transportation like taxis, reported issues with the drivers and delays that made them miss their appointments (Roman et al., 2017) (Table 10).

3.7.5 | Theme 10: Lack of health literacy and reproductive knowledge

A lack of health literacy or lack of reproductive health knowledge and lack of access to knowledge was widely reported. Many women in the studies reported a delay in the recognition of their pregnancy (Callaghan et al., 2011; Daniels et al., 2006; Haddrill et al., 2014; Meyer et al., 2016; Roman et al., 2017) due to different reasons such as mistiming of the pregnancy (Haddrill et al., 2014), lack of knowledge of pregnancy signs and symptoms (Callaghan et al., 2011; Daniels et al., 2006; Haddrill et al., 2014), attributing symptoms to

TABLE 11 Theme 10 Lack of health literacy and reproductive knowledge quotes

Barriers
'I just started throwing up. I just thought I had an upset stomach, so I waited for about 2–3 months and then I finally went to the hospital (Daniels et al., 2006)'
'Last time, it was just weird because I went for the Depo and they told me I was 25 weeks pregnant. I got caught on the Depo and I didn't know that, and I took the pills and I got caught on the contraceptive pill this time... and I didn't know with this one' (Haddrill et al., 2014)
'When they (the GPs) said 'I was going through the change' I thought 'well could I be' because at 37 I thought 'well I might be' because you hear women go through it earlier than I did and I think I got that into my head more than anything and I never contemplated that I was pregnant' (Haddrill et al., 2014)

other issues (Haddrill et al., 2014; Roman et al., 2017), having a history of irregular periods (Haddrill et al., 2014; Roman et al., 2017), not expecting the pregnancy (Haddrill et al., 2014) or not noticing the symptoms (Haddrill et al., 2014). Contrarily, some women believed it was not possible for them to be pregnant due to their age (Haddrill et al., 2014) or due to using contraception (Haddrill et al., 2014; Roman et al., 2017) (Table 11).

3.7.6 | Theme 11: Government-level issues

By government-level issues we understand barriers that might be derived from decisions made by governing institutions, policy makers or funding agencies. In this theme, the studies analysed showed that the biggest barriers were the limitations of financial resources for the antenatal healthcare system which explains a lot of the healthcare system-related barriers (e.g., small clinic capacity (Mehta et al., 2017), shortage or closure of clinics (Meyer et al., 2016)) or overload of clinics resulting in long waiting times (Daniels et al., 2006; Mehta et al., 2017; Roman et al., 2017) and the limitations associated with the government health programmes and costs of care (Funge et al., 2020; Johnson et al., 1994; Meyer et al., 2016; Roman et al., 2017; Ward et al., 2013).

On the contrary, it was also drawn from the studies that supporting women with the cost of antenatal care through government aid or by availing of free care for everyone was a facilitator to engage in antenatal care (Table 12).

TABLE 12 Theme 11 Government-level issues quotes

Barriers	Facilitators
<p>Clinic capacity was perceived as being limited: 'Having more providers at one clinic would probably help just because it wouldn't be so hard to get an appointment' (Mehta et al., 2017)</p> <p>Individual women described issues with access to appropriate care based on their public insurance—some expressed a lack of awareness that they had the right to choose a provider or clinic; others expressed frustration at calling multiple clinics trying to find out if their insurance was accepted, or in figuring out which hospital accepts insurance for what type of care (Ward et al., 2013)</p>	<p>Sound policy and legislation in relation to paid maternity leave entitlements are essential in the current climate where women make up a significant percentage of the workforce (Murphy Tighe, 2010)</p>

4 | DISCUSSION

The results of the synthesis identified facilitators and barriers associated with four different levels which we considered relevant to whether women seek and engage in the process of antenatal care. First, we identified facilitators and barriers associated with the women's individual factors. The women's perceived value of antenatal care and their perceived clinical experiences during their current or previous antenatal care have an influence on their willingness to attend. The women's feelings towards their pregnancy and the idea of parenthood also played a role in their attendance behaviour. Second, we identified facilitators and barriers associated with individual healthcare professionals. According to the women's accounts, certain attitudes and communication styles that healthcare professionals adopted had an impact on their antenatal care engagement. Third, facilitators and barriers associated with the healthcare system were discussed. These barriers and facilitators related to the complexities of the system itself, with women finding barriers associated with the organisation of the system and their own difficulties to navigate through it. Finally, we identified factors associated with the social environment, such as socioeconomic position, availability of social support and transportation, and lack of health literacy, that have an effect on women's attendance at antenatal care.

Although the facilitators and barriers identified in this study have been divided into different themes, they should not be considered separate systems. On the contrary, the influences they have over each other are crucial to understanding the true dimensions of this issue. The reasons why women might not attend or engage in antenatal care are multifactorial and the personal barriers identified are only one such aspect. Sociodemographic factors, geographical differences and limitations within the healthcare system can determine women's access to knowledge and ability to make informed decisions. These factors also influence beliefs and perceptions about the antenatal care process, ultimately affecting their behaviour.

In many instances, these attitudes, beliefs or perceptions are the results of a lack of information, limited health literacy or the influence of other people's experiences. Health literacy is associated with poorer health outcomes and poorer use of healthcare services in general (Berkman et al., 2011; Kilfoyle et al., 2016). This is also true for pregnant women; a study conducted by Kohan concluded that women with higher levels of health literacy were more likely

to attend antenatal care early and frequently, and also had healthier outcomes for themselves and their babies (Kohan et al., 2007). Similarly, previous research from our group has demonstrated that the level of health literacy and awareness that women have about a certain issue can have an impact on their engagement in behaviour change (Escañuela Sánchez et al., 2022). Previous studies have demonstrated that peer-led interactive interventions are more effective than lecture-style information provision in terms of increasing health literacy (Dehghani, 2021; Sanders et al., 2021). These elements should be considered when designing interventions targeting all women in a community. Further, involving women's voices in the development of interventions is also crucial to ensure that their needs are met. For example, Satwell et al. have designed an intervention to overcome some of the barriers identified in this study, including lack of health literacy, by co-producing an intervention with the involvement of their community to reduce the high rates of late initiation of antenatal care in the UK. The intervention is co-produced and locally tailored to each participating site (Sawtell et al., 2018).

The coronavirus disease (COVID-19) pandemic has forced the world to adapt in many ways, including the provision of antenatal care. Some of the necessary antenatal care was delivered via online care programs. Online antenatal care could prove beneficial for those women who encounter economic, logistic or other types of external barriers to attend antenatal care at a healthcare facility, as it may be more convenient and cost-effective (Wu et al., 2020). One way of tackling some of the barriers exposed in this article would be by providing high-quality antenatal care programmes, but to do so, health services need to have skilled professionals and technology available, and governments should ensure access to electronic devices and relevant resources to their population. However, further work is necessary to optimise systems, as recent research has shown that women might find telehealth problematic and less favoured than in-person care (Meaney et al., 2020; Smith et al., 2021).

Our findings show that healthcare professionals should receive adequate education through their training programmes, and National Antenatal Education Standards published by the different Health Services should include an element of the importance of discussing health habits and risk factors for stillbirth or other potential adverse outcomes. Further training and guidance might encourage

healthcare professionals to engage in these discussions with their patients with a higher level of confidence.

These results can be explained using the Social Determinants of Health model (Dahlgren & Whitehead, 1991). This model takes into account the impact of social and political conditions on health (Solar & Irwin, 2010). Aspects like the conditions in which a person is born and raised, availability of social support and community networks, access to education, job opportunities, housing, water and food supplies, access to health services, etc. have an impact on health outcomes (Allen et al., 2014; Dahlgren & Whitehead, 1991; Solar & Irwin, 2010). Dahlgren and Whitehead developed a conceptual framework of the Social Determinants of Health mapping out the different categories that relate to public health (Dahlgren & Whitehead, 1991). This framework suggests different levels of intervention, ensuring that all relevant determinants of health are targeted when addressing any specific health issue. Hence, in order to intervene effectively, all levels need to be considered consistently whilst avoiding contradictive policies at different levels (Dahlgren & Whitehead, 1991; Rice & Sara, 2019).

In the Social Determinants of Health model, Dahlgren and Whitehead positioned the constitutional/individual and life-style factors as the smallest arch of their rainbow (Dahlgren & Whitehead, 1991). These would correspond with facilitators and barriers related to the women's individual factors identified in this study. Although these personal factors, such as beliefs, capabilities and experiences, need to be set in their wider social context to be fully understood, they also play a role in health behaviours and subsequent health outcomes (Palmer et al., 2019). Therefore, the individual also needs to take responsibility and policy should be a tool to support the individual's personal autonomy when engaging in well-informed decision making about their own health, without reaching a victim-blaming extreme (Forde & Raine, 2008). The last three levels represented in the Social Determinants of Health model relate to social and community networks, living conditions and general socio-economic, cultural and environmental conditions. We were able to identify factors at each level (see Figure 2). Issues related to social position, cultural aspects, education, transportation limitations and lack of resources are the responsibilities of local and national governments and further work is necessary to address inequalities impacting women's access to antenatal care across all levels.

Better health outcomes may be achieved by a combined effort between society and the individual (Forde & Raine, 2008; Voorberg et al., 2017). To support this purpose, co-production is an approach that has been applied to the provision of public health services. By co-production, we understand the direct user involvement in the production of public services giving the users an active role (Fusco et al., 2020; Verschuere et al., 2012). Co-production can be used to obtain insight into the quality of care perceived by the users of health service and improve that quality based on the insights obtained (Vennik et al., 2016). Some of the techniques that can be used for co-production include in-depth interviews, focus groups, feedback meetings, shadowing, using patients as

educators and experience-based co-design, where patients and healthcare professionals work together for a period of time to co-design a service (Vennik et al., 2016). Previous authors have asked their participants about ways to facilitate attendance or engagement with antenatal care; the responses given by women include providing a non-judgemental contextually tailored service, better promotion and education about the value of early antenatal care (Haddrill et al., 2014), better preconceptional reproductive education (Haddrill et al., 2014), improved communication between services (Haddrill et al., 2014), and simplifying the referral process (Hatherall et al., 2016). This information obtained by the women involved in antenatal care, in addition to insights obtained by healthcare professionals, could be part of a co-productive process to target those barriers that prevent women from attending antenatal care.

Our study has a number of limitations. First, our systematic review of the literature relied on a limited number of databases. These databases were chosen based on similar studies in the area, previous experience and knowledge about the databases.

Further, we excluded studies based on quality assessment. Although this has enabled the findings from our study to be of higher quality, excluding studies due to quality criteria can result in a loss of relevant input. However, previous research in the area of quality appraisal has shown that the quality of reporting of a study correlates with its value as a source for the final synthesis, and, therefore, it is appropriate to exclude inadequately reported studies (Carroll et al., 2012).

The findings obtained in this study are based on interpretations of women's perceptions and beliefs, and therefore, they cannot be considered as facts. Additionally, by choosing not to include the experiences of other agents involved in the antenatal care process, we are not able to fully explore the issue from different perspectives. We considered that hearing the women's voices is crucial in order to develop appropriate interventions. Nonetheless, further research should be undertaken to explore other stakeholders' experiences and opinions.

Finally, our findings are not based on primary data but a secondary analysis of these women's views, opinions and experiences. This means that the original author's own views and interpretations should be acknowledged as potentially having some influence over our findings. However, the findings across the studies were consistent despite being conducted by different authors in different parts of the world, which strengthens our own findings.

The results of this study show that to tackle the issue of non-attendance at, or delaying access to, antenatal care, interventions need to be designed at different levels. Trying to increase the intrinsic motivation of women through tailored interventions that tackle the different personal barriers to antenatal care and working with healthcare professionals towards using better communication strategies could result in a reduction of the barriers identified in this study. This issue needs to be considered by policy makers not only in terms of health but also in terms of education, employment, housing and social equality. Moreover, the role of the individual cannot be forgotten. A co-production approach should be used where the

social determinants of health are addressed to enable the individual to enhance facilitators and overcome barriers to securing better antenatal health (Forde & Raine, 2008).

AUTHOR CONTRIBUTIONS

Tamara Escañuela Sánchez: conceptualisation, methodology, formal analysis, investigation, and writing—original draft. Laura Linehan: investigation and writing—review and editing. Keelin O'Donoghue: conceptualisation, funding acquisition, supervision, and writing—review and editing. Molly Byrne: conceptualisation, supervision, and writing—review and editing. The author(s) read and approved the final manuscript. Sarah Meaney: conceptualisation, investigation, methodology, supervision, and writing—review and editing.

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CONFLICT OF INTEREST

The authors report no conflict of interest.

DATA AVAILABILITY STATEMENT

The data supporting the conclusions of this article is available in these published articles: Callaghan et al., 2011; Daniels et al., 2006; Docherty et al., 2012; Funge et al., 2020; Hadrill et al., 2014; Hatherall et al., 2016; Johnson et al., 1994; Larsson et al., 2017; Meyer et al., 2016; Murphy Tighe, 2010; Roman et al., 2017; Ross, 2012; Sami et al., 2019; and Ward et al., 2013.

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SUPPORTING INFORMATION

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