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Migrant women's experiences of pregnancy, childbirth and maternity care in European countries: A systematic review

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Abstract

Background

Across Europe there are increasing numbers of migrant women who are of childbearing age. Migrant women are at risk of poorer pregnancy outcomes. Models of maternity care need to be designed to meet the needs of all women in society to ensure equitable access to services and to address health inequalities.

Objective

To provide up-to-date systematic evidence on migrant women's experiences of pregnancy, childbirth and maternity care in their destination European country.

Search strategy

CINAHL, MEDLINE, PubMed, PsycINFO and Scopus were searched for peer-reviewed articles published between 2007 and 2017.

Selection criteria

Qualitative and mixed-methods studies with a relevant qualitative component were considered for inclusion if they explored any aspect of migrant women's experiences of maternity care in Europe.

Data collection and analysis

Qualitative data were extracted and analysed using thematic synthesis.

Results

The search identified 7472 articles, of which 51 were eligible and included. Studies were conducted in 14 European countries and focused on women described as migrants,

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refugees or asylum seekers. Four overarching themes emerged: 'Finding the way—the experience of navigating the system in a new place', 'We don't understand each other', 'The way you treat me matters', and 'My needs go beyond being pregnant'.

Conclusions

Migrant women need culturally-competent healthcare providers who provide equitable, high quality and trauma-informed maternity care, undergirded by interdisciplinary and cross-agency team-working and continuity of care. New models of maternity care are needed which go beyond clinical care and address migrant women's unique socioeconomic and psychosocial needs.

Introduction

International migration continues to grow rapidly [1]. Between 2000 and 2017, the migrant population increased by 85 million, from 173 to 258 million [1]. In 2017, more than 90 million international migrants were residing in the World Health Organization (WHO) European region and more than half of these migrants were women, many of childbearing age [2]. There are no universally accepted definitions for a migrant at an international level [2] and this heterogeneous group includes individuals who vary by length of stay in a country, documentation and residency status, movement being voluntary or forced, and reasons for migration [2,3]. Health needs and outcomes in this heterogeneous group is a complex topic, as these are influenced by the interaction of the process of migration and exposure to risks and access to the determinants of health in the country of origin, during transit and in the destination country [2].

On average the fertility rate in the migration population is higher than the native population [4]. Among women living in the United Kingdom, birth data from 2015 show a total fertility rate (the average number of children a woman has in her lifetime) of 2.06 for non-UK born women versus 1.75 for UK born women [5]. Pregnancy is a period of increased vulnerability for migrant women [6,7]. There is a consistent trend for poorer pregnancy outcomes amongst migrant women [2] who are at greater risk of maternal and neonatal morbidity and mortality when compared to native born women [2,8-17]. This is a result of the complex interplay of multiple factors including substandard healthcare in the country of origin [2] and issues around accessing care and the quality of care in the new country [2,14,18]. Moreover, migration itself can have significant negative consequences for people's physical and mental health and their wellbeing due to migration-related social problems, like poor socio-economic status, discrimination and social exclusion, multiple losses, and the chronic stress caused by these [19–21]. It is often observed that migrants leaving their country of origin are healthier than comparable native populations. This phenomenon has been called the "healthy migrant effect" and is usually explained through the positive self-selection of immigrants and the positive selection, screening and discrimination applied by host countries [22]. But, although often healthy when arriving in the country, the health of migrants deteriorates over time, and in general, they rate themselves to have poorer health compared to the native population of their host countries [20].

Across the WHO European region there is consensus and commitment to ensure the availability, accessibility, affordability and quality of essential health services for migrants in transit and host environments [23]. Hence European countries have a common responsibility to tackle inequalities and provide high quality healthcare that meets the needs of childbearing migrant women. However across European Union (EU) member states, the services provided for migrants and how they are administered, financed and delivered differs between countries; with some providing care free of charge, some requiring health insurance and some available to those making national insurance contributions through a place of work [24].

A previous qualitative evidence synthesis [25] has explored both migrant women's care experiences and their perceived care needs for data published prior to June 2010. However, an updated review was deemed important with the acknowledgement that changing global, political and economic climates have led to increased migration into Europe [2,26]. This includes recent political unrest and conflict in many Middle Eastern and Sub-Saharan countries [26], the updated rights of free movement of citizens and their families within the European Economic Area laid down in a Directive in 2004 [27] and an increased recognition of the need to integrate the health needs of migrants and refugees into national health strategies [2]. This review therefore aimed to provide up-to-date systematic evidence on migrant women's experiences of pregnancy, childbirth and maternity care in their destination country within Europe.

Methods

A systematic search of five databases was undertaken to identify articles pertaining to migrant women's experiences of pregnancy and maternity care in their destination country. The following databases were searched; CINAHL, MEDLINE, PUBMED, PSYCHINFO and SCO-PUS. Databases were searched from 2007 until the final search on 22/05/2017. The point of commencement was taken as 2007 due to the changing political landscape within the EU at that point, with the health of migrants being a focus of the EU president in 2007 [28]. The search strategy comprised of three facets, with terms relating to (i) migrant (ii) maternity and (iii) experience. The Boolean operators AND and OR were used alongside truncation operators and phrase-searching, and the search syntax was adapted for each database. The full search strategy, as applied in MEDLINE (EBSCO interface) is provided in S1 File. In addition to the electronic database search, the reference lists of eligible studies were examined to identify any other relevant studies and citation tracking was undertaken.

Study selection and data extraction

Screening of the titles and abstracts against the inclusion and exclusion criteria in Table 1 was carried out by two researchers independently. This was followed by double-screening the full-text of potentially relevant sources. Any disagreements concerning eligibility were resolved through discussion between team members. Study characteristics and all qualitative data that related to women's experiences of any aspect of maternity care within the host country were extracted using a standardised form.

Critical appraisal

Included articles were quality appraised using the qualitative National Institute for Health and Care Excellence (NICE) critique tool [29] (see S2 File) and 10% were appraised by a second reviewer to ensure consistency. A low-quality score (-) was assigned if either most criteria were not met, or it was judged that there were significant flaws in the study design. The article was classified as moderate quality (+) if most criteria were met and it was identified that there may be some flaws in the study resulting in a lack of rigor. A high-quality score (++) required that the majority of the appraisal criteria were met and the study was judged to be trustworthy and reliable and there was significant evidence of author reflexivity.

Table 1. Inclusion and exclusion criteria.

Inclusion Criteria	Exclusion criteria
 Qualitative or mixed-methods studies with a qualitative component Peer reviewed articles Exploring any aspect of migrant women's experiences of maternity care in the host country Study undertaken in Europe Published within the last 10 years (from 2007 onwards) Studies focussed on women described as migrants, refugees or asylum seekers, including undocumented migrants Where both first and second-generation migrants were included within a study, the study was included but where possible only the views of the first-generation migrant women were included Where studies included both the experiences of migrant women and health care professionals, only the views of the migrant women were included No language restrictions were put in place 	 Internal migrants (eg rural to urban) Migration status unclear (eg. studies of ethnic minorities women with no reference to migration status) Non peer-reviewed articles eg commentaries, editorials, reports, books, protocols and theses/dissertations Systematic reviews and reviews—however their references were systematically searched Studies focussed solely on women's experiences of interventions

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Evidence synthesis

A thematic synthesis was undertaken involving 3 separate steps; i) line by line coding adding new codes to the 'bank' of codes as required, ii) organising codes into descriptive themes according to their similarities or differences and using new codes to capture the group of original codes, iii) generating analytical themes [30]. Coding was undertaken using NVivo and Atlas.ti packages. A total of 28% of the articles were double-coded, and development of the final analytic themes involved discussion with the whole research team to achieve consensus.

Confidence in the findings

The confidence in the findings of this review was assessed independently by two reviewers using the Confidence in the Evidence from Reviews of Qualitative Research (CERQual) approach [31,32]. This assesses confidence in the evidence base in four components: (i) methodological limitations which evaluates any methodological concerns in the primary studies contributing to the review finding, (ii) relevance to the review question evaluates the applicability of primary study data to the context specified in the review question, (iii) coherence which evaluates the fit between the primary study's data and the review finding it contributes to and (iv) adequacy of the data which evaluates the richness and quantity of primary study data for each review finding [33]. An overall judgement for confidence in each review finding of 'high', 'moderate' or 'low' was determined based on evaluation of the four components.

Results

A flow diagram of the study selection process can be seen in Fig 1. A total of 7472 citations were initially identified out of which 51 articles (47 studies) were included.

Description of included studies

The characteristics of the included studies can be seen in Table 2 and the reasons for exclusion at abstract and full text can be found in <u>S3 File</u>. Of the 47 included studies, 43 exclusively used qualitative methodology and four adopted a mixed methods approach and reported relevant qualitative data [<u>34–37</u>]. Individual interviews were exclusively undertaken in 27 of the studies [<u>8,38–63</u>] and focus groups in five studies [<u>64–68</u>]. Multiple methods of data collection were

Characteristics of included studies.	lies
Table 2. C	Qualitative studi

Weither building Rest building building Image building building Image building Image building <thimage building <thimage building</thimage </thimage 	studies marked	* studies marked with an asterix are taken as the primary report for that study	as the primary re	port for that study									
Mathematical statistics Mathmathematical statistics Mathematic	First author	Study design	Setting		Partici	pants		Aim	Data collection	Data analysis	Outcomes	Comments	Quality
QuentorIndItRegisteringRestructionRestortion <th>(car)</th> <th></th> <th>(country research undertaken in)</th> <th>sample size</th> <th>country of origin</th> <th>age</th> <th>parity</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th>score</th>	(car)		(country research undertaken in)	sample size	country of origin	age	parity						score
Outline Index The anomatical field in the standard sector. The standard sector is a field sector. The standard sector	Almeida & Caldas (2013) [8]	Qualitative	Portugal	14	Brazil $(n = 7)$ and Portugal $(n = 7)$	Not reported	Not reported	To investigate native Portuguese and immigrant women's perceptions of maternity care.	Semi-structured intervièws	Qualitative content analysis.	Brazlian women were dissatisfied with the quarty of information provided by the health professionals, the communications skills of these professionals, and reported reduced access to medical specialities, especially in primary care	Only results from migrant women were used	
Qualitation 17 System (1), Gaunal Sust (1), Gaunal Sust (1), Gaunal Teams, canalysis Teams, canalysis Qualitation Spin Spin Spin (1), Start (1), Gaunal Distribution (1), Start (1), Sta	* Almeida, Caldas et al (2014) Almeida, Casanova et al (2014) [38,80]	Qualitative	Portugal	31	African countries (11), Eastern European countries; (7), Brazil (7) and 6 Portugal	20-45 years		To investigate native and immigrant women's perceptions about quality and appropriateness of maternity care	Semi-structured interviews	Qualitative content	Misinformation about legal rights and inudequest chriftication during meticical appointments frequently in teracted with appoint and a status unemportent and poor living conditions, to result in lover poor living conditions, to result in lover	Only results from migrants were extracted	+
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Qualitative terrenoticeUKStantaneor terrenoticeStantaneor terrenoticeSentaneor terrenoticeConstance terrenoticeConstance terrenoticeConstance terrenoticeConstance terrenoticeConstance terrenoticeConstance terrenoticeConstance terrenoticeConstance terrenoticeConstance terrenoticeConstan	et al (2013) [65]	Qualitative descriptive and exploratory study	Spain	26 immigrant women and 24 midwifes	Bolivia and Ecuador	20-35 years	1- >2 children	To explore the perceptions, attitudes and experiences of Ecuadorian and Bolivian women with regard to motherbood, pregnancy and their experiences of the health-care system.	Focus groups	Content analysis	Women reported that it was not necessary to go as soon and as frequently for health examinations during pregnancy, as the midwive suggested. The main barriers all dentified to health- care services were linked to include illegal employment status, inflexible appointment timeluble for promatal about how public services worked	Only results from migrant women were used	
QualitativeUKSo immigrant womenSomalia (3) and UK fisiab womenIs-48 yearsI-10 childrenTo explore immigrant mortaris ergeness of individual material statements of individual and G2 obsertic care providesSomalia (3) and UK mortaris ergeness of mortaris ergeness of mortaris ergenessIndepti- material statements of mortaris ergenessQualitative erchingeas mortaris ergenessIndepti- material statements of material statements of material statementsQualitative erchingeasQualitativeSwitzerland31 immigrantTurkey (14). Portugal mater switsBetween -30 and >50Between 1 and mortarian and 9To explore the issues of material statementsCoding and the material statementsQualitativeSwitzerland31 immigrantTurkey (14). Portugal mater switsBetween -30 and >50SchildrenProspica the issues of material statementsCoding and the material statementsQualitativeSwitzerland1To explore the issues of material statementsFound stratementsCoding and the material statementsQualitativeUK4AMaterial MortarianTo explore and synthesisProspica for spicarsProspica and synthesisQualitativeUK4Material. Compa1-36 years1-36 years1-36 yearsProspica and synthesisProspica andQualitativeUK4Material. Compa1-36 years1-36 years1-36 years1-36 years1-36 years1-36 yearsQualitativeUK4Material. Compa1-36 years <t< td=""><td>Binder, Johnsdotter et al (2012) [39]</td><td>Qualitative. Hermen eu tic</td><td>UK</td><td>54 immigrant women and 62 NHS maternal care providers</td><td>Sub-Saharan regions in Africa (Somalia, Ghana, Nigeria, Senegal, Eritrea).</td><td>18–48 years</td><td>1-10 children</td><td>To explore the influence of pre-migration scoio-cultural factors on post-migration maternal care seeking, and barriers between immigrant women and maternal care providers during the care encounter.</td><td>Semi-structured interviews</td><td>Constant comparison and triangulation with framework</td><td>Broken trust between women and material care provided area provided area provided adalos at the facility level, expressed as dealos at the facility level, expressed as women's choice for late-booking non- adherence or inappropriate decision- making and as provider frustration making and as provider frustration excluding from the inability to impart optimal treatment.</td><td></td><td>+</td></t<>	Binder, Johnsdotter et al (2012) [39]	Qualitative. Hermen eu tic	UK	54 immigrant women and 62 NHS maternal care providers	Sub-Saharan regions in Africa (Somalia, Ghana, Nigeria, Senegal, Eritrea).	18–48 years	1-10 children	To explore the influence of pre-migration scoio-cultural factors on post-migration maternal care seeking, and barriers between immigrant women and maternal care providers during the care encounter.	Semi-structured interviews	Constant comparison and triangulation with framework	Broken trust between women and material care provided area provided area provided adalos at the facility level, expressed as dealos at the facility level, expressed as women's choice for late-booking non- adherence or inappropriate decision- making and as provider frustration making and as provider frustration excluding from the inability to impart optimal treatment.		+
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Qualitative. UK 4 Afghanistan, Congo, Individual 19-36 years 1-3 To explore and synthesize In-depth Construction of Interviews, and female asylum seckers' and interviews In-depth Construction of Interviews case study Image and synthesize Image asylum seckers' and Interviews Image asylum seckers' and Intervi	Bollini et al (2007) [66]	Qualitative	Switzerland	31 immigrant women and 9 native Swiss women	Turkey (14), Portugal (17)	Between <30 and >50 (not specified)	Between 1 and >2 children	To explore the issues of pregnatory and delivery in migrant women in their interaction with the Swiss healthcare system		Coding and the construction of themes	Migrant women face stressful situations, which may differ accounty for mitonality and length of stay in the country. Main factors negatively affecting pregnancy were stress due to preatonair. Were stress due to preatorious living conditions, heavy vork during pregnancy in adquarte communication with health.care providers, and fedings of rackin and discrimination in sockey	Only results from migrant women were used	
	Briscoe & Lavender (2009) [70]	Qualitative. Longitudinal exploratory multiple case study	UK	4	Afghanistan, Congo, Rwanda, Somalia.	19-36 years	1-3	To explore and synthesize fernale asytum seekers' and refugees' experience of maternity care	In-depth interviews. Photographs taken by the women. Field notes and observation.	Construction of themes	The women perceived 'self' as a response to social interaction. At times, 'taken for granted' communication in practice created a barrier to understanding for the women. Social policy related to seeking asymm, dispersal, housing and health frected the lives and maternity experiences of women		÷

s private system system ter with ter with ter with ter with ter with ter with ter with ter with ter with ter wi	<i>mother's</i> Only results from + bod for migrant women itilfiling were used always arming ding	met Only results from subjility, migrant women aaternity were used the	the care their the care their the rest idens' the their tree the care the c	t lenges. en may d	dd Only results from ++ yr and migratt women strean were used asreai utcome	iccess to need re and re and is is itions	he UK +
A balancing act between keeping private life private and the new vedirere system was identified, where the midwife's questions about violence were met with hesianoe. The midwife was, however, considered a resource for access to support services in the new society. A focus on pragmatic terategies to move on in life, rather than dwelling on potential experiences of violence and related traumary was prominant. Social networks, spiritual faith and motherhood were cucial for regaining coherence in the aftermath of war. Dialogue and mutual ablustments were identified as trategies used to overcome power tensions in minimate relationships undergoing transition	5 themes - Maa Kaa Dood' (The mother's mild): The most conventent method for me. Formula feeding as a way of fulfiling the baby's demands. Present sin't always best - women's experience of information and role conflict. Learning by observation - the formula feeding by observation - the formula feeding culture	Major emerging categories of unmet expectations referred to the accessibility, human resources, incentives to maternity care, physical and environmental conditions, and organization of the health system.	1 Participants were satisfied with the care they received in Finland. Despite their satisfaction, the health care providers' social attitudes towards them were perceived as unifrendly, and communication as poor	Migrant women who experience pregnancy in their bost country face multiple, multi-faceted challenges Migrant Eastern European women may have parculast strugges with transitioning to a less medicalised maternity healthcare system	Somali women expressed fear and anxievy throughout he pregnancy and identified strangues to avoid casensem section Avoiding or refusing casensem was based on a rational choice to avoid death and coping with adverse outcome relied on fatalstic attitudes	Dispersal interrupted women's access to maternity care. Women experienced practical barriers to accessing care and communication problems. Women experience dithe prostratal period as emotional and stressful and had concerns about their biving conditions.	West African mothers living in the UK experienced isolation and a lack of practical, emotional and professional
Thematic analysis.	Thematic analysis	Content analysis	Themes constructed	Construction of themes	Framework of naturalistic inquiry using the emic/etic model.	Not specified	Interpretive Phenomenological Analysis
Individual semi- structured interviews	Semi-structured interviews	Semi-structured interviews. Guidelines were used. Recorded.	Focus groups.	Semi-structured interviews	In-depth semi- structured interviews and focus groups	Individual interviews, face-to- face or telephone	Semi-structured interviews
To explore how Somali: born women understand and refate to violence and wellbeing during their migration transition and their views on being questioned about violence in Swedish antenatal care	To explore the influence of acculturation on breastfeeding practices of South Asian women.	To identify the unmet expectations of the health system by Portuguese and immigrant women, during pregnancy, childbirth and postpartum.	To explore immigrant Somali women's experiences of prepoductive and maternity health care services and their perceptions about the service providers	To explore migrant Eastern European women's experience of pregnancy in Ireland	To explore the attitudes of Somali women and their western obstetric care providers towards Caesarean section	To investigate the experiences of women who had been dispersed during pregnancy and of midwives involved in caring for these women	To explore the lived experience of postnatal depression in West African
Between 0 and >7 children	9 para 1, 9 para 2, 2 expecting first baby	Not reported	2–10 children	Varied, numbers not reported.	1-10 children	Not reported	1-3
18 45 years	Not reported	Not reported	18-50 years	20-40 years	18–48 years (Somali women)	Not reported	22-26
Somalia	South Asia. 11 born in UK, 9 outside UK.	Brazil, Ukraine, China, Moldova, Russia, France, Span, India, Portugal and others	Somali women from Kenya (18), Mogadishu (32) and Hargeysa (20)	Eastern Europe	Somalia	14 different countries	Nigeria and Ghana
21	50	82 (60 immigrant women and 22 native Portuguese women)	20	12	101 (39 Somali women and 62 obstetric care providers)	20 women	9
Sweden	UK	Portugal	Finland	Ireland	UK	UK	UK
An explorative, qualitative approach	Descriptive qualitative study	Qualitative, exploratory, descriptive study	Qualitative	Qualitative— grounded theory	Qualitative	Qualitative	Qualitative
Byrskog et al (2016) [40]	Choudhry & Wallace (2012) [41]	Coutinho et al (2014) [42]	Degni et al (2014) [67]	Dempsey & Peeren (2016) [43]	Essén et al (2011) [71]	Feldman (2014) [44]	Gardner et al (2014) [<u>45</u>]

Table 2. (Continued)

•			+				+	
Only results from migrant women were used	Only results from migrant women were used	Teenagers were also included		Norway public health services cover all women and children		Only results from migrant women were used	Only results from migrant women were used	
Participants reported that they were provided with little minfon-related information. The information was perceived as presented in very general terms and focused on food safety. Weight management and the long-term prevention of diet-related chronic diseases alsh andyl by here miscussed. Women were confused about information given by the midwife which was incongruent with their original food culture. The participants were actively esching for nutrition-related information	Even though none of the participants were asked about domestic violence in antennal arte, they offered different suggestions on how and when midwives should talk about it.	Women reported over stretched services, language and communication problems, issues around acces and engagement, and the importance of cultural issues.	Women underlined the importance of accurate and deailed information about the tests procedures and the anomalies that could be detected and preferred counselors to initiate discussions about moral topics and its relationship with the worred's religious beliefs and values to ficilitate an informed protece about whether or not to participate in the screening tests. Women preferred a counselity evidence about whether or not to participate in the accenting tests. Women preferred a as an individual who has an falamic as an individual who has an falamic	Findings highlighted in adequate integration into Norwegian society, the need for and fear of a casarean delivery, issues of ramily support around the prospartum period and support from health services	When mothers experienced emotional issues they sought the support of their family, friends and religious leaders, and, although, fimiliar with some primary care services, they were not always their first point of contact	The healthcare model was perceived as functioning well. Works more from the Middle East felt cared for, had been given the necessary information and chimed to follow arkie. Adequate information follow arkies. Adequate information reduced respondents' anxiety and increased their control over the situation	Overall mothers were dissatisfied with their infant feeding occomes. Mothers who were positive to human immanuodeficiency virus followed the UK guidelines but struggled with guilt of not being able to breastfeed. All mothers unable to exclusively breastfeed experienced a sense of loss. Lack of wider support review coupled with complex lifestyles appeared to create challenges in providing rinfant feeding support	Analysis showed that refugee women enter anneatal care in the first trimester of their pregnancies, but they may miss from one to many appointments due to the language and financial barrier, the unfamiliarity with the rational health pregnancy as a natural event pregnancy as a natural event
Interpretative phenomenological analysis	Thematic analysis according to	Thematic analysis.	Thematic analysis.	Content analysis	Thematic analysis	Content analysis	Framework approach	Latent content analysis
In dividual in terviews	Individual semi- structured interviews	Interviews and focus groups	Interviews	Semi-structured interviews	Focus groups	Semi-structured individual interviews	Semi-structured interviews and focus groups	Semi-structured interviews
To explore experiences with matrition -related information during routine antental care among women of different ethnical backgrounds	To investigate pregnant women's experiences of domestic violence and how this is addressed in antenatal care	To describe refugee and asylum seeking women's experiences of pregnancy, childbirth and maternity services	To explore the preferences of pregnant Morecan women regarding contencian and approach to antenatal counselling for anomaly screening.	To explore Somali new mothers' experiences of the Norwegian maternity health care system.	To explore Bangladeshi mothers' interpretations of postnatal depression and its effect on the wellbeing on the mother, family and community.	To explore patients' evaluation of a specialised gestational diabetes clinic	To explore infant fæding practices of immigrant mothers.	To examine whether refugee women, receive antenatal care and to explore possible factors that may influence their attitude towards maternity care
Not reported	1–3 children	Not reported	0-3 children	1-4 children	1-4	2 nulliparous 12 parous	0-8 children	Primigravid (11), Multparous (15)
Od a verige 28 yans old	Not reported	Many were teenagers who entered UK as unaccompanied asylum seeking children (otherwise NR)	20-36 years	25-34	16-24	Mean age = 35	Not reported	Not reported
Algeria, Albania, Algeria, Albania, Turkey, Russia, Sri Lanka, Somalia, Lanka, Somalia,	Iraq, Turkey, Pakistan, Poland, Spain and Norway	Afghanistan, China, Eritrea, Bthiopia, Iraq, Iran, Sri Lanka, Somalia, Central and West Africa, Uganda, Zimbabwe and Russia	Матоссо	Somali	Bangladeshi	Middle East (14) Sweden (13)	From 19 countries	Iraq, Iran, Sudan, Lebanon, Syria, Afghanistan, Armenia, Tukey, Abania, Serbia, Zaire
17 Rothnic Norwegian and 12 immigrants)	8 (5 immigrants and 3 ethnic Norwegian	43	12	10	10	27	35 (30 immigraat mothers and 5 maternal HCP8)	26
Norway	Norway	UK	Netherlands	Norway	UK	Sweden	UK	Greece
Qualitative	An explorative qualitative approach	Qualitative	Qualitative	Qualitative	Qualitative	Qualitative	Qualitative	Qualitative
Garnweidner et al (2013) (मि6)	Garnweidner et al (2017) [47]	Gaudion & Allotey (2009) [72]	Gitsels-van der Wal et al (2015) [48]	Glavin & Sæteren (2016) [49]	Hanley (2007) [68]	Hjelm et al (2007) [50]	Hufton & Raven (2016) [73]	Iliadi (2008) [51]

Table 2. (Continued)

Table 2. (1	(communed)								
Jonkers et al (2011) [52]	Qualitative — grounded theory	Netherlands	40 immigrant women (and 10 Dutch women) with severe maternal morbidity	Morocco Turkey, Suriname' Dutch Caribbean Eastern Europe Middle East, Asian and sub- Saharan Africa	Not reported	Not reported	To investigate ethnicity- related factors contributing to sub-maternity care and the effects on severe maternal morbidity among immigrant women Netherlands	In -depth interviews	Thematic analysis
Lephard & Haith-Cooper (2016) [53]	Qualitative interpretive, in line with hermeneutic phenomenology	UK	٥	Sub-Sahara Africa (4), Eastern Europe (2)	Over 18 otherwise not recorded	5 primigravid, 1 had 1 previous child	To understand the experiences of women seeking asylum while accessing local maternity services	Semi-structure interviews.	Thematic analysis
Leung (2017) [54]	Qualitative	UK	10	China	Average age 36	8 primigravid, 2 mulitiparous	To explore how cultural beliefs influence postpartum dietary choices and infant feeding practices.	Semi-structured interviews	Not reported
Lundberg & Gerezgiher (2008) [55]	Qualitative — ethnography.	Sweden	15	Eritrea	31–45 years	3 to 5 children	To explore Eritrean immigrant women's experiences of female genital mutilation during pregnancy, birth and postpartum.	Semi-structured interviews	Thematic analysis
Ny et al (2007) [74]	Qualitative	Sweden	13	Turkey, Syria, Iraq and Lebanon	23-41	1–6 children	To describe Middle Eastern mothers' experiences of the maternal health care services in Sweden and the involvement of their male partner.	Focus group discussions and individual interviews.	Content analysis
Petruschke et al (2016) [56]	Qualitative exploratory	Germany	19 Turkish origin (11 German origin)	Turkey	21–41 years	42% nulliparous	To identify possible differences in the Turkish and German women's attitudes towards epidural analgesia.	Semi-structured interviews	Content analysis
Ranji et al (2012) [57]	Exploratory, qualitative	Sweden	6	Iran (5), Afghanistan (4)	21–39 years	2 nulliparous, 7 had one child.	To describe immigrant parents' experiences of ultrasound examination in the second trimester of pregnancy	In depth interviews	Content analysis
(2015) [75]	Intersectional approach	Sweden	25	17 countries	21-50+	Not reported	To analyse women's realections on how their migration and resuttlement influence their health and beathcare needs during childbearing.	Focus groups and semi-structured individual interviews	Content analysis
Sauvegrain et al (2017) [76]	Qualitative	France	33	Sub Saharan Africa (16) France (17)	21-44	P1 = 12 P2 = 13 P3 = 3 P4 = 3 P6 = 2	To analyse whether the prenatal care trajectories among women with hypertensive disorders during pregnancy differed between immigrand and native women	Semi-structured interviews	Identification of themes
Strauss et al (2009) [58]	Ethnography	UK	×	Somalia	23-57	Not specified	To examine cultural and social aspects of childbirth and how they intersect with the needs and experiences of Somali women in the UK.	In-depth narrative interviews	Thematic analysis
Szafranska & Gallagher (2013) [59]	Descriptive qualitative approach	Ireland	و	Poland,	Not reported	Not reported	To explore the factors that influence Polish women's decisions to initiate and continue breastfeeding in Ireland	Unstructured face- to face interviews.	Identification of themes
Tobin et al (2014) [60]	Qualitative Dramatisitic pentad	Ireland	22	9 different countries	18-40	9 primiparous, 13 multiparous	To gain insight into women's experiences of childbirth in Ireland while seeking asylum	In depth unstructured interviews	Narrative analysis
Tons at al	Ouslitating anitical	Doutrical	9	Theoise	01 00	6 v mana 1 4 v	To invodicato microsoft	_	Thomastic analy

Turkish women ascribe meaning to labour pain and reject epidural for fear of long-term complications and because they don't view epidural delivery as natural

Parents were impressed by the quality of their communication with the care-givers, found the process to be well organised and did not experience

discrimination on the basis of being an

immigrant

Women reported fear and anxiety, extreme pain and long-term complications and health-care professionals' knowledge of circumcision

Women developed trust in the midwife based on the knowledge and the empathy the midwife imparted, and did not feel that the midwife's understanding of their

native language or culture was vital to develop a good relationship

Interviews were a long time post delivery for some participants

Only results from migrant women were used

Some evidence of differential care.

mismanagement of care for women who have been circumcised, aspects of

Concerns raised around: the

communication, continuity of care and attitudes of health professionals Professional and family support are key to successful BF

and discriminating. Women felt stronger and had fewer complications during pregnancy and labour when they had a confident, caring relationship with caregivers/midwives.

Being treated as a stranger and rejected in healthcare encounters was devaluing

The hardships of migration, resettlem and constraints in the daily life made women feel tense and disembodied.

migrant women were used. It was not possible in this study to separate $1^{s_1/2}$ md generation

nigrants

Women experienced pre-booking challenges, inappropriate accommodation, dispersal, being alone

and not being listened to

Women felt midwives were unaware of their cultural practices when offering

postnatal dietary advice

Only results from

Women unaware of potential pregnancy complications and felt that HCP paid

insufficient attention to pregnancy

complications.

(Continued)

Women fed misinformed about their legal rights and free access to maternal health services. They were distantished with the quality of information provided by HC and their communication skills. They fel than their access to medical specialities was limited.

connection, communication and Women experienced a lack of

culturally competent care

Thematic analysis.

Semi-structured interviews

ď

To investigate migrant women's perceptions of the quality and appropriateness of maternity care received in public health services

6 x para 1, 4 x para 2

28-49

Ukraine

2

Portugal

(2014) [60] Topa et al (2017) [61]

Qualitative—critical feminist exploratory design with hermeneutic approach.

+	+	+	+	+				score			‡	
							Comments	COMMENTS		Only qualitative data extracted	Only qualitative data extracted	Only qualitative data extracted
Receiving an HIV diagnosis challenged the normalcy and joy of becoming a mother. Women experienced sigma and breaches of confidentiality from HCP. Women found their inability to breastfeed most distressing as this was central to their cultural identity as mothers.	There were both good and bad experiences of care from HCP8 during pregnary and childbirth. Culture influenced the women's views of health and disease.	The mothers experienced challenges of dealing with conflicting recommendations and expectations regarding infant feeding. They navigated among different sources of information, taking into consideration traditional living in Norway, and research-based knowledge.	There were differences between the women's sepectations and theri maternity care experience. Caring was related to the changing culture. Finnish maternity are readinoss were sometimes imposed on the immigrant performant and the conflicts professional friend, and the conflicts encountered were resolved.	Culture influence women's perceptions of 'good' and 'bad' food and their food habits during pregnancy.			Outcomo	O BEODERS		Migrant women faced several obstacles to accessing care induding communication ablems, limited knowledge of the health system in the new country, logistical barriers, limited family support and social inequalities	Structural, legal and institutional barriers prevent access to care. This includes language and communications, cultural health capital and discrimination, power and control, structural inequalities and social networks	Obstacles to accessing reproductive health facilities include lack of information about services, financial problems, sexual and physical violence and fear of deportation
Interpretive phenomenological analysis (IPA).	Qualitative content analysis.	Development of categories	Focused ethnographic analysis.	Identification of themes			Data andraia			Not reported	Thematic analysis of qualitative data and descriptive statistics for quantitative data	Identification of themes in qualitative data, and use of f descriptive statistics for s quantitative data
Semi- structured in terview	Semi-structured interviews	Semi-structured interviews and focus groups.	Interviews, observations and field notes.	Focus groups and in depth semi- structured interviews								
w UK-based erceive, d manage a during fter delivery	aternal ategies of n Norway	. feeding Somali-born ay, and the ay navigate nformation	grant 1ces of	ood habits gnant British ten			Data collection	Data collect		Quantitative research alongside Focus groups	82 semi-structured questionnaires and 13 case studies using in- depth interviews	Semi-structured interviews,
To investigate how UK-based African waten perceive, make sense of, and manage a diagnosis of HIV during pregnancy, and after delivery	To explore the maternal health coping strategies of migrant women in Norway	To explore infant feeding practices annong Somali-born mothers in Norway, and the ways in which they navigate annong different information sources	To explore immigrant mothers' experiences of maternity care	To examine the food habits and beliefs of pregnant British Bangladeshi women						To investigate immigrant's access to maternity health services	To explore the reasons new migrant women book late for antenatal care and do not attend follow-up appointments	To explore the reproductive health problems of illegal female immigrants and obstacles they experience to seeking help.
Not reported	1–8 children	Majority multiparous	9x para 1, 4x para 2, 3x para 3, 1x para 4	Most had more than 1 baby						To investige access to ma services	To explore the re migrant women l antenatal care an attend follow-up appointments	To explore th health proble female immig obstacles they seeking help.
23-41 years 7	20-38	21-40 years n	9 - 36 years	20-44 years old ti				parity		Not reported	4 nulliparous 43 had 1 child, 27 had 2 children, 6 had 3 children and 2 had 4 children	Not reported
3		2		30			Doublelissants	age	0	Not reported	Majority under 30	Mean age of 36.4
Africa	South America, Europe, Middle East, Africa, Asia	Somalia	Australia(1), Bosnia (3), Burma (1), (3), Burma (1), (3), Hungar(1), India (3), Hungar(1), Uganda (1), Iraq (2), Uganda (1), and Vietnam (1)	Bangladesh				country of origin		Natives and immigrants, no further details specified	28 different countries	32 different countries
12	17	38 (16	21	26			rt for that stud		size	103 1 1 1 8 8	95	100
UK	Norway	Norway 3	Finland	UK 2	-		the primary repor	setung (country research	undertaken in)	Italy,	UK	The Netherlands
 Qualitative	Qualitative exploratory, descriptive design with hermenutic approach	Qualitative	Ethnography	Qualitative		ıdies	studies marked with an asterix are taken as the primary report for that study			Mixed methods	Mixed methods study	Exploratory mixed method study
Treisman et al (2014) [<u>62</u>]	Viken et al (2015) [<u>63</u>]	W an dal et al (2016) [77]	* Wikberg et al (2012) Wikberg et al (2014) [78,81]	Yeasmin & Regmi (2013) [79]		Mixed-method studies	* studies marked w	(year)		Baken et al (2007) [<u>34</u>]	* Phillimore (2015), Phillimore (2016) and Newall et al (2012) [<u>35,82,83</u>]	Schoevers et al (2010) [<u>36</u>]

4

Only qualitative data extracted

Failures in care included poor communication especially with a language barrier, limited possibilities for family to be involved in delivery and unsuitable HCP behaviours

Not reported

Semi-structured interview

To explore immigrant women's experiences of pregnancy and perinatal care

46.8% 1 child 37.1% 2 children,

20 - 46

193

Czech Republic

Questionnaire with open and closed questions

Veleminsky et al (2014) [37]

Vietnam (65), Mongolia (35) and Ukraine (93) (green) ++ article judged to be of high quality as majority of NICE appraisal tool [29] criteria met. Study judged to be reliable and trustworthy, with evidence of author reflexivity

(yellow) + article judged to be of moderate quality as most criteria met in NICE appraisal tool, Study however deemed to lack rigor due to some flaws in study design

(red) - article judged to be of low quality as most criteria within the NICE critical appraisal tool not met

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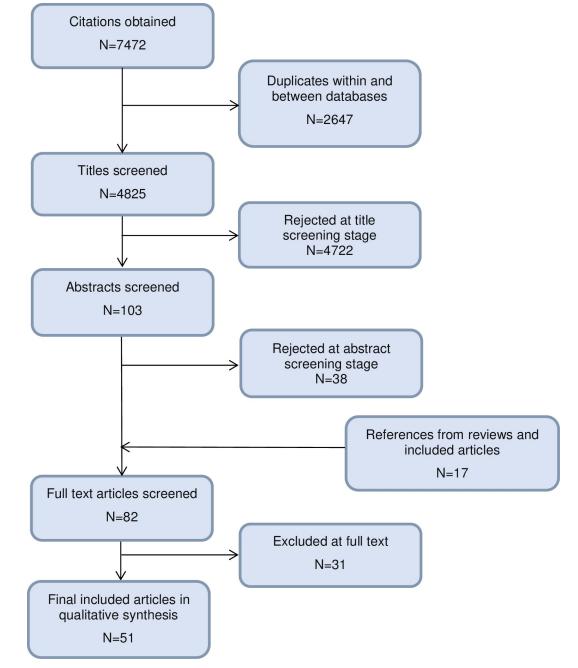


Fig 1. Flowchart of study selection.

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used in fourteen studies [34-36,69-79] including eight which conducted both interviews and focus groups with different groups of women [69,71-75,77,79]. One study used a question-naire which included relevant qualitative data [37]. Studies were undertaken in 14 European countries, ranged in size from four [70] to 193 [37] participants and included a total of 1330 migrant women, although one study did not specify the number of participants and could not be included in this number [34]. The majority of studies (n = 34) were published from 2012 onwards. A total of seven studies were rated as high quality [35,40,60,64,67,71,74], 22 were of

moderate quality [38,39,41,43,45,46,48,53,55-57,61-63,65,70,73,75-79] and 18 of low quality [8,34,36,37,42,44,47,49-52,54,58,59,66,68,69,72].

Data synthesis

Four overarching analytic themes emerged from the literature.

Finding the way—navigating the system in a new place. *Weighing it up.* Before accessing maternity care women considered the value [35,51,52,60,81,82], and necessity [65] of care. They also weighed up the financial costs of accessing care [37,49,61], and the consequences of accessing care, particularly when they had a lack of trust in healthcare providers (HCPs) [39,75], previous poor experiences with HCPs [38], or were fearful that their visibility in maternity services could result in deportation [35,36,66,82].

"I had my first daughter when I was illegal, it has been a terrible experience even though my sister helped me, I was always fearing that someone would knock at the door and would send us back to Portugal. . . Even when I had contractions I was afraid to go to the hospital fearing to be sent back to Portugal." (Bollini et al 2007, pp.82) [66]

Finding the way in and through the system. For some migrant women who wanted to access care, there were difficulties in finding the way into the system. The system was unfamiliar and different to that of their country of origin and the women were often unaware of their rights and entitlement to care [34,36,42,53,61,65,72,78,82,83]. There was a lack of information about the services that were available and if the services were free [36,53,61,82]. Some women faced difficulties in being accepted for registration for primary healthcare services [36,53,82], were refused entry to healthcare facilities [75], and struggled to provide the required documentation or insurance that were prerequisites for care [66,80]. Having friends and relatives who had already settled in the new country and could speak the local language helped migrant women find the way into the system, along with NGOs who provided information about entitlement and available services [36,51]. Women being held in detention centres were isolated from these sources of help and reported that the way into the system was blocked by detention centre staff who refused or delayed their access to care [35,53].

"The Home Office put me in detention centre so I could not attend my appointments. There were no maternity services there for me for the 2 months I was there. I was offered appointments but they were cancelled at short notice without anyone telling me why." (Phillimore 2015, pp.576) [35]

Costs related to transportation and payment for care were identified as factors influencing ongoing access to care [34,44,53,61,83]. Those who received free care identified that this enabled them to access care, which was often in contrast to the situation in their country of origin [37,49,67,81]. Flexibility in the system in relation to the timing and location of appointments influenced access [61,65,70]. Inflexibility in the system, such as the rigid use of telephone booking systems for appointments were an ongoing barrier that women faced when trying to navigate the system in a new language [34,75,82].

"I get so nervous to communicate through the telephone, is so difficult . . . instead I go there to get an appointment but they tell me I have to phone . . . Why?" (Robertson 2015, pp.62) [75]

We don't understand each other. Women highlighted that information, advice and the opportunity to discuss their health and the health of their unborn child with a HCP was extremely important to them [63,74,78]. However, they identified a range of issues related to communication and understanding which are discussed in the sub-themes; Overcoming language barriers, Unmet information needs and Different expectations of care.

Overcoming language barriers. Women faced significant language barriers in the new country and felt that their language difficulties made them problem patients [69], that impacted on their relationship with their HCPs [37,53,66,78]. Even when women could proficiently manage everyday situations, they still often lacked the vocabulary to cope with medical terminology [53,58,70,75].

"I asked them, "[Can] we cancel the meeting until we get an interpreter... I didn't understand you and you didn't understand me." She said, "No, it's OK, we can go on—you understand English." (Lephard & Haith-Cooper 2016, pp. 134) [53]

Failure to use professional interpreters was a barrier to receiving satisfactory care [38,44,58,60,69,83], hindered accurate information sharing and led to frequent misinterpretation [52,70,81] and a lack of understanding of procedures women were asked to give consent for [35,52,60].

"They [midwives] communicated by sign language and I was never sure I had understood properly." (Briscoe & Lavender 2009, pp.20) [707]

However, the use of professional interpreters was met with caution when discussing intimate or difficult matters [47,69,74,82] or when women had come from areas of persecution leaving them suspicious of everyone [75]. When women's partners were asked to interpret during care encounters some women felt vulnerable [35,82,83] and embarrassed [51,74] and felt that their partners were reluctant to reveal their own poor understanding [52,70,74].

"If I could have someone who is not my husband it could make a big difference because throughout my pregnancy I did not say anything about my needs or problems. My husband was saying everything." (Phillimore 2015 pp.576) [35]

Unmet information needs. Women identified a lack of information around pregnancy, childbirth or the postpartum period, and a lack of information that was available in an accessible language or format [8,35,37,46–50,52,58,64,66,70–72,75–79,81–83]. Professional advice often conflicted with cultural and family advice [41,46,49,54,63,77–79] and this left women feeling insecure about which actions to take [46,63,77].

"I did not give water, and I was criticized by my family and relatives. They told me: He is a human being, he gets thirsty and that milk does not quench thirst. . . while the health clinic said: no, he does not need water" (Wandal et al 2016, pp.4) [77]

Women also identified that their care and safety were adversely affected when they did not disclose important information to HCPs, as did not want to be a nuisance or failed to understand the importance of their health history or potential seriousness of their current or previous symptoms [52,76].

"I thought: it is a holiday, I do not want to be a problem for someone. I will try to go Monday or Tuesday after the holidays. But I think now: why did I wait ? Why didn't I phone immediately ?" (Jonkers et al 2011, pp.149) [52]

Different expectations of care. Some women reported being fearful of being treated poorly in the new country when their expectation of maternity care was based on poor experiences in their country of origin [60,61].

"I was so scared of them (the midwives). . . I thought they would beat me. . . if I scream or if I cry. So in labour I don't speak, so that I don't upset them." (Tobin et al 2014, pp.836) [60]

Procedures which were familiar to practitioners were not always familiar to women coming from other care systems [8,70], and this caused women to feel fearful [60,82] and to lack trust in the information provided by HCPs [39].

"They were putting all those funny cords around me which were so tight, so irritating, I didn't know what those were, I never had seen them before. It's like going to another planet and you are seeing all these things which are happening to you and you can't ask anything." (Tobin et al 2014, pp.836) [60]

Women's cultural backgrounds influenced some of their preferences [39,56,60,71] and beliefs about procedures [49,55,67,70,71,81] and the way they wanted to discuss these [56,74]. Experiences in their country of origin influenced their expectation of the need for medical surveillance and interventions during pregnancy and childbirth [8,42,43,63,80,81].

"According to our religion, we Somali women, we don't think that giving birth by caesarean section is a good thing and that a woman should give birth by vagina and not by opening her stomach to take the baby out. Somali women's general belief is that caesarean birth is not a real way of a woman to give birth. And how many times doctors will cut her stomach if she has to deliver many times in her life?" (Degni et al 2014, pp.357) [67]

"I found it extremely friendly but very low in real medicine? It's all midwife based, no exams, which is very strange for me". (Dempsey & Peeren 2016, pp.377) [43]

The way you treat me matters. *Impact of poor care*. The HCPs attitude was an important factor in how migrant women perceived the quality of care. Some women found HCPs to be unfriendly [67,74] and disrespectful [63,81], failing to respond to their concerns in a caring matter, ignoring them [74,75] and not taking their complaints seriously [49,52,66,74,75]. This made women doubt their own capabilities [75]. Unsatisfactory interactions with HCPs often led to a lack of connection and poor relationships with HCPs which resulted in women feeling isolated and fearful of being mistreated [60].

"Really they should have asked in a friendly way if we needed help...it was a very unpleasant experience, I felt like an idiot, as totally incompetent." (Robertson, 2015, pp.63) [75]

When encountering the healthcare system, migrant women expressed a sense of being seen and treated differently [37,50,53,75,76]. Many women felt that their customs and culture were not understood by those caring for them [35,37,45,54,55,64,67,76,78,83]. Prejudice and stereo-typing by HCPs [8,35,37,57,58,66,75,77,78] led to assumptions based on women's perceived cultural backgrounds and left them feeling that their needs were overlooked [35,52,53]. In

contrast some HCPs were noted to overly focus on cultural and psychosocial factors when assessing patient's symptoms, and therefore overlook potentially serious medical conditions [50,67].

"I think that people that work in the health care settings ... the doctors, the nurses, the midwives and even cleaners need education in different cultures. They need to understand that patients from different cultures and race are not inferiors and not ...monsters." (Degni et al 2014, pp.360) [67]

Migrant women highlighted several other factors which resulted in inadequate and ineffective care including; long waiting times for appointments [61,80], the perceived busyness of HCPs which prevented women sharing their anxieties and concerns [70,81,82], inadequate knowledge of legislation by administrative staff [80], not being involved in decision-making [80], and limited access to specialist care [80].

Importance of good care. Women stressed the importance of good quality care and reported several examples from their experiences. They valued HCPs who were encouraging and reassuring [50,60,77], supportive [43,46,50,70,75] good listeners [50,71] and good information-providers [50,57,74]. Moreover, they wanted to be cared for by HCPs who had a respectful attitude [43,48,62,74], made them feel emotionally safe [43] and would take their concerns seriously [75]. Women also appreciated HCPs who demonstrated cultural sensitivity, although this did not necessarily require an in-depth knowledge of individual customs and traditions [48,78].

'You know when I talk about myself I feel good about it because I know there's someone who's listening and understanding which makes me feel better.' (Briscoe & Lavender 2009, pp.20) [70]

Good care encompassed a trusting relationship between women and HCPs, which empowered women to feel confident and prepared for childbirth [63,75,78], even overcoming a lack of social networks or support [75].

"When one feels well-treated and cared for, one never forgets it. . .especially when you feel lonely and vulnerable with a lot of need of support. . .it is worth so much." (Robertson 2015, pp.63) [75]

Continuity of care was seen as an important factor in establishing these trusting relationships [51,58,63,75,78,81]. Individualised care, with friendly, unhurried HCPs encouraged women to attend for maternity care and positively influenced their sense of well-being [37,74,81]. Fragmented care given by different midwives negatively influenced the effectiveness of care and the women's confidence to attend appointments [82].

"For example, when I was struck by panic again, I went to the delivery ward, and there was the same midwife, and (she) immediately knew me. Yes, she remembered the name and that it was the first pregnancy, it was nice.... It felt like she was a relative." (Wikberg et al 2012, pp.644) [78]

Women also identified that good care required facilities that were hygienic [37,74] and promoted privacy [81] and informed choice [74,78]. **My needs go beyond being pregnant.** Many migrant women presented to their HCPs and to the researchers in the primary studies with needs that were outside the ordinary remit of maternity healthcare provision and beyond the issue of their pregnancy. Preoccupation with these other needs impacted on their time and ability to focus on the pregnancy [35,36,62].

"I was so busy to survive, to find food, and shelter. I simply did not think of antenatal checks at all." (Schoevers et al 2010, pp.260) [36]

Financial difficulties and poor living conditions. Financial pressures were identified by many migrant women which led to difficulties covering basic living costs [35,82,83], transport to appointments [35,53,72,82,83] and costs of essential care [51]. This was exacerbated by not being allowed to work in the host country [35,66,70,82] or difficultly securing a job [49,63,74,75]. Although some women encountered actual or feared employment insecurity [35,61,65,66,82] and exploitation [66], others appreciated the protection of national employment laws [81].

"worst aspect I think during pregnancy he want to dismiss me [...] but could not, could not because I had my rights, [...] but he fired me soon after the birth of my daughter" (Topa et al 2017 pp.115) [61]

Concerns over living conditions were also common [44,52,53,62,66,70,73,83] and included; living in temporary [70] or shared accommodation [44,53], poor housing conditions [44,70] and the impact of dispersal [35,44,53,70,73,82], whereby women were moved by migration authorities to new, unknown areas within the host country. This increased women's feelings of stress [44] and powerlessness [70].

"They give me a [hotel] room... [It was] very small, it was smelling of cigarettes. The duvet was very dirty. The bed... the walls... everything was very dirty." (Lephard & Haith-Cooper 2016, pp.132) [53]

"They were saying they're taking me to Birmingham. I had no one in Birmingham. I don't know anyone at all in Birmingham. I was like Oh God, where are they taking me?" (Briscoe & Lavendar 2009, pp.21) [70]

The burden of traumatic experiences. Many childbearing women had experienced trauma or persecution prior to or during migration [45,52,60–63,75], and the resulting stress often became evident as pain and illness in their body [75]. These experiences left women with a lost or negative sense of identity [45,58,70] and being unwilling to trust their interpretations of their bodily symptoms [75].

"People were killed; I survived, because they thought I was dead, you can see the scars on my face, where the bullets entered my face . . . They did what they wanted with us, beating us, having rape parties" (Treisman et al 2014, pp.150) [62]

Social support and relationship issues. Childbearing women who had family present in their destination country appreciated their assistance with domestic tasks [49,68,79] and their guidance [49,74,79,81], and support [56,59,71]. However, many migrant childbearing women lacked this social support and this left them feeling lonely [45,51,53,60,63,64,73,78,83], isolated [35,44,45,47,49,58,60,70,74,78,79], hopeless [51] and deeply distressed [37,60,70,74]. Women were particularly aware of the lack of support from their own mothers [45,53,60,74,78,81] and

highlighted that being able to contact family members was important [63]. Without family support women were worried about having no one to ask for advice [74,78,81], found raising children more difficult [74,77,81] and felt that the changes in societal roles [61,75] and lack of other social support [40] caused tension in the relationship with their partners [75].

"This was my first baby, I was afraid and also I don't have family here. . . and was crying all the time and very lonely." (Babatunde & Moreno-Leguizamon 2012, pp.5) [64]

Women who experienced domestic violence were restricted from talking about this as it was often not acceptable within their culture [47] and they were not always aware that violence was forbidden in the destination country [47]. Where the woman experiencing abuse was also dependent upon the partners' family for communication with HCPs it left her unable to talk openly about her circumstances or to report pregnancy problems [35]. Although the midwife was seen as a resource to signpost to domestic violence support services by some [40], others were unsure if a midwife could help them [40,47].

"... I don't believe a Somali woman would go and tell her (the midwife) if she is having problems or anything like that... if it has gone far enough that a woman has decided to report the man, then she knows she can call the police, or that she can get help from friends instead". (Byrskog et al 2016, pp. 12) [40]

CERQual assessment

The summary scores from the CERQual assessment of confidence in the findings can be seen in Table 3 and full details are shown in S4 File. A total of 16 findings were assessed, with twelve scoring high confidence and three scoring moderate confidence and one scoring low confidence.

Discussion

Main findings

Migrant women's struggles with communication and language barriers are recurrent themes within this and previous reviews. Migrant women report a poor understanding of medical terminology [25] and yet there is inadequate use of interpreters within the healthcare system [25,84]. Poor communication and the provision of insufficient information impact on women's ability to choose appropriate care options and provide informed consent [25,84–87]. An inability to converse in the local language also means women find it difficult to establish a relationship with their care provider and this impacts upon women accessing care [25,84,88,89]. HCPs can help women to overcome language barriers by providing appropriate information, engaging professional interpreters more frequently and ensuring they give women the opportunity to ask the questions that they have [90–99].

In line with other studies [25,85–87,89,100,101], a lack of understanding between migrants and HCPs in terms of their traditional customs and their expectations of maternity care was found to impact upon their access of services. The issues clearly point to a need for HCPs to receive education and training in culturally competent care to better identify women's expectations of care and how to understand and appropriately respond to women's needs related to their cultural background, to ensure effective maternity care and reduce barriers to accessing care [22].

Women's fear of deportation impacting upon use of services identified within this review is in line with previous literature [88] as is lack of awareness of entitlements to maternity care

Analytic theme	Review finding	CERQual assessment of confidence in the evidence
Finding the way—Navigating the system in a new place	Migrant women weigh up the value of maternity care and the costs and consequences of accessing care.	HIGH
	Some migrant women are unaware of their rights and entitlements to maternity care.	HIGH
	Migrant women face difficulties in finding the way into the maternity care system.	HIGH
	Ongoing access to maternity care is influenced by financial factors	HIGH
	Ongoing access to maternity care is influenced by flexibility in the system	MODERATE
We don't understand each other	Migrant women face language barriers when accessing maternity care	HIGH
	Migrant women have unmet perinatal information needs	MODERATE
	Migrant women have different expectations of maternity care	HIGH
The way you treat me matters	Migrant women experience prejudice and stereotyping from HCPs	HIGH
	Maternity care is culturally insensitive to migrant women's needs	HIGH
	Migrant women value continuity of care	MODERATE
	Migrant women value trusting relationships with HCPs who demonstrate good professional behaviours	HIGH
	Migrant women value high quality maternity facilities	LOW
My needs go beyond being pregnant	Migrant women face financial difficulties and poor living conditions	HIGH
	Migrant women carry the burden of previous traumatic experiences	HIGH
	Migrant women have needs related to social support and relationship issues	HIGH

Table 3. CERQual summary scores.

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[86]. The United Nations, to which all European countries belong, has developed the Convention on the Elimination of all Forms of Discrimination Against Women [102] which states that all maternity services, including routine antenatal treatment, must be treated as being immediately necessary; '*No woman must ever be denied, or have delayed, maternity services due to charging issues*' (Department of Health and Social Care (2018) p. 67) [103]. Healthcare providers need to ensure the provision of adequate support and timely advice for migrant mothers on their entitlements to care to allay fears and improve access to care, with the ultimate aim of reducing pregnancy complications.

While the healthy migrant phenomenon may mean that some migrants are healthier than the native population [22]; a theme which emerged particularly strongly within this review is that to meet the unique needs of many migrant women there is a necessity for care which goes beyond traditional models. Other academic studies and reports have highlighted migrant women's unstable or inappropriate living conditions, their financial struggles [25,89,104,105] and the enormous burden of loneliness and the lack of a family network around them [25,85,100,104–106]. As the wider determinants of health are well recognised [107], including intimate partner violence [108], low health literacy [109–111], limited social support [112];

addressing social and mental wellbeing alongside physical wellbeing is seen as important for the overall health of mothers and their infants [113]. Addressing the wider determinants of health which impact on migrant women requires closer cross-agency working with effective collaboration between healthcare, social care, the voluntary sector and communities [2]. This current review also highlighted that many migrant women have experienced trauma prior to and during migration, which is widely recognised to impact on mental health and wellbeing in the destination country [114]. Maternity services should develop trauma-informed care [115] to promote a culture of safety and avoid re-traumatisation through staff training and reviewing policies and procedures through a trauma lens and developing pathways of support to meet the needs of these vulnerable women [115].

Some migrant women described exemplary care, receiving treatment that was empathetic, caring, culturally sensitive and compassionate. However other migrants reported discrimination prevalent in the HCPs that they encountered. Care is seen to be impacted where women do not feel well treated or where they feel discriminated against [84,85], while unrushed, kind, empathetic HCPs are appreciated [25,84,85]. Our findings suggest that continuity of care increases migrant women's satisfaction with maternity care. This is in line with the Cochrane review into continuity of midwife care models which has found increased satisfaction reported by women receiving continuity by a known midwife, as well as reduced rates of preterm birth and perinatal death [116]. To address the social determinants of health and avoid discriminating against migrant women, it calls for person-centred, high-quality, continuity of care that incorporates aspects of cultural competency and trauma aware care. The evidence within this review, alongside other evidence, led to the development of the ORAMMA integrated perinatal care model [117]. This model has been feasibility tested and will be reported in further articles currently under development. Other known integrated healthcare models include Community Orientated Primary Care [118,119], as well as the integrated approach developed within the European Refugees-Human Movement and Advisory Network (EUR-Human) project [120].

Strengths and limitations

This review provides up-to-date, systematic evidence located using a comprehensive search undertaken by a multidisciplinary team. Assessing confidence in the evidence using the CERQual approach is a further strength of this review. The review is strengthened by the inclusion of a large number of eligible studies set in 14 different European countries which included migrant women from a wide range of countries of origin. However, some papers did not provide a clear or consistent definition for the term 'migrant' or provide details about how recently the women within their study had arrived in the host country, the specific country of origin or the reason for migration. Hence, some issues that may be more pertinent to particular migrants may not be visible within this synthesis. This review focussed exclusively on migrant women's experiences of maternity care within European host countries. It is recognised that many experiences may overlap with migrant experiences across other world regions for example social isolation, language and cultural barriers. However, to ensure local applicability further in-depth investigation would be required on country or community specific factors influencing migrant experiences.

Conclusion

There are several implications for practice and research from this review.

- It is important that migrant women feel understood. Professional interpreters should be provided at each appointment/care encounter to enable HCPs to listen to women and build a friendly, trusting relationship with women.
- HCPs should avoid stereotyping and respect and accommodate traditional or cultural practices that are relevant in the perinatal period.
- Migrant women's needs go beyond their pregnancy and include psychosocial-emotional and economic challenges. To address these needs cross-agency working is needed alongside culturally competent and trauma-informed models of maternity care that incorporates continuity.
- Future research should focus on providing robust evidence on clinical perinatal outcomes for migrant mothers and explore the needs of different migrant populations to facilitate development of tailored interventions.

Supporting information

S1 File. Search strategy.(DOCX)S2 File. Critique tool.

(DOCX)

S3 File. Excluded studies. (DOCX)

S4 File. Full CERQual assessment scoring table. (DOCX)

S1 PRISMA Checklist. (DOC)

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References

- 1. International Organization for Migration. World Migration Report 2018. 2017. International Organization for Migration Publications; Geneva.
- 2. World Health Organization. Report on the health of refugees and migrants in the WHO European Region: No public health without refugee and migrant health. 2018. World Health Organization: Copenhagen.
- De Grande H, Vandenheede H, Gadeyne S, Deboosere P. Health status and mortality rates of adolescents and young adults in the Brussels-Capital Region: differences according to region of origin and migration history. Ethnicity and Health 2014; 19(2):122–143. https://doi.org/10.1080/13557858.2013. 771149 PMID: 23438237
- Kulu H, Hannemann T, Pailhé A, Neels K, Krapf S, González-Ferrer A, et al. Fertility by birth order among the descendants of immigrants in selected European countries. Population and Development Review 2017; 43(1):31–60.
- Office for National Statistics. Total Fertility Rates (TFR) for UK and non UK born women in the UK, 2004 to 2015. 2016; Available from: https://www.ons.gov.uk/peoplepopulationandcommunity/ birthsdeathsandmarriages/conceptionandfertilityrates/adhocs/ 006295totalfertilityratestfrforukandnonukbornwomenintheuk2004to2015. Accessed May 2, 2019.
- 6. Bunevicius R, Kusminskas L, Bunevicius A, Nadisauskiene R, Jureniene K, Pop V. Psychosocial risk factors for depression during pregnancy. Acta Obstetricia et Gynecologica 2009; 88(5):599–605.
- Schetter CD. Psychological science on pregnancy: Stress processes, biopsychosocial models, and emerging research issue. Annual Review of Psychology 2011; 62:531–558. https://doi.org/10.1146/ annurev.psych.031809.130727 PMID: 21126184
- 8. Almeida LM, Caldas JP. Migration and maternal health: Experiences of Brazilian women in Portugal. Revista Brasileira de Saúde Materno Infantil 2013; 13(4):309–316.
- Esscher A, Högberg U, Haglund B, Essen B. Maternal mortality in Sweden 1988–2007: more deaths than officially reported. Acta Obstetricia et Gynecologica Scandinavica 2013; 92(1):40–46. https://doi. org/10.1111/aogs.12037 PMID: 23157437
- Hayes I, Enohumah K, McCaul C. Care of the migrant obstetric population. International Journal of Obstetric Anesthesia 2011; 20(4):321–329. <u>https://doi.org/10.1016/j.ijoa.2011.06.008</u> PMID: 21840201
- Malin M, Gissler M. Maternal care and birth outcomes among ethnic minority women in Finland. BMC Public Health 2009; 9:84. https://doi.org/10.1186/1471-2458-9-84 PMID: 19298682
- Pedersen GS, Grøntved A, Mortensen LH, Andersen A-N, Rich-Edwards J. Maternal mortality among migrants in western Europe: a meta-analysis. Maternal & Child Health Journal 2014; 18(7):1628– 1638.
- Urquia ML, Glazier RH, Mortensen L, Nybo-Andersen AM, Small R, Davey MA, et al. Severe maternal morbidity associated with maternal birthplace in three high-immigration settings. European Journal of Public Health 2015; 25(4):620–625. https://doi.org/10.1093/eurpub/cku230 PMID: 25587005
- van den Akker T, van Roosmalen J. Maternal mortality and severe morbidity in a migration perspective. Best Practice & Research: Clinical Obstetrics & Gynaecology 2016; 32:26–38.

- Van Hanegem N, Miltenburg AS, Zwart JJ, Bloemenkamp KW, Van Roosmalen J. Severe acute maternal morbidity in asylum seekers: a two-year nationwide cohort study in the Netherlands. Acta Obstetricia et Gynecologica Scandinavica 2011; 90(9):1010–1016. https://doi.org/10.1111/j.1600-0412.2011.01140.x PMID: 21446931
- Van Oostrum IE, Goosen S, Uitenbroek D, Koppenaal H, Stronks K. Mortality and causes of death among asylum seekers in the Netherlands. Journal of Epidemiology & Community Health 2011; 65 (4):376–383.
- Zwart JJ, Richters JM, Ory F, de Vries JI, Bloemenkamp KW, van Roosmalen J. Severe maternal morbidity during pregnancy, delivery and puerperium in the Netherlands: a nationwide population-based study of 371,000 pregnancies. BJOG: an international journal of obstetrics and gynaecology. 2008; 115(7):842–850.
- Arcaya MC, Arcaya AL, Subramanian SV. Inequalities in health: definitions, concepts, and theories. Global Health Action 2015; 8(1):27106.
- Hadgkiss EJ, Renzaho AM. The physical health status, service utilisation and barriers to accessing care for asylum seekers residing in the community: a systematic review of the literature. Australia Health Review 2014; 38(2):142–159.
- Nielsen SS, Krasnik A. Poorer self-perceived health among migrants and ethnic minorities versus the majority population in Europe: a systematic review. International Journal of Public Health 2010; 55 (5):357–371. https://doi.org/10.1007/s00038-010-0145-4 PMID: 20437193
- Rechel B, Mladovsky P, Ingleby D, Mackenbach JP, McKee M. Migration and health in an increasingly diverse Europe. Lancet 2013; 381(9873):1235–1245. https://doi.org/10.1016/S0140-6736(12)62086-8 PMID: 23541058
- 22. Matlin SA, Depoux A, Schütte S, Flahault A, Saso L. Migrants' and refugees' health: towards an agenda of solutions. Public Health Reviews 2018; 39:27.
- 23. Regional Committee for Europe. Strategy and action plan for refugee and migrant health in the WHO European Region. 2016. World Health Organization: Copenhagen.
- 24. European Commission. Migrant access to social security and healthcare: policies and practice. European Migration Network Study 2014. Available from: https://ec.europa.eu/home-affairs/sites/ homeaffairs/files/what-we-do/networks/european_migration_network/reports/docs/emn-studies/ emn_synthesis_report_migrant_access_to_social_security_2014_en.pdf. Accessed December 17, 2019.
- Balaam M, Akerjordet K, Lyberg A, Kaiser B, Schoening E, Fredriksen A, et al. A qualitative review of migrant women's perceptions of their needs and experiences related to pregnancy and childbirth. Journal of Advanced Nursing 2013; 69(9):1919–1930. https://doi.org/10.1111/jan.12139 PMID: 23560897
- Lionis C, Petelos E, Mechili E-, Sifaki-Pistolla D, Chatzea V-, Angelaki A, et al. Assessing refugee healthcare needs in Europe and implementing educational interventions in primary care: a focus on methods. BMC International Health and Human Rights 2018; 18:11. https://doi.org/10.1186/s12914-018-0150-x PMID: 29422090
- 27. Directive of the European Parliament and of the Council of the European Union. Directive 2004/38/EC The right of citizens of the Union and their family members to move and reside freely within the territory of the Member States amending Regulation (EEC) No 1612/68 and repealing Directives 64/221/EEC, 68/360/EEC, 72/194/EEC, 73/148/EEC, 75/34/EEC, 75/35/EEC, 90/364/EEC, 90/365/EEC and 93/96/EEC. Available form: https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ: L:2004:158:0077:0123:en:PDF Accessed December 17, 2019.
- Peiro MJ, Benedict R. Migration health policy. The Portuguese and Spanish EU Presidencies. Eurohealth 2010; 16(1):1–4.
- 29. National Institute for Health and Care Excellence. Methods for the development of NICE public health guidance: Process and methods. 2012; Third Edition. NICE (National Institute for Health and Care Excellence): London.
- 30. Thomas J, Harden A. Methods for the thematic synthesis of qualitative research in systematic reviews. BMC Medical Research Methodology 2008; 8:45. <u>https://doi.org/10.1186/1471-2288-8-45</u> PMID: 18616818
- Lewin S, Glenton C, Munthe-Kass H, Colvin C, Gulmezoglu M, Noyes J. Using qualitative evidence in decision making for health and social interventions: an approach to assess confidence in findings from qualitative evidence syntheses (GRADE-CERQual). PLoS Medicine 2015; 12(10).
- Lewin S, Booth A, Glenton C, Munthe-Kaas H, Rashidian A, Wainwright M, et al. Applying GRADE-CERQual to qualitative evidence synthesis findings: introduction to the series. Implementation Science 2018; 13(Suppl 1):2. https://doi.org/10.1186/s13012-017-0688-3 PMID: 29384079

- 33. Lewin S, Bohren M, Rashidian A, Munthe-Kaas H, Glenton C, Colvin CJ, et al. Applying GRADE-CERQual to qualitative evidence synthesis findings—paper 2: how to make an overall CERQual assessment of confidence and create a summary of qualitative findings table. Implementation Science 2018; 13(Supp 1):10.
- 34. Baken E, Bazzocchi A, Bertozzi N, Celeste C, Chattat R, D'Augello V, et al. La salute materno-infantile degli stranieri e l'accesso ai servizi. Analisi qualiquantitativa nel territorio cesenate. (Italian) [Maternal and child health of migrants and access to services. Qualitative quantitative analysis in the Cesena area]. Quaderni acp 2007; 14(2):56–60.
- **35.** Phillimore J. Delivering maternity services in an era of superdiversity: The challenges of novelty and newness. Ethnic and Racial Studies 2015; 38(4):568–582.
- Schoevers MA, van den Muijsenbergh METC, Lagro-Janssen ALM. Illegal female immigrants in the Netherlands have unmet needs in sexual and reproductive health. Journal of Psychosomatic Obstetrics & Gynecology 2010; 31(4):256–264.
- Velemínský M Jr, Průchova D, Vránová V, Samková J, Samek J, Porche S, et al. Medical and salutogenic approaches and their integration in taking prenatal and postnatal care of immigrants. Neuroendocrinology Letters 2014; 35(Suppl 1):67–79.
- Almeida L, Caldas JP, Ayres-de-Campos D, Dias S. Assessing maternal healthcare inequities among migrants: a qualitative study. Cadernos de Saúde Pública 2014; 30(2):333–340. https://doi.org/10. 1590/0102-311X00060513 PMID: 24627061
- Binder P, Johnsdotter S, Essén B. Conceptualising the prevention of adverse obstetric outcomes among immigrants using the 'three delays' framework in a high-income context. Social Science & Medicine 2012; 75(11):2028–2036.
- Byrskog U, Essén B, Olsson P, Klingberg-Allvin M. 'Moving on' Violence, wellbeing and questions about violence in antenatal care encounters. A qualitative study with Somali-born refugees in Sweden. Midwifery 2016; 40:10–17. https://doi.org/10.1016/j.midw.2016.05.009 PMID: 27428093
- Choudhry K, Wallace LM. 'Breast is not always best': South Asian women's experiences of infant feeding in the UK within an acculturation framework. Maternal and Child Nutrition 2012; 8(1):72–87. <u>https://</u> doi.org/10.1111/j.1740-8709.2010.00253.x PMID: 22136221
- Coutinho E, Rocha A, Pereira C, Silva A, Duarte J, Parreira V. Experiences of motherhood: Unmet expectations of immigrant and native mothers, about the Portuguese health system. Atencion Primaria 2014; 46(Suppl 5):140–144.
- Dempsey M, Peeren S. Keeping things under control: exploring migrant Eastern European womens' experiences of pregnancy in Ireland. Journal of Reproductive & Infant Psychology 2016; 34(4):370– 382.
- 44. Feldman R. When maternity doesn't matter: Dispersing pregnant women seeking asylum. British Journal of Midwifery 2014; 22(1):23–28.
- 45. Gardner PL, Bunton P, Edge D, Wittkowski A. The experience of postnatal depression in West African mothers living in the United Kingdom: a qualitative study. Midwifery 2014; 30(6):756–763. https://doi. org/10.1016/j.midw.2013.08.001 PMID: 24016554
- 46. Garnweidner LM, Sverre Pettersen K, Mosdøl A. Experiences with nutrition-related information during antenatal care of pregnant women of different ethnic backgrounds residing in the area of Oslo, Norway. Midwifery 2013; 29(12):e130–7. https://doi.org/10.1016/j.midw.2012.12.006 PMID: 23481338
- Garnweidner-Holme L, Lukasse M, Solheim M, Henriksen L. Talking about intimate partner violence in multi-cultural antenatal care: a qualitative study of pregnant women's advice for better communication in South-East Norway. BMC Pregnancy Childbirth 2017; 17:123. <u>https://doi.org/10.1186/s12884-017-1308-6 PMID: 28420328</u>
- Gitsels-van dW, Martin L, Manniën J, Verhoeven P, Hutton EK, Reinders HS. Antenatal counselling for congenital anomaly tests: Pregnant Muslim Moroccan women's preferences. Midwifery 2015; 31 (3):e50–7. https://doi.org/10.1016/j.midw.2015.01.002 PMID: 25637462
- 49. Glavin K, Sæteren B. Cultural Diversity in Perinatal Care: Somali New Mothers' Experiences with Health Care in Norway. Health Science Journal 2016; 10(4):1–9.
- 50. Hjelm K, Bard K, Nyberg P, Apelqvist J. Management of gestational diabetes from the patient's perspective—a comparison of Swedish and Middle-Eastern born women. Journal of Clinical Nursing 2007; 16(1):168–178. https://doi.org/10.1111/j.1365-2702.2005.01422.x PMID: 17181679
- **51.** Iliadi P. Refugee women in Greece:- a qualitative study of their attitudes and experience in antenatal care. Health Science Journal 2008; 2(3):173–180.
- Jonkers M, Richters A, Zwart J, Öry F, van Roosmalen J. Severe maternal morbidity among immigrant women in the Netherlands: patients' perspectives. Reproductive Health Matters 2011; 19(37):144– 153. https://doi.org/10.1016/S0968-8080(11)37556-8 PMID: 21555095

- 53. Lephard E, Haith-Cooper M. Pregnant and seeking asylum: Exploring women's experiences 'from booking to baby'. British Journal of Midwifery 2016; 24(2):130–136.
- Leung G. Cultural considerations in postnatal dietary and infant feeding practices among Chinese mothers in London. British Journal of Midwifery 2017; 25(1):18–24.
- 55. Lundberg PC, Gerezgiher A. Experiences from pregnancy and childbirth related to female genital mutilation among Eritrean immigrant women in Sweden. Midwifery 2008; 24(2):214–225. <u>https://doi.org/ 10.1016/j.midw.2006.10.003 PMID: 17316934</u>
- Petruschke I, Ramsauer B, Borde T, David M. Differences in the Frequency of Use of Epidural Analgesia between Immigrant Women of Turkish Origin and Non-Immigrant Women in Germany—Explanatory Approaches and Conclusions of a Qualitative Study. Geburtshilfe Frauenheilkd 2016; 76(9):972– 977. https://doi.org/10.1055/s-0042-109397 PMID: 27681522
- Ranji A, Dykes A, Ny P. Routine ultrasound investigations in the second trimester of pregnancy: the experiences of immigrant parents in Sweden. Journal of Reproductive & Infant Psychology 2012; 30 (3):312–325.
- Straus L, McEwen A, Hussein FM. Somali women's experience of childbirth in the UK: perspectives from Somali health workers. Midwifery 2009; 25(2):181–186. <u>https://doi.org/10.1016/j.midw.2007.02</u>. 002 PMID: 17600598
- Szafranska M, Gallagher L. Polish women's experiences of breastfeeding in Ireland. Practising Midwife 2016; 19(1):30–32. PMID: 26975131
- Tobin C, Murphy-Lawless J, Tatano Beck C. Childbirth in exile: Asylum seeking women's experience of childbirth in Ireland. Midwifery 2014; 30(7):831–838. https://doi.org/10.1016/j.midw.2013.07.012 PMID: 24071035
- Topa JB, Nogueira CO, Neves SA. Maternal health services: an equal or framed territory? International Journal of Human Rights in Healthcare 2017; 10(2):110–122.
- Treisman K, Jones FW, Shaw E. The experiences and coping strategies of United Kingdom-based African women following an HIV diagnosis during pregnancy. The Journal Of The Association Of Nurses In AIDS Care: JANAC 2014; 25(2):145–157. https://doi.org/10.1016/j.jana.2013.01.008 PMID: 23523367
- Viken B, Lyberg A, Severinsson E. Maternal health coping strategies of migrant women in Norway. Nursing Research and Practice 2015;878040: https://doi.org/10.1155/2015/878040 PMID: 25866676
- Babatunde T, Moreno-Leguizamon C. Daily and cultural issues of postnatal depression in African women immigrants in South East London: tips for health professionals. Nursing Research And Practice 2012;181640: https://doi.org/10.1155/2012/181640 PMID: 23056936
- Barona-Vilar C, Más-Pons R, Fullana-Montoro A, Giner-Monfort J, Grau-Muñoz A, Bisbal-Sanz J. Perceptions and experiences of parenthood and maternal health care among Latin American women living in Spain: A qualitative study. Midwifery 2013; 29(4):332–337. <u>https://doi.org/10.1016/j.midw.2012</u>. 01.015 PMID: 22398026
- Bollini P, Stotzer U, Wanner P. Pregnancy outcomes and migration in Switzerland: results from a focus group study. International Journal of Public Health 2007; 52(2):78–86. https://doi.org/10.1007/ s00038-007-6003-3 PMID: 18704286
- Degni F, Suominen SB, El Ansari W, Vehviläinen-Julkunen K, Essen B. Reproductive and maternity health care services in Finland: perceptions and experiences of Somali-born immigrant women. Ethnicity & Health 2014; 19(3):348–366.
- Hanley J. The emotional wellbeing of Bangladeshi mothers during the postnatal period. Community Practitioner 2007; 80(5):34–37. PMID: 17536469
- 69. Binder P, Borné Y, Johnsdotter S, Essén B. Shared language is essential: communication in a multiethnic obstetric care setting. Journal of Health Communication 2012; 17(10):1171–1186. <u>https://doi.org/10.1080/10810730.2012.665421</u> PMID: 22703624
- Briscoe L, Lavender T. Exploring maternity care for asylum seekers and refugees. British Journal of Midwifery 2009; 17(1):17–24.
- **71.** Essén B, Binder P, Johnsdotter S. An anthropological analysis of the perspectives of Somali women in the West and their obstetric care providers on caesarean birth. Journal of Psychosomatic Obstetrics & Gynecology 2011; 32(1):10–18.
- 72. Gaudion A, Allotey P. In the bag: meeting the needs of pregnant women and new parents in exile. Practising Midwife 2009; 12(5):20–23. PMID: 19517965
- **73.** Hufton E, Raven J. Exploring the infant feeding practices of immigrant women in the North West of England: a case study of asylum seekers and refugees in Liverpool and Manchester. Maternal & Child Nutrition 2016; 12(2):299–313.

- 74. Ny P, Plantin L, Karlsson D, Elisabeth, Dykes A. Middle Eastern mothers in Sweden, their experiences of the maternal health service and their partner's involvement. Reproductive Health 2007; 4:9. https:// doi.org/10.1186/1742-4755-4-9 PMID: 17958884
- 75. Robertson EK. "To be taken seriously": women's reflections on how migration and resettlement experiences influence their healthcare needs during childbearing in Sweden. Sexual & Reproductive Health-Care 2015; 6(2):59–65.
- 76. Sauvegrain P, Azria E, Chiesa-Dubruille C, Deneux-Tharaux C. Exploring the hypothesis of differential care for African immigrant and native women in France with hypertensive disorders during pregnancy: a qualitative study. BJOG: an international journal of obstetrics and gynaecology 2017; 124(12):1858–1865.
- Wandel M, Terragni L, Nguyen C, Lyngstad J, Amundsen M, de Paoli M. Breastfeeding among Somali mothers living in Norway: Attitudes, practices and challenges. Women & Birth 2016; 29(6):487–493.
- 78. Wikberg A, Eriksson K, Bondas T. Intercultural Caring From the Perspectives of Immigrant New Mothers. JOGNN: Journal of Obstetric, Gynecologic & Neonatal Nursing 2012; 41(5):638–649.
- 79. Yeasmin SF, Regmi K. A Qualitative Study on the Food Habits and Related Beliefs of Pregnant British Bangladeshis. Health Care for Women International 2013; 34(5):395–415. <u>https://doi.org/10.1080/07399332.2012.740111</u> PMID: 23550950
- Almeida L, Casanova C, Caldas J, Ayres-de-Campos D, Dias S. Migrant Women's Perceptions of Healthcare During Pregnancy and Early Motherhood: Addressing the Social Determinants of Health. Journal of Immigrant & Minority Health 2014; 16(4):719–723.
- Wikberg A, Eriksson K, Bondas T. Immigrant New Mothers in Finnish Maternity Care: An Ethnographic Study of Caring. International Journal of Childbirth 2014; 4(2):86–102.
- 82. Phillimore J. Migrant maternity in an era of superdiversity: New migrants' access to, and experience of, antenatal care in the West Midlands, UK. Social Science & Medicine 2016; 148:152–159.
- Newall D, Phillimore J, Sharpe H. Migration and maternity in the age of superdiversity. Practising Midwife 2012; 15(1):20–22. PMID: 22324128
- Small R, Roth C, Raval M, Shafiei T, Korfker D, Heaman M, et al. Immigrant and non-immigrant women's experiences of maternity care: a systematic and comparative review of studies in five countries. BMC Pregnancy and Childbirth 2014; 14:152. <u>https://doi.org/10.1186/1471-2393-14-152</u> PMID: 24773762
- Wikberg A, Bondas T. A patient perspective in research on intercultural caring in maternity care: A meta-ethnography. International Journal of Qualitative Studies on Health & Well-Being 2010; 5(1):1– 15.
- Sudbury H, Robinson A. Barriers to sexual and reproductive health care for refugee and asylum-seeking women. British Journal of Midwifery 2016; 24(4):275–281.
- Santiago M, Figueiredo M. Immigrant Women's Perspective on Prenatal and Postpartum Care: Systematic Review. Journal of Immigrant & Minority Health 2015; 17(1):276–284.
- Ostrach B. 'Yo No Sabía . . . 'Immigrant Women's Use of National Health Systems for Reproductive and Abortion Care. Journal of Immigrant & Minority Health 2013; 15(2):262–272.
- Boerleider AW, Wiegers TA, Manniën J, Francke AL, Devillé WLJM. Factors affecting the use of prenatal care by non-western women in industrialized western countries: A systematic review. BMC Pregnancy Childbirth 2013; 13:81. https://doi.org/10.1186/1471-2393-13-81 PMID: 23537172
- Cohen AL, Rivara F, Marcuse EK, McPhillips H, Davis R. Are language barriers associated with serious medical events in hospitalized pediatric patients? Pediatrics 2005; 116(3):575–579. https://doi.org/10.1542/peds.2005-0521 PMID: 16140695
- Divi C, Koss RG, Schmaltz SP, Loeb JM. Patients with limited English experience more serious errors. International Journal for Quality in Health Care 2007; 19(2):60–67. <u>https://doi.org/10.1093/intqhc/mzl069</u> PMID: 17277013
- 92. Karliner LS, Jacobs EA, Chen AH, Mutha S. Do professional interpreters improve clinical care for patients with limited English proficiency? A systematic review of the literature. Health Services Research 2007; 42(2):727–754. https://doi.org/10.1111/j.1475-6773.2006.00629.x PMID: 17362215
- Flores G. The impact of medical interpreter services on the quality of health care: a systematic review. Medical Care Research & Review 2005; 62(3):255–299.
- Jacobs EA, Shepard DS, Suaya JA, Stone E-L. Overcoming language barriers in health care: costs and benefits of interpreter services. American Journal of Public Health 2004; 94(5):866–869. https:// doi.org/10.2105/ajph.94.5.866 PMID: 15117713
- Jacobs EA, Sadowski LS, Rathouz PJ. The impact of an enhanced interpreter service intervention on hospital costs and patients satisfaction. Journal of General Internal Medicine 2005; 22(Supplement 2):306–311.

- Meeuwesen L. Language barriers in migrant health: a blind spot. Patient Education and Counseling 2012; 86(2):135–136. https://doi.org/10.1016/S0738-3991(12)00012-2 PMID: 22284163
- Ku L, Flores G. Pay now or pay later: Providing interpreters services in health care. Health Affairs 2005; 24(2):435–444. https://doi.org/10.1377/hlthaff.24.2.435 PMID: 15757928
- Gany F, Kapelusznik L, Prakash K, Gonzalez J, Orta LY, Tseng C-. The impact of medical interpretation method on time and errors. Journal of General Internal Medicine 2007; 22(Supplement 2):319– 323.
- 99. Ramirez D, Engel KG, Tang TS. Language interpreter utilization in the emergency department setting: a clinical review. Journal of Health Care for the Poor and Underserved 2008; 19(2):352–362. <u>https://doi.org/10.1353/hpu.0.0019</u> PMID: 18469408
- Benza S, Liamputtong P. Pregnancy, childbirth and motherhood: A meta-synthesis of the lived experiences of immigrant women. Midwifery 2014; 30(6):575–584. https://doi.org/10.1016/j.midw.2014.03. 005 PMID: 24690130
- 101. Nilaweera I, Doran F, Fisher J. Prevalence, nature and determinants of postpartum mental health problems among women who have migrated from South Asian to high-income countries: a systematic review of the evidence. Journal of Affective Disorders 2014; 166:213–226. https://doi.org/10.1016/j. jad.2014.05.021 PMID: 25012434
- General Assembly. Convention on the Elimination of All Forms of Discrimination against Women. General Assembly Resolution 34/180. 1979. UN General Assembly.
- **103.** Department of Health and Social Care. Guidance on implementing the overseas visitor charging regulations. 2018. Department of Health and Social Care: Leeds
- 104. Schmied V, Black E, Naidoo N, Dahlen HG, Liamputtong P. Migrant women's experiences, meanings and ways of dealing with postnatal depression: A meta-ethnographic study. PLoS One 2017; 12(3): e0172385. https://doi.org/10.1371/journal.pone.0172385 PMID: 28296887
- **105.** Wittkowski A, Patel S, Fox JR. The Experience of Postnatal Depression in Immigrant Mothers Living in Western Countries: A Meta-Synthesis. Clinical Psychology & Psychotherapy 2017; 24(2):411–427.
- 106. Higginbottom G, Reime B, Bharj K, Chowbey P, Ertan K, Foster-Boucher C, et al. Migration and Maternity: Insights of Context, Health Policy, and Research Evidence on Experiences and Outcomes From a Three Country Preliminary Study Across Germany, Canada, and the United Kingdom. Health Care for Women International 2013; 34(11):936–965. <u>https://doi.org/10.1080/07399332.2013.769999</u> PMID: 23631670
- **107.** Marmot M. Fair Society, Healthy Lives: The Marmot Review: Strategic Review of Health Inequalities in England post-2010. 2010. Department of International Development: London.
- 108. Parker B, McFarlane J, Soeken K. Abuse during pregnancy: effects on maternal complications and birth weight in adult and teenage women. Obstetrics and Gynecology 1994; 84(3):323–328. PMID: 8058224
- Farley TA, Mason K, Rice J, Habel JD, Scribner R, Cohen DA. The relationship between the neighbourhood environment and adverse birth outcomes. Paediatric & Perinatal Epidemiology 2006; 20 (3):188–200.
- Stillerman KP, Mattison DR, Guidice LC, Woodruff TJ. Environmental exposures and adverse pregnancy outcomes: a review of the science. Reproductive Sciences 2008; 15(7):631–650. <u>https://doi.org/10.1177/1933719108322436</u> PMID: 18836129
- 111. Kruger DJ, Munsell MA, French-Turner T. Using a life history framework to understand the relationship between neighborhood structural deterioration and adverse birth outcomes. Journal of Social, Evolutionary, and Cultural Psychology 2011; 5(4):260–274.
- 112. Feldman PJ, Dunkel-Schetter C, Sandman CA, Wadhwa PD. Maternal social support predicts birth weight and fetal growth in human pregnancy. Psychosomatic Medicine 2000; 62(5):715–725. <u>https://doi.org/10.1097/00006842-200009000-00016 PMID: 11020102</u>
- Graham W, Woodd S, Byass P, Filippi V, Gon G, Virgo S, et al. Diversity and divergence: the dynamic burden of poor maternal health. Lancet 2016; 388(10056):2164–2175. https://doi.org/10.1016/S0140-6736(16)31533-1 PMID: 27642022
- 114. Sangalang CC, Becerra D, Mitchell FM, Lechuga-Peña S, Lopez K, Kim I. Trauma, Post-Migration Stress, and Mental Health: A Comparative Analysis of Refugees and Immigrants in the United States. Journal of Immigrant and Minority Health 2018: https://doi.org/10.1007/s10903-018-0826-2.
- 115. Sperlich M, Seng JS, Yang Li Y, Taylor J, Bradbury-Jones C. Integrating Trauma-Informed Care into Maternity Care Practice: Conceptual and Practical Issues. Journal of Midwifery and Women's Health 2017; 62(6):661–672. https://doi.org/10.1111/jmwh.12674 PMID: 29193613

- 116. Sandall J, Soltani H, Gates S, Shennan A, Devane D. Midwife-led continuity models versus other models of care for childbearing women. Cochrane Database of Systematic Reviews 2016(Issue 4). Art. No.: CD004667.
- 117. Vivilaki V, Soltani H, van den Muijsenbergh M et al. Approach to Integrated Perinatal Healthcare for Migrant and Refugee Women. 2017. Available from: http://oramma.eu/wp-content/uploads/2018/12/ ORAMMA-D4.2-Approach_reviewed.pdf. Accessed November 15, 2019.
- Mullen F, Epstein L. Community-Oriented Primary Care: New Relevance in a Changing World. American Journal of Public Health (AJPH) 2002; 92(11):1748–1755.
- Mash B, Ray S, Essuman A, Burgueño E. Community-orientated primary care: a scoping review of different models, and their effectiveness and feasibility in sub-Saharan Africa. BMJ Global Health. 2019; 4:e001489. https://doi.org/10.1136/bmjgh-2019-001489 PMID: 31478027
- 120. Mechili EA, Angelaki A, Petelos E, Sifaki-Pistolla D, Chatzea VE, Dowrick C, et al. Compassionate care provision: an immense need during the refugee crisis: lessons learned from a European capacity-building project. Journal of Compassionate Health Care 2018; 5:2 <u>https://doi.org/10.1186/s40639-018-0045-7</u>. Accessed December 17, 2019.