

Non-western women in maternity care in the Netherlands

Exploring 'inadequate' use of prenatal care
and the experiences of care professionals



Agatha Winifred Boerleider

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Non-western women in maternity care in the Netherlands:
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1

Introduction

General Introduction

Skilled professional care for pregnant women is not only important during childbirth, but also during the prenatal and postnatal period. In the prenatal period, professional care is generally acknowledged to be effective in preventing adverse pregnancy outcomes, and it is considered to be effective in detecting and treating complications, providing timely interventions, promoting a healthy lifestyle and facilitating informed choice [1]. In the postnatal period professional care is necessary to maintain and promote the health of mother and child, to foster an environment that offers help and support for physical and mental health as well as social and cultural issues that can affect health and wellbeing. Furthermore, it offers new parents support for parenting and the responsibilities that come with it [2]. Despite these advantages and the universal accessibility of prenatal and postnatal care, previous studies in the Netherlands have demonstrated that non-western women from various ethnic origins are more likely to make inadequate use of these services [3-7].

Research conducted so far, has not been able to give a complete understanding of non-western women's prenatal and postnatal care utilisation in the Netherlands. Filling this gap in knowledge and understanding provided the main rationale for conducting this study. The second rationale was gaining insight into the interactions between non-western women and the maternity care professionals involved, as this may affect the utilisation of prenatal and postnatal care.

This introductory chapter provides background information on the organisation of maternity care, the non-western population, perinatal and maternal mortality among non-western women and the utilisation of prenatal and postnatal care by non-western women in the Netherlands. In addition, information is given about the aim, research questions and theoretical framework of the research presented in this thesis.

Organisation of maternity care in the Netherlands

In the Netherlands, maternity care is organised in a model consisting of so called primary, secondary and tertiary care [8]. Primary care is provided by primary care midwives, autonomous qualified medical professionals providing full maternity care on their own accountability, and a small number of general practitioners active in midwifery care. Latter are mainly engaged in rural areas with a low

population density [9]. Secondary and tertiary care is provided by obstetricians and specialised 'clinical' midwives in general (secondary care) and academic hospitals (tertiary care) [10].

One of the basic pillars of the Dutch maternity care system is risk selection. Risk selection is conducted at primary care level by only referring women and newborns with complications or an increased risk for developing complications to secondary care. Thus these primary maternity care professionals serve as gatekeepers to secondary maternity care. The basic principle behind risk selection is that in the Netherlands, pregnancy, childbirth and the postnatal period are in essence perceived as being 'physiological'. By supervising low risk pregnancies, births and postnatal periods in primary maternity care, and only cases of (expected) complications/pathology in secondary maternity care, the various maternity care professionals' expertise can be applied to its full potential [11]. To guide the risk selection, the indications for referral to and consultation of secondary care are defined in the List of Obstetric Indications (Verloskundige Indicatie Lijst) – a list based on scientific evidence and consensus among the various maternity care professionals. Currently the third revision of this list, published in 2003, is in use.

This thesis is specifically focusing on primary maternity care, with the abovementioned primary care midwives as the main care providers. Approximately 77% of the 2444 midwives in the Netherlands provide this type of care [12]. Between 1999 and 2012, the majority of pregnant women in the Netherlands (83.2%) had their first maternity care check-up in a primary care setting. Eventually, 54.3% of the pregnant women started labour in primary care, and 34.2% gave birth in a primary care setting [13].

Primary midwifery care includes care provided during pregnancy (prenatal care), childbirth (natal care) and after birth (postnatal/postpartum care).

Prenatal care encompasses supervision of pregnant women from pregnancy confirmation during the prenatal period until birth. It consists of an intake and several follow-up visits in which diagnostic, counseling and health education activities are performed. According to the standards of the Royal Dutch Organisation of Midwives (KNOV), the first prenatal visit (intake) should ideally be made between the 6th and 8th week of pregnancy [14]. Throughout pregnancy 10 to 16 prenatal visits should ideally be made, with an average of 13, depending on necessary medical care and the needs and expectations of clients. In the first

trimester clients should have at least one visit, while follow-up visits in the second trimester should have a 4-6 weeks interval. From 24 weeks gestation on, the interval between follow-up visits should be 3 weeks, followed by even smaller intervals from 32 weeks gestation on.

Natal care encompasses supervision during birth. Depending on their preference, low risk women may give birth at home, a maternity hotel, a birth centre or an outpatient clinic; always under supervision of their primary care midwife.

Postnatal care offers supervision to puerperal women and their newborns. It consists of five to six home visits in the first ten to twelve days after birth and a final follow-up visit at six weeks postpartum [15].

Besides the primary care midwives as the main care providers at primary care level in the Netherlands, there are also maternity care assistants active. **Maternity care assistance** consists of natal and postnatal care. It can be offered in many forms. The most extensive form is assistance during birth (natal care) followed by 80 hours of care spread over 10 days (postnatal care). The most limited form of maternity care assistance does not include assistance of the midwife during birth and is confined to 24 hours of care spread over 8 days (postnatal care). Based on the 'Landelijk Indicatieprotocol Kraamzorg' the amount of maternity care one is entitled to is decided by the maternity care agency and the midwife [16].

Natal care. In the natal period, the maternity care assistant supports the pregnant woman – and if necessary – the partner during labour and birth. Furthermore she assists the midwife [16].

Postnatal care. In the postnatal period, the maternity care assistant is responsible for taking proper care of mother and child, ensuring good hygiene, giving information and instruction to the parents, and supporting or temporarily taking over household tasks [17]. Furthermore, the maternity care assistant is responsible for early detection of abnormalities in mother and child, a task which they share with the primary care midwife.

The costs for midwifery care are covered by the basic health insurance. For the costs of certain care related to birth (e.g. laboratory investigations) the obligatory own risk of health insurance is applied [18]. In case of non-medically indicated births in a medical facility i.e. an outpatient clinic, maternity hotel or birth centre, a compulsory personal contribution is required. This personal contribution may be covered by an additional insurance. Only in case of a home birth or a medically indicated hospital birth i.e. a birth in the hospital supervised by an obstetrician, no personal contribution is required for midwifery care.

The costs for maternity care assistance are also (partly) covered by the basic health insurance. A compulsory personal contribution may be covered by an additional insurance [19]. Only in case of medically indicated hospital birth, no personal contribution is required for maternity care assistance in the hospital.

History and composition of the non-western population in the Netherlands

According to data from Statistics Netherlands, approximately 12% of the Dutch population in 2014 was of non-western origin. These persons have at least one parent who was born in Turkey, Africa, Asia or Latin America [20]. The largest non-western groups in the Netherlands originate from Turkey, Morocco, Suriname and the Dutch Antilles/Aruba. Together these four groups account for 63.5% of the entire non-western population living in the Netherlands. Turkish and Moroccan men were recruited as guest workers during the economic growth of the Netherlands in the 60s and 70s. In 1973 the Dutch economy contracted and the government ceased recruitment of labour workers from Turkey and Morocco. Because of the unpropitious political and economic climate in their country of origin, many guest workers decided to stay in the Netherlands and reunite with their families who were initially left back home. On the first of April 2014, 397,078 persons of Turkish and 376,223 persons of Moroccan origin lived in the Netherlands. Suriname and the Dutch Antilles/Aruba were former Dutch colonies, and their inhabitants were perceived as overseas citizens of the Netherlands. In the 50s and 60s Surinamese and Antilleans/Arubans mostly migrated to the Netherlands to complete their education and work. Afterwards, migration from Suriname increased substantially with peaks around the independence of Suriname in 1975, the expiration to automatically obtain the Dutch nationality in 1980 and the economic crises in the 90s. For the Dutch Antilles/Aruba which did not become independent from the Netherlands, and therefore retained visa exemption, the economic crises in the second half of the 80s and around 2000 led to strong increases in migration. On the first of April 2014, 348,167 persons of Surinamese and 147,010 persons of Antillean/Aruban origin lived in the Netherlands. The remaining 36.5% of the non-western population in the Netherlands consists of many small non-western groups, originating among others from China, Ghana, Cape Verdian, India and war affected countries such as Iraq, Afghanistan, Iran and Somalia.

Besides categorisation according to country of origin, the non-western population in the Netherlands can also be subdivided into generations. Individuals who were

born outside the Netherlands are considered first generation immigrants, and those who were born in the Netherlands are considered the so-called second generation immigrants or descendants of the first generation [21]. Approximately half of the persons of Turkish and Moroccan origin in the Netherlands belong to this second generation, while for persons of Surinamese and Antillean/Aruban origin this amounts to four in ten. These generational subgroups are not homogeneous. The first generation consists of individuals who came as young children, teenagers or adults to the Netherlands. Therefore, they spent a larger or smaller part of their life outside the Netherlands. Most of the second generation immigrants lived their entire life in the Netherlands. The third generation is emerging, but up to now, this generation is very small and very young. It consists of individuals who have two second generation parents or a second generation and native Dutch parent.

Characteristics of the four major non-western groups in the Netherlands: Turks, Moroccans, Surinamese and Antilleans/Arubans

1

Education

The average education level of the non-western population is lower than that of native Dutch [22].

- In 2011, approximately 18% of the non-western population between 25 and 65 years had completed only basic education versus 6% of the native Dutch.
- 24% of the non-western population had at least attended higher education versus 32% of the native Dutch.

Employment income

People of non-western origin are more often unemployed and more likely to have a lower income compared to native Dutch [22].

- In 2011, the net employment rate, the percentage of labour force (i.e. 15-65 years) having at least 12 hours work per week, was 62% for Surinamese, 54% for Turks, 52% for Antilleans, 50% for Moroccans and 50% for other non-westerns compared to 70% for native Dutch.
- The odds of Turks and Moroccans having a low income is almost four times greater than for native Dutch after adjusting for gender, age, household composition, main income source and region. For Surinamese and Antilleans, these odds were two times greater than for native Dutch.

Dutch language proficiency

Because Dutch is the official language in Suriname and the Antilles, individuals originating from these countries have fewer problems with the Dutch language than Turks, Moroccans and other non-westerns [22].

- One percent of the Surinamese and 3% of the Antilleans often experience difficulties related to Dutch speaking skills versus 23% of the Turks and 16% of the Moroccans.

Fertility

- Surinamese and Antillean women have almost similar mean numbers of children, 1.77 and 1.76 respectively, as native Dutch women (1.79). Only second generation Surinamese women have a slightly lower mean number (1.63) than native Dutch women [22].
- First generation Turkish and Moroccan women have higher mean numbers of children than native Dutch – 2.02 and 2.91 respectively. For second generation Turkish and Moroccan women these numbers have dropped to below or around the Dutch mean number – 1.64 and 1.93 respectively [22].

Perinatal and maternal mortality among non-western women in the Netherlands

For years it was unclear how the perinatal mortality in the Netherlands was, compared to other European countries. With the EURO-PERISTAT study – which was designed to develop valid and reliable indicators for monitoring and evaluating perinatal health in the European Union – there came an end to this unclear situation. The study results of the first EURO-PERISTAT study, which covered fifteen European Union member states, were published in 2003. The Netherlands was found to have the highest fetal mortality (7.4 per 1000 total number of births) and the second highest early neonatal mortality (3.5 per 1000 live births) from 22 weeks gestation [23]. In 2009, the study results of the second EURO-PERISTAT study covering twenty five European Union member states and Norway were published. The Netherlands again had a poor ranking: highest fetal mortality rate (7.0 per 1000 total number of births) and the seventh highest early neonatal mortality (3.0 per 1000 live births) from 22 weeks gestation [24]. Although the overall perinatal mortality rate had dropped from 10.9 per 1000 total number of births in the PERISTAT-1 study to 10.0 per 1000 total number of births in the PERISTAT-2 study the Netherlands still retained a poor ranking compared to other EU countries. These high perinatal numbers were much debated in the Netherlands, and one likely explanation given was the increase of pregnant women from non-Dutch origin in the Netherlands [25].

A more detailed look at non-western women's perinatal mortality statistics shows that several studies have reported a higher perinatal mortality ratio for non-western women, especially for women of sub-Saharan, Surinamese and Dutch Antillean origin. In 1998, van Enk *et al.* reported that the odds ratio for Black women (mostly originating from Suriname and the Dutch Antilles) was two times higher than for native Dutch women [26]. Schulpen *et al.* reported significantly higher relative risks of 2.2 (95% CI 1.2-2.4) and 1.3 (95% CI 1.2-1.6) for Black and Hindustani women compared to native Dutch women in 2001 [27]. In a study on ethnic differences in perinatal mortality published in 2011 by Ravelli *et al.*, a significantly higher risk for fetal mortality was found for African women (OR 1.7; 95% CI 1.4-2.1), South Asian women (OR 1.8; 95% CI 1.4-2.3), Turkish/Moroccan women (OR 1.3; 95% CI 1.1-1.4) and other non-western women (OR 1.3; 95% CI 1.1-1.6) and a higher early neonatal mortality risks for other non-western women (OR 1.3; 95% CI 1.0-1.8) [28]. Several factors were found to provide at least a partial explanation for this higher perinatal mortality risk among non-western women: higher rates of immature and premature birth [26,27], teenage

pregnancy [27], grand multiparity [27] and booking a first prenatal visit after 18 weeks of gestation [28].

Another pregnancy outcome which is less favourable for non-western women in the Netherlands is maternal mortality. A confidential enquiry into maternal mortality between 1983 and 1992 revealed that non-Caucasian women contributed to 21% of the 154 cases that occurred in this period, with the majority originating from Suriname, Turkey and Morocco [29]. In a subsequent enquiry which covered the period between 1993 and 2005 non-western women were again found to be at higher risk for maternal mortality compared to native Dutch women (OR 2.1; 95% CI 1.6-2.7) [30]. Another study specifically focused on maternal mortality due to hypertensive disorders between 2000 and 2004 also revealed a higher share for non-western women: ten of the 27 women were of immigrant origin with the majority, eight, originating from sub-Saharan Africa [31]. Despite non-western women's proportionally larger share in these small maternal mortality numbers, this issue has been less debated than perinatal mortality by scientists, medical professionals and politicians in the Netherlands.

Utilisation of maternity care by non-western women in the Netherlands

Non-western women's prenatal care utilisation has been studied for several years in the Netherlands. In 2007, an article by Alderliesten *et al.* concluded that non-western women from several ethnic groups (Surinamese, Turkish, Moroccan, Ghanaian and other non-western) were all significantly later in starting prenatal care compared to native Dutch women [3]. At a gestational age of 16 weeks and 3 days, 90% of the native Dutch women had started prenatal care, while for Ghanaian women this was at 24 weeks and 4 days. For the other non-western groups included in this study, the 90% prenatal care entry lies in between these two aforementioned gestational ages. Poor language proficiency, low maternal education, teenage pregnancy, multiparity and unplanned pregnancy were found to explain these ethnic groups' late prenatal care entry, except for Surinamese and Antillean women. In 2011, an article by Choté *et al.* also reported late prenatal care entry by non-western women from Turkish, Moroccan, Antillean, Cape Verdean and Surinamese Creole background compared to native Dutch women [4]. However, one group of women was not more likely to enter prenatal care late: Surinamese Hindustani women. A combination of factors – predisposing (age, parity, household arrangement, planned pregnancy, pregnancy concern), enabling (educational level, having a paid job), need (perceived health of mother) and behavioral (folic acid intake, maternal smoking, alcohol use) – could explain

Turkish and Cape Verdean women's late prenatal care entry in this study, but not those of Surinamese Creole, Antillean and Moroccan women. In 2013, another study conducted by Choté was published which reported that the unadjusted odds of first generation non-western women entering prenatal care late was 1.70 times greater than for second generation non-western women [5]. After adjusting for predisposing (age, marital status, planned pregnancy, confidence in a favourable course of the pregnancy, personal ability to adequately deal with the pregnancy), enabling (educational level, having a paid job, proficiency in Dutch speaking), need (perceived health of mother) and behavioral factors (folic acid intake, maternal smoking, alcohol use), latter group of factors provided the main explanation for the first generation's late prenatal care entry. This study concluded that women who are less likely to adopt healthy behaviour (not taking folic acid at all or late in pregnancy) are also less likely to enter prenatal care early. Choté *et al.* also studied non-western women's prenatal care utilisation taking not only entry but also the number of visits into account [6]. In that study, several non-western groups (Turkish, Moroccan, Antillean, Cape Verdean and Surinamese Creole) were found to be more likely to make inadequate use of prenatal care compared to native Dutch women, except for Surinamese Hindustani women again. However, the inadequate use was mainly characterised by late entry and could not be explained by age, gravidity and parity. One qualitative study by Nienhuis published in 1998, much earlier than the quantitative studies on non-western women's prenatal care utilisation, gives insight into how Somali women perceive prenatal care visits [32]. This study revealed that Somali women in the Netherlands were not used to visiting their midwife in Somalia as often as in the Netherlands and also had less extensive examinations in Somalia. Furthermore, it revealed that these Somali women could not understand why the number of prenatal visits was increased towards the end of pregnancy in the Netherlands, and even found it exaggerating and nerve-wracking. This study showed that the experiences in the country of origin may play an important role in how prenatal care in the new host-country is being perceived.

Non-western women's use of maternity care assistance has received much less attention than their use of prenatal care. In a study published in 1999, interviews with Turkish and Moroccan women were analysed quantitatively and qualitatively [7]. These non-western women were shown to make less use of maternity care assistance compared to native Dutch women, because of expected help from family members and their own previous experiences or other's experiences with maternity care assistance. These women also were shown to have less access to maternity care assistance. There were some who did not know of maternity care

assistance before their pregnancy, did not understand the information on maternity care assistance received from their midwife, registered late during pregnancy for maternity care assistance or were not informed on the content and the different forms of maternity care assistance when contacting the maternity care assistance centre. In 2013, Statistics Netherlands reported an increase in the use of maternity care assistance by non-western women [33]. However, the proportion of non-western women making use of this type of care still differs from that of native Dutch women, 89% versus 96%. Also, non-western women still use less hours of maternity care assistance compared to native Dutch women, 29.0 hours compared to 41.9 hours.

Research conducted so far has been able to provide insight into the extent to which non-western women make use of prenatal care and to some extent the factors associated with this. However, these studies were limited to a specific number of major cities in the Netherlands. Up to now, non-western women's prenatal care utilisation and in-depth insight into the factors and reasons associated with this use are lacking at national level. Furthermore, insight into the encounter between midwives and maternity care professionals and non-western women is lacking.

Aim and research questions

The overall aim of this study is to gain insight into the factors affecting non-western women's utilisation of prenatal care, and the experiences of midwives and maternity care assistants with non-western women.

The following research questions are addressed in this thesis:

Utilisation

- Which factors are known to affect non-western women's prenatal care utilisation in industrialised western countries?
- How do first and second generation non-western women in the Netherlands make use of prenatal care compared to native Dutch women, and by which factors can this difference (statistically) be explained?
- Why do some non-western women in the Netherlands make less adequate use of prenatal care compared to other non-western women?

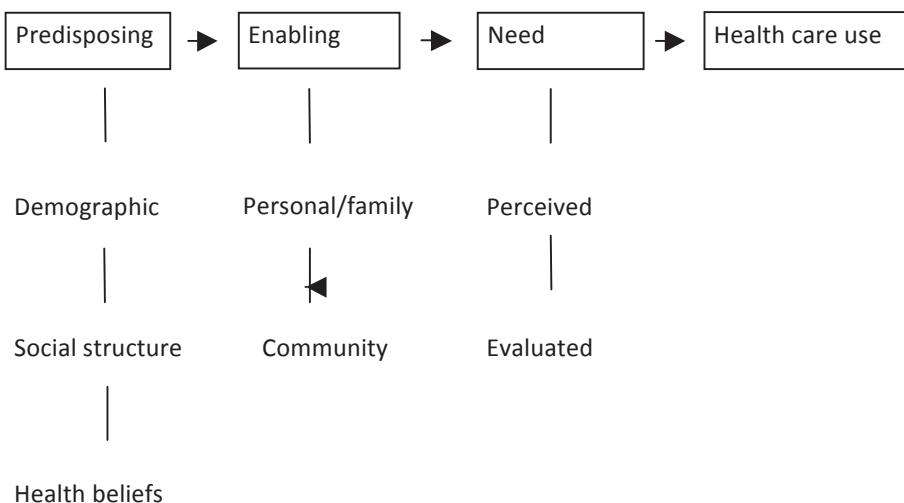
Experiences

- In what way does the delivery of care for non-western women differ compared to native Dutch women, according to midwives and maternity care assistants, and how do they address these differences?

Theoretical framework

To answer the first two research questions the conceptual framework of Foets *et al.* was used to provide a clear overview and analysis of the factors involved. The conceptual framework of Foets *et al.* was initially developed to study variations in healthcare utilisation between individuals in general and the extent to which healthcare is accessible for different groups in the population [34]. However, it also showed to be useful in explaining ethnic differences in healthcare utilisation and access to care. The framework of Foets *et al.* is largely based on Andersen's model of healthcare utilisation, which distinguishes three groups of determinants of healthcare utilisation: predisposing, enabling and need characteristics [35]. *Predisposing characteristics* include demographic, social structure and health beliefs factors which affect the predisposition to use health services. *Enabling characteristics* include personal, family and community characteristics which enable or impede the use of care. *Need characteristics* include the perceived (by the individual) and evaluated (by the care professional) need for care. (Figure 1)

Figure 1. Andersen's initial behavioural model of healthcare utilisation



In the conceptual framework of Foets *et al.* (Figure 2), two groups of underlying factors, individual and healthcare factors, are added to the model with predisposing, enabling and need factors.

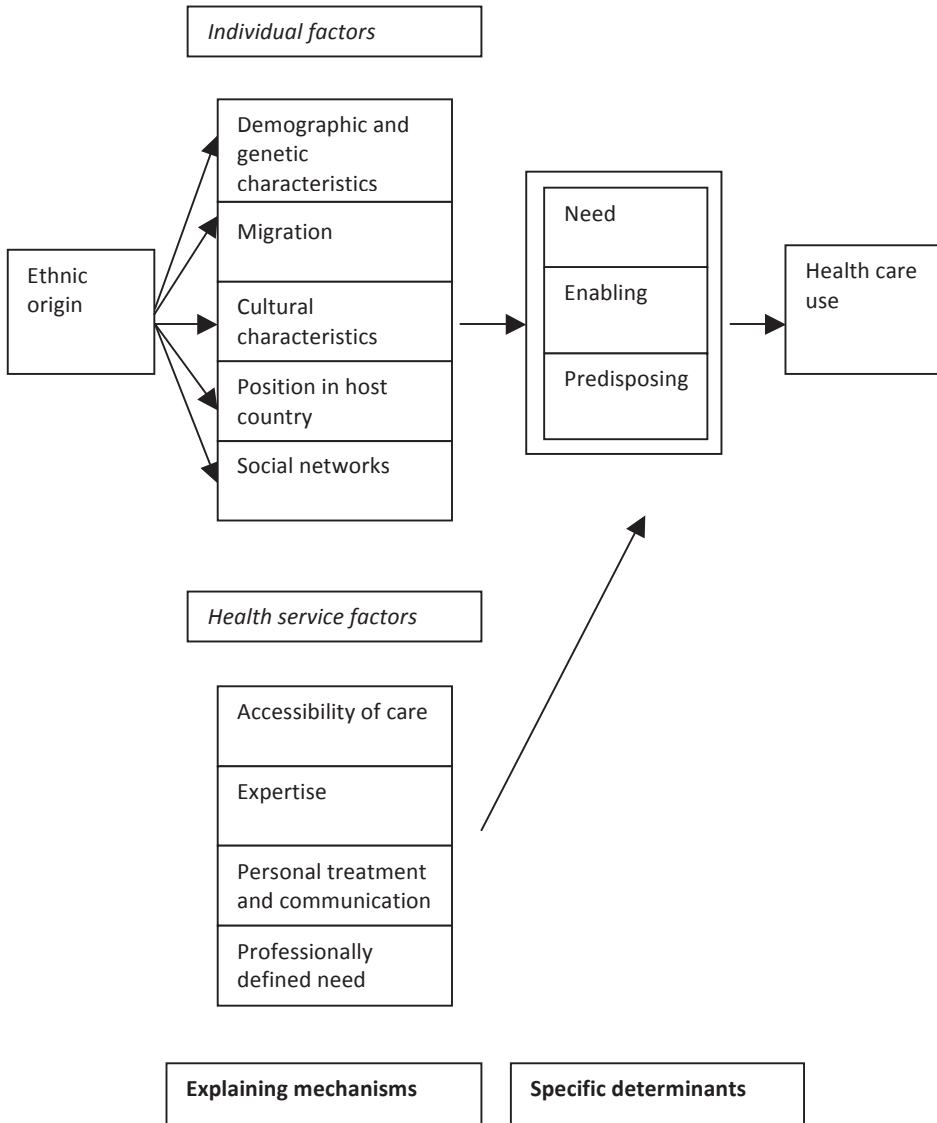
At the **individual level** this conceptual framework distinguishes between:

- *Demographic and genetic characteristics.* These reflect the biological characteristics which may affect the health status. Furthermore, age and gender are more social-psychological characteristics which may influence the need for healthcare utilisation.
- *Migration-related characteristics.* The period prior to migration and migration itself may influence (mental) health. Also migrants take their habits, experiences and expectations concerning healthcare along with them from their country of origin.
- *Cultural characteristics.* Migrants' norms and values may differ from those of the native population. Also, these norms and values may change over time after contact with the culture(s) in the host country (acculturation).
- *Position in the host country.* Socioeconomic status may influence one's health and views about health and healthcare. It may also influence the ability to use health care.
- *Social network characteristics.* The presence, size and degree of contact in the social network may influence the experienced health. The social network may give (emotional) support and information and thus be an alternative for professional support.

At **healthcare level** this conceptual framework distinguishes between:

- *Accessibility.* The use of interpreters by care professionals and discrimination (directly or indirectly) may affect accessibility of care.
- *Expertise.* Health care providers may differ in the way they provide care through their expertise. Clients experiencing a lack of specific expertise, e.g. care inadequately tailored to their needs, may make less use of care.
- *Personal treatment and communication.* Negative experiences related to personal treatment and communication may reduce confidence in the healthcare system and thereby healthcare utilisation.
- *Professionally defined need.* Poor identification of indications for referral among migrant clients, may lead to less access to specialised care.

Figure 2. The elaborated model of Andersen’s healthcare use by Foets *et al.*



Outline of the thesis

The research presented in this thesis includes several substudies. Firstly, a systematic review on factors affecting prenatal care utilisation by non-western women in western countries. Secondly, both qualitative and quantitative research as a mixed-methods strategy to examine the reasons behind non-western women's inadequate prenatal primary care utilisation in the Netherlands (as opposed to the so far quantitative approach in the Netherlands). Lastly, qualitative research on the encounter between non-western women in the Netherlands and the maternity care professionals involved.

This thesis is divided into two sections:

I. Non-western women in prenatal care: factors explaining their inadequate utilisation of prenatal care

Chapter 2 gives a literature overview of factors affecting non-western women's use of prenatal care (both medical care and prenatal classes) in industrialised western countries.

Chapter 3 describes first and second-generation non-western women's prenatal care utilisation in the Netherlands, and the explanatory factors. To assess non-western women's prenatal care utilisation an index was compiled, taking both the initiation of prenatal care and the number of prenatal visits into account. This index was derived from the well-known Kotelchuck index, and modified to the Dutch primary midwifery care context.

Chapter 4 explores qualitatively the reasons behind late prenatal care initiation, by comparing late and timely initiators of non-western origin with each other. Timely initiation was defined as a first prenatal visit at a gestational age ≤ 11 weeks and 6 days, and late initiation as a first prenatal visit at a gestational age ≥ 12 weeks and 0 days.

II. Non-western women in midwifery care and maternity care assistance: the experiences of midwives and maternity care assistants

Chapter 5 describes primary care midwives' experiences with non-western women. Aspects in the provision of prenatal care differing between non-western and native Dutch women are explored, as well as the manners in which these are addressed.

Chapter 6 describes maternity care assistants' experiences with non-western women. Aspects in the provision of postnatal care differing between non-western and native Dutch women are explored, as well as the manners in which these are addressed.

Lastly, the results of these five chapters are summarised and brought together to give insight into the factors behind non-western women's utilisation of prenatal care and maternity care assistance, and the experiences by and with them. These insights are discussed in the light of previous knowledge and understanding, and are concluded with practice implications and recommendations for future research.

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2

Factors affecting the use of prenatal care by non-western women in industrialised western countries: a systematic review

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Abstract

Background

Despite the potential of prenatal care for addressing many pregnancy complications and concurrent health problems, non-western women in industrialised western countries more often make inadequate use of prenatal care than women from the majority population do. This study aimed to give a systematic review of factors affecting non-western women's use of prenatal care (both medical care and prenatal classes) in industrialised western countries.

Methods

Eleven databases (PubMed, Embase, PsycINFO, Cochrane, Sociological Abstracts, Web of Science, Women's Studies International, MIDIRS, CINAHL, Scopus and the NIVEL catalogue) were searched for relevant peer-reviewed articles from between 1995 and July 2012. Qualitative as well as quantitative studies were included. Quality was assessed using the Mixed Methods Appraisal Tool. Factors identified were classified as impeding or facilitating, and categorised according to a conceptual framework, an elaborated version of Andersen's healthcare utilisation model.

Results

Sixteen articles provided relevant factors that were all categorised. A number of factors (migration, culture, position in host country, social network, expertise of the care provider and personal treatment and communication) were found to include both facilitating and impeding factors for non-western women's utilisation of prenatal care. The category demographic, genetic and pregnancy characteristics and the category accessibility of care only included impeding factors. Lack of knowledge of the western healthcare system and poor language proficiency were the most frequently reported impeding factors. Provision of information and care in women's native languages was the most frequently reported facilitating factor.

Conclusion

The factors found in this review provide specific indications for identifying non-western women who are at risk of not using prenatal care adequately and for developing interventions and appropriate policy aimed at improving their prenatal care utilisation.

Background

Prenatal care has the potential to address many pregnancy complications, concurrent illnesses and health problems [1]. An essential aspect of prenatal care models concerns the content of prenatal care, which is characterised by three main components: a) early and continuing risk assessment, b) health promotion (and facilitating informed choice) and c) medical and psychosocial interventions and follow-up [2,3]. Another essential aspect of prenatal care models concerns the number and timings of prenatal visits. While there is overall agreement on the importance of early initiation of prenatal care, the number of prenatal visits has led to a great deal of discussion. A Cochrane review of ten RCTs among mostly low-risk women concluded that the number of prenatal visits could be reduced without increasing adverse maternal and perinatal outcomes, although women in developed countries might be less satisfied with this reduced number of prenatal visits [4].

Despite universal healthcare insurance coverage in most industrialised western countries, studies in these countries have shown that non-western women make inadequate use of prenatal care. They are less likely to initiate prenatal care in good time [3,5-7], attend all prenatal care appointments [8] and attend prenatal classes [9]. Furthermore, non-western women have also been shown to be at increased risk for adverse perinatal outcomes. A meta-analysis by Gagnon *et al.* showed that Asian, North African and sub-Saharan African migrants were at greater risk of foeto-infant mortality than 'majority' populations in western industrialised countries, with adjusted odds ratios of 1.29, 1.25 and 2.43 respectively. This study also found that Asian and sub-Saharan African migrants are at greater risk of preterm birth, with adjusted odds ratios of 1.14 and 1.29 respectively [10]. Besides an increased risk for adverse perinatal outcomes, non-western women are also at increased risk of adverse maternal outcomes, in terms of both mortality [11,12] and morbidity [13].

A few studies have implied a relationship between non-western women's higher risk of adverse pregnancy outcomes and their use of prenatal care. In a Dutch study conducted by Alderliesten *et al.*, late start of prenatal care was one of the maternal substandard care factors of perinatal mortality that were more common among Surinamese and Moroccan women [14]. In a French study conducted by Philibert *et al.*, the excess risk for postpartum maternal mortality among non-western women was associated with a poorer quality of care, suggesting attention should be paid to early

enrolment in prenatal care [15]. This relationship emphasises the importance of proper use of prenatal care to address pregnancy complications, concurrent illnesses and health problems.

Two previously conducted reviews provide relevant insights into the factors affecting prenatal care utilisation [16,17]. The first review focused on women, irrespective of origin, in high-income countries. Ethnicity, demographic factors, socioeconomic factors at the individual and neighbourhood level, health behaviour and provider characteristics were found to be determinants of inadequate prenatal care utilisation [16]. The second review focused on first-generation migrant women of western and non-western origin in western industrialised countries. In this review, being younger than 20, poor or fair language proficiency and socioeconomic factors were reported to affect prenatal care utilisation [17].

A review specifically focused on factors affecting prenatal care utilisation by non-western women, irrespective of generation, was still lacking. Furthermore, qualitative studies – which are well suited to exploring the experiences and perceptions that play a role in women’s prenatal care utilisation – were not included in previously conducted reviews. Also, these reviews were not restricted to countries with similar accessibility to healthcare, which complicates generalisation of the results found. In this review, we therefore aimed to identify and summarise all reported factors, irrespective of study design, affecting non-western women’s use of prenatal care and prenatal classes in industrialised western countries with universal insurance coverage. Prenatal (or antenatal) care was defined as all care given by professionals to monitor women’s pregnancy. All courses preparing pregnant women for birth or teaching them how to feed and take care of their baby were defined as prenatal or antenatal classes. ‘Factors’ were defined as all experiences, needs, expectations, circumstances, characteristics and health beliefs of non-western women.

Methods

Search strategy

The following databases were searched: PubMed, Embase, PsycINFO, Cochrane, Sociological Abstracts, Web of Science, Women’s Studies International, MIDIRS, CINAHL, Scopus and the NIVEL catalogue. The search was limited to articles published between 1995 and July 2012.

The search strategy consisted of a number of Medical Subject Headings (MeSH) terms and text words, aiming to include as many relevant papers as possible (Additional file 1). It was devised for use in PubMed, and was adapted for use in the other databases. The search was performed in all fields of PubMed (the main database) and in titles, abstracts and keywords for the other databases. No language restriction was applied.

Methods of screening and selection criteria

The initial screening of articles was based on titles, and the second based on titles and abstracts. Finally, the full texts of the articles were assessed for inclusion. Screening was done by five reviewers (WD, AF, TW, JM, AB). Each article was screened by two reviewers: one of the first four reviewers plus the fifth reviewer. For each article, any discrepancy between the two reviewers was resolved through discussion.

The aim was to identify studies analysing or exploring factors affecting the use of prenatal care by non-western women in industrialised western countries. We therefore included studies if they (a) concerned prenatal care; (b) concerned factors affecting the use of prenatal care; (c) did not concern specific diseases during prenatal care, with the exception of pregnancy-related or postpartum conditions; (d) concerned industrialised western countries (high-income OECD countries except for Japan and Korea) with universal insurance coverage (resulting in exclusion of the USA); (e) concerned non-western women as clients (women from Turkey, Africa, Latin-America, Asia), with results presented at subgroup level; (f) did not concern illegal immigrants, refugees, asylum seekers, students or migrant farm workers (seasonal workers, internal migration); (g) were based on primary research (qualitative, quantitative, mixed methods or case studies). We have used the term 'non-western' women to mean immigrant women from the countries mentioned above, as well as their (immediate) descendants. Studies focusing on women from non-migrant ethnic minority groups (e.g. Aboriginals) were excluded.

In the first two screening stages (titles and titles plus abstracts), studies were included when both reviewers agreed they were eligible for inclusion, or if there was doubt about whether or not to exclude them. In the final screening stage (full texts), studies were included when both reviewers felt they met all the inclusion criteria.

Data extraction and quality appraisal

The following information was abstracted from the included studies:

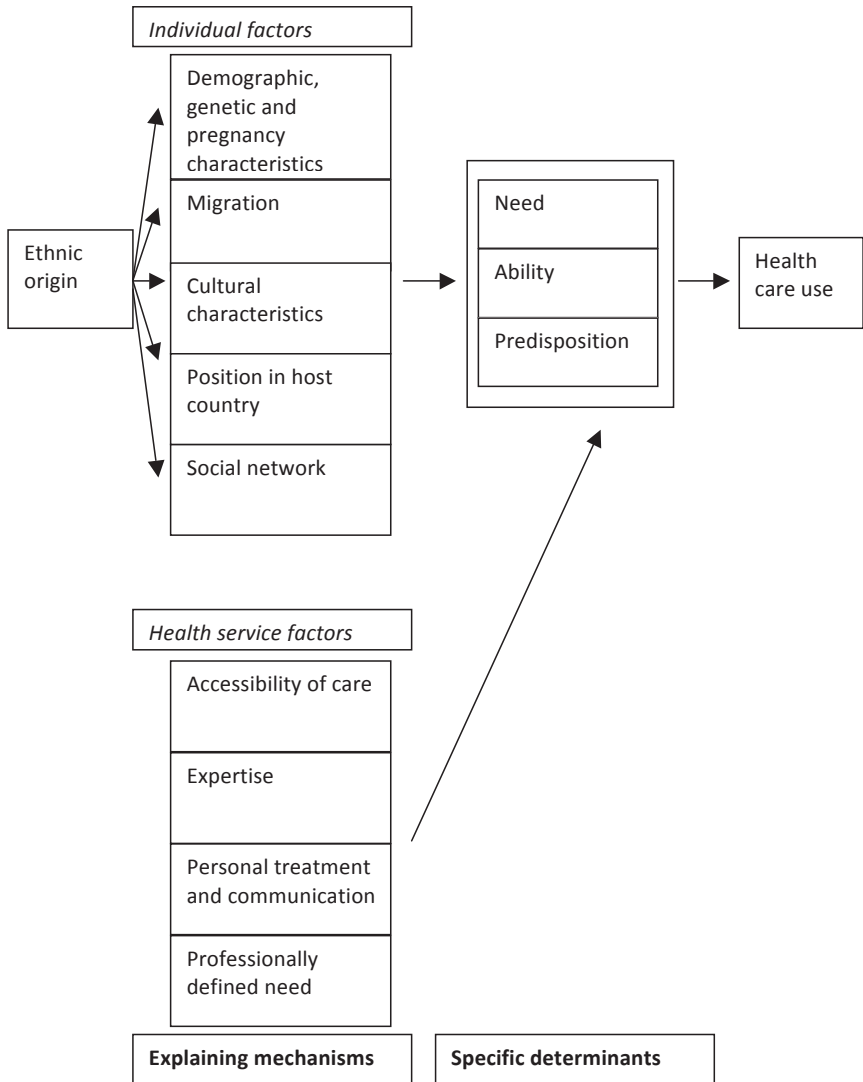
(a) general information: authors, journal, publication date, country, language; (b) research design: qualitative, quantitative or mixed-methods design; (c) research population: ethnic group, immigrant generation, sampling method, sample size; (d) analytical approach; (e) all possible factors affecting the use of prenatal care; (f) results and conclusions.

The quality of the studies was assessed by two reviewers, using the Mixed Methods Appraisal Tool (MMAT-version 2011) [18]. This quality appraisal tool seems appropriate as it was designed to appraise complex literature reviews consisting of qualitative, quantitative and mixed-methods studies. Quantitative and qualitative studies are each appraised by four criteria with overall scores varying from 0% (no criterion met) to 100% (all four criteria met). For criteria partially met, we decided to give half of the criterion score. For mixed methods studies, three components are appraised: the qualitative component, the quantitative component and the mixed methods component. The overall score is determined by the lowest component score.

Synthesis

Because of the heterogeneity in terms of countries, non-western groups and methods of analysis, we chose not to conduct a meta-analysis for the quantitative results. Instead, we chose to produce a narrative synthesis of the results of the studies included. For that synthesis, we used the conceptual framework of Foets *et al.* 2007, an elaborated version of Andersen's healthcare utilisation model (Figure 1) [19]. As this conceptual framework integrates the possible explanations for the relationship between ethnicity and healthcare use, it seemed the most appropriate. In this elaborated model the predisposing, enabling and need factors of Andersen are explained by two groups of underlying factors: individual factors and health service factors. The individual factors are subdivided into several categories: demographics and genetics, migration, culture, the position in the host country and social network. The health service factors are subdivided into: accessibility, expertise, personal treatment and communication, and professionally defined need. To fit the factors emerging from the data extraction, the category 'demographics and genetics' was expanded to include pregnancy. This finally resulted in the following categories:

Figure 1. The conceptual framework of Foets *et al.*



Individual factors

- 1) Demographics, genetics and pregnancy: women's age, parity, planning and acceptance of pregnancy, pregnancy related health behaviour and perceived health during pregnancy
- 2) Migration: women's knowledge of/familiarity with the prenatal care services/system, experiences and expectations with prenatal care use in their country of origin, pregnancy status on arrival in the new industrialised western country
- 3) Culture: women's cultural practices, values and norms, acculturation, religious beliefs and views, language proficiency, beliefs about pregnancy and prenatal care
- 4) Position in the host country: women's education level, women's pregnancy-related knowledge, household arrangement, financial resources and income
- 5) Social network: size and degree of contact with social network, information and support from social network

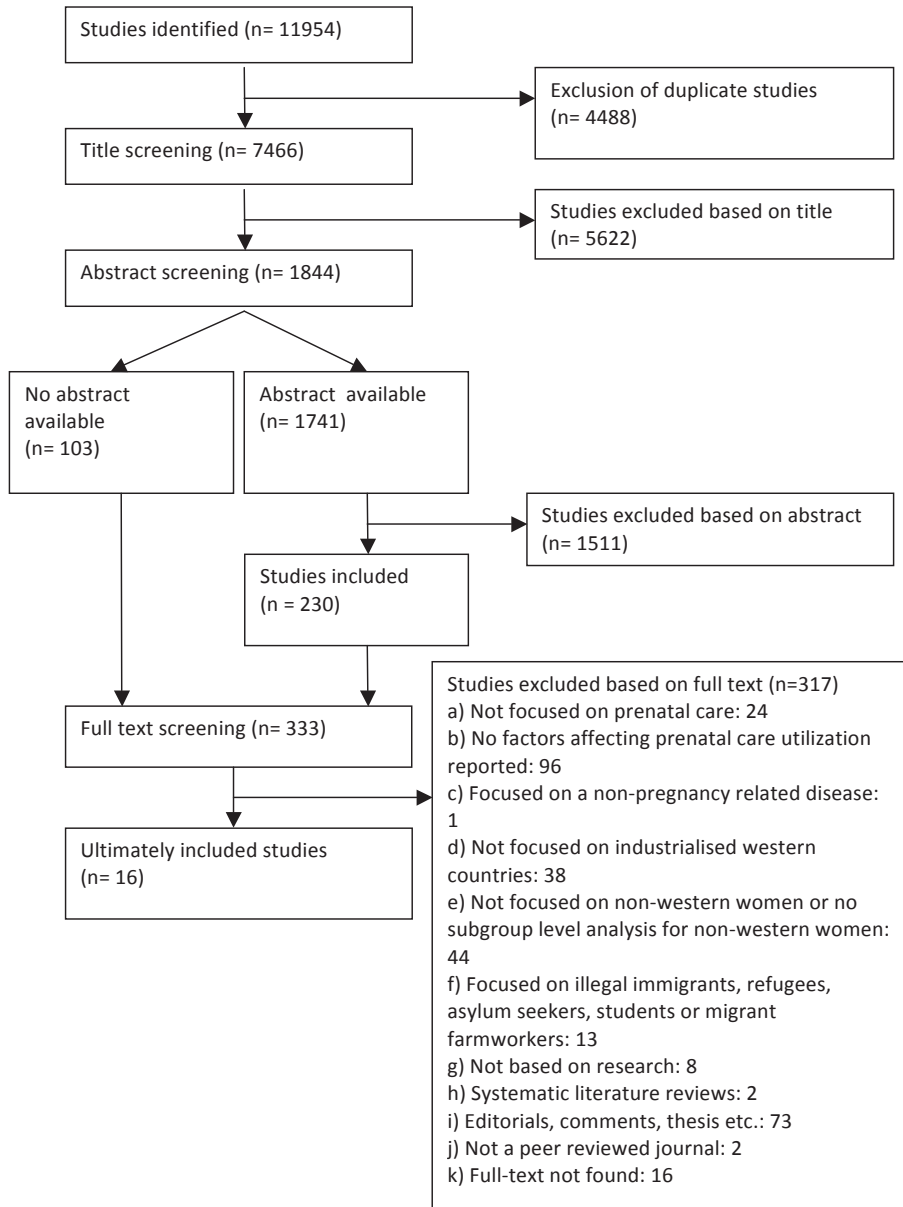
Health service factors

- 6) Accessibility: transport, opening hours, booking appointments, direct and indirect discrimination by the prenatal care providers
- 7) Expertise: prenatal care tailored to patients' needs and preferences
- 8) Treatment and communication: communication from prenatal care providers to women, personal treatment of women by prenatal care providers, availability of health promotion/information material, use of alternative means of communication
- 9) Professionally defined need: referral by general practitioners and other healthcare providers to prenatal care providers

Results

A total of 11954 articles were initially identified, of which 4488 were duplicates. Title screening of the remaining 7466 non-duplicate references resulted in 1844 relevant articles being selected for abstract screening. After abstract screening, 333 articles were selected for full text screening, either because they were relevant (230) or no abstract was available (103). Finally, full text assessment resulted in 16 peer-reviewed articles being included and their methodological quality being assessed. (Figure 2)

Figure 2. Schematic draft of the selection process



Characteristics of the included studies

Additional file 2 provides an overview of the articles included. Three articles described quantitative observational studies: 2 cohort studies [20,21] and 1 cross-sectional study [22] with methodological quality scores varying between 75% and 100%.

Twelve articles described qualitative studies: seven individual interview studies [23-29], two focus group studies [30,31], two studies combining individual interviews and focus group interviews [32,33] and one study combining individual interviews and observations [34]. The methodological quality scores of eleven of these twelve qualitative studies varied between 50% and 100%, with the twelfth study scoring 25%.

One study used mixed-methods - combining a retrospective cohort design with focus groups [35]. Only the focus group yielded relevant information for this review. The methodological quality score of this study was 25%.

The studies were conducted in various industrialised western countries. Nine studies were conducted in a European country [20,21,23,28,29,31-33,35], four in Canada [22,25,27,30] and three in Australia [24,26,34].

Fourteen articles were published in English [20-22,24-34], one in German [23] and one in Italian [35].

The studies included women from different regions of the world. Three studies reported factors for *sub-Saharan African women*: Somali or Ghanaian [29,32,33]; eight for *Asian women*: South Asian [22], Sri Lankan [23], Filipino [26], Vietnamese [27], Indian [30], Thai [34] or a mixture of Asian origins [24,28]; and two for *Turkish women* [21,31]. One study reported factors for Muslim women not further specified [25].

Some studies reported factors for various non-western ethnic groups. One study reported factors for *sub-Saharan African women* (Ghanaian), *North African women* (Moroccan), *Turkish women* and other non-western women not further specified [20]. Another study reported factors for *North African women* (Northwest African women) and *Asian women* (Chinese) as part of a group of migrant women [35].

Barriers to prenatal care utilisation

All factors impeding the use of prenatal care were classified as barriers. The first column of Table 1 gives an overview of these factors according to the conceptual framework of Foets *et al.* Both quantitative and qualitative studies reported factors impeding non-western women's use of prenatal care. Demographic, genetic and pregnancy-related factors were only

described in one quantitative study and in none of the qualitative studies. In this study *multiparity, being younger than 20 and unplanned pregnancy* were associated with late prenatal care entry [20].

On the other hand, expertise factors as well as personal treatment and communication factors were only described in qualitative studies. *Care providers with a lack of knowledge of cultural practices* were described as being unable to provide knowledgeable health guidance and more likely to display insensitive behaviour [25]. Interviews with caregivers revealed that Somali women *perceiving themselves as being treated badly by a care provider* would not return for antenatal care [33]. *Poor communication* complicated women's access to prenatal care [35], prevented attendance of prenatal classes [23] and was reported as an underlying problem in understanding maternity reproductive services [32].

Factors reported in both qualitative and quantitative studies concerned: migration, culture, position in the host country, social network and accessibility of prenatal care.

– Migration-related factors: For Asian, Somali and Turkish women, as well as Muslim women otherwise unspecified, *lack of knowledge of or information about the Western healthcare system* was reported to deter utilisation of prenatal care [26,27,30-32,35] or prenatal classes [22,23,25]. *Arriving in the new country late in pregnancy* was reported as another reason for not attending prenatal classes [22].

– Cultural factors: *Adherence to cultural and religious practices* was reported to impede prenatal care utilisation by Asian and Muslim women. Women entered prenatal care late because of shame about being undressed during consultations [23]. Prenatal classes were not attended because of feelings of fear and embarrassment about watching a video of the act of giving birth [34] and because classes were not exclusively designed for women [25]. *Poor language proficiency* was another cultural characteristic described as an impeding factor for prenatal care [20,22,24,27,30,31] and prenatal classes [26]. *Lack of assertiveness* appeared to make it difficult for Asian women to access maternity services and information. These women were too reluctant or ashamed to enquire about services or ask for information [24]. *Dependency on the husband* was described as complicating access to both prenatal care [35] and prenatal classes [22,34]. *Pregnancy was perceived as a normal state* by Somali women and some of them therefore did not understand the necessity of prenatal care [29]. *Prenatal care was perceived as a burden more than a*

benefit because the same procedure is performed every time and doctors are too busy to provide pregnancy-related information [25]. *Prenatal classes were perceived as not being necessary* as women had already experienced birth [22,34] or attended classes previously [22].

– Factors related to women’s position in the host country: *Financial problems* impeded the ability to pay for health insurance [31], access to medical care during pregnancy [22] and attendance of prenatal classes [23]. *Unemployment* was another characteristic that was identified. In a Dutch study, enabling factors (including being in employment) explained Turkish women’s delayed entry into prenatal care [21]. In two studies, *low or intermediate educational level* was associated with late entry into prenatal care [20,21]. *Social inequalities* in education, economic resources and residence (rural or urban) among those who have immigrated, were found to affect access to prenatal care [35]. *Lack of time* was reported as a reason for not attending prenatal classes [22,23,30] and as a barrier to accessing prenatal support from public health and community nurses [27]. Another reason for not attending prenatal classes was *lack of childcare* [23,25]. Turkish women in a Swiss study reported *problems obtaining medical leave from work* [31].

– Social network factors: *Little or no support from family* was described as complicating access to prenatal care [35]. *Acquiring or following advice from family and friends* was reported as a reason for not attending prenatal classes [22,23]. *Isolation of the community* was described as complicating Chinese women’s access to prenatal care [35].

– Accessibility factors: *Inappropriate timing* was reported as a reason for not attending prenatal classes [23] while *incompatible opening hours* (incompatible with women’s own working hours or those of their husband or accompanying persons) were reported to affect their access to prenatal care [35]. *Transport and mobility problems* were reported to complicate access to medical care during pregnancy [22], prenatal care [35] and prenatal classes [26,27]. *Indirect discrimination* also affected access to care. Somali women in a UK study reported that general practitioners would sometimes refuse to see them if they did not bring along an interpreter, and that they had to book appointments for secondary care three days in advance if interpretation services were needed [32].

Facilitators of prenatal care utilisation

All factors facilitating the use of prenatal care were classified as barriers. The second column of Table 1 gives an overview of these factors according to the conceptual framework of Foets *et al.*. These factors were only reported in qualitative studies and concerned: migration, culture, socioeconomic status, social network, treatment and communication.

– Migration-related factors: To improve prenatal class attendance, women suggested *recognition of prenatal care as an important issue in the community* through mobilisation within their communities by word of mouth, radio and television [30].

– Cultural factors: Women felt that prenatal support provided by *health workers or peers of the same ethnic origin* would be beneficial to them [27]. *Believing that prenatal care ensures babies' wellbeing* was another characteristic that facilitated prenatal care utilisation. In one study, prenatal care was perceived as an important aspect of pregnancy that could assure women about their babies' wellbeing [34], while in another study regular consultations reduced women's uncertainty or fear about the pregnancy or their babies' health [23]. *Believing in looking after your own health for a healthy baby* was also described as a reason for not missing any prenatal check-ups [34].

– Factors related to women's position in the host country: Women suggested *better socioeconomic follow-up by institutions* because socioeconomic conditions affected their ability to pay for health insurance [31].

– Social network factors: Women with a *husband who spoke the industrialised country's official language* reported that their husbands told them to attend antenatal check-ups and arranged antenatal care because they did not speak the country's language themselves [34].

– Expertise factors: Women recommended that *healthcare providers facilitating prenatal care sessions should be mature women with experience of childbirth* [30]. Care providers were expected to *show respect by being interested and allowing for women's sense of shame about nudity* [23]. They were also expected to *alleviate worries and fears* by giving women a sense of security through careful monitoring, assessment, supervising and by acknowledging women's fears and reassuring them [23].

– Personal treatment and communication factors: One of these factors was the use of *women's native language*. Women proposed more information in their native language [31], prenatal classes being conducted in their

Table 1. Overview of the factors according to the conceptual framework of Foets *et al.*

Category	Impeding factors	Facilitating factors
Demographic, genetic and pregnancy characteristics	Being younger than 20 [20]* Multiparity [20]* Unplanned pregnancy [20]*	
Migration characteristics (history)	Lack of knowledge or information about the western healthcare system [22,23,25-27,30-32,35] Arriving in the new country late in pregnancy [22]*	Recognition of prenatal care as an important issue in the community [30].
Cultural characteristics	Adherence to cultural and religious practices [23,25,34]* Poor language proficiency [20,22,24,26,27,30,31] Lack of assertiveness [24]* Dependency on husband [22,34,35] Perceiving pregnancy as a normal state [29]* Belief that prenatal care is more a burden than a benefit [25]. Belief that prenatal classes are not necessary [22,34]	Care provider of the same ethnic origin [27]* Belief that prenatal care ensures baby's well-being [23,34]. Belief in looking after your own health for a healthy baby [34].
Position in host country	Financial problems [22,23,31] Unemployment [21]* Low or intermediate educational level [20,21]* Social inequality (education, economic resources and residence (rural or urban)) [35]. Lack of time [22,23,27,30] Lack of child care [23,25]* No medical leave from work [31].	Better socioeconomic follow-up [31].

- table 1 continued -

Category	Impeding factors	Facilitating factors
Social network	<p>No support from family [35]. Acquiring or following advice from family and friends [22,23] Isolated community [35].</p>	<p>Husband in command of the industrialised country's official language [34].</p>
Accessibility of care	<p>Inappropriate timing and incompatible opening hours [23,35]. Transport and mobility problems [22,26,27,35] Indirect discrimination [32].</p>	
Expertise	<p>Care providers lacking knowledge of cultural practices [25].</p>	<p>A mature experienced healthcare provider with a command of the native language [30]. Care provider showing interest and respect [23]. Care provider alleviating worries and fears [23].</p>
Personal treatment and communication	<p>Poor communication [23,32,35]. Perceiving yourself as having been badly treated by a care provider [33].</p>	<p>Use of native language [27,28,30,31]. Improved communication [23,31]. Audio-visual material [27]. Renaming prenatal classes to prenatal sessions [30].</p>

Ad* Factors only reported in quantitative studies.

Ad• Factors only reported in qualitative studies or the qualitative part of the mixed-methods study.

native language [27] and healthcare providers with a command of their native language [30]. Group prenatal care was described as being more accessible when practice midwives spoke several community languages [28]. Another characteristic was *improved communication*. Care providers or institutions were expected to provide translation [23,31], conversation space [23], and to make up for women's experience and knowledge by asking specific questions and giving customised information, demonstrations and explanations [23]. In one study, women reported a *preference for audio-visual material* over written information [27]. Women explained that the term 'classes' suggests that they are ignorant about childbirth, and that *prenatal classes should be called prenatal sessions* to improve their attendance [30].

Discussion

Factors affecting prenatal care utilisation

This review gives an overview of factors affecting non-western women's use of prenatal care in western societies. Therefore, 'factors' were described in the broadest sense, comprising experiences, needs and expectations, circumstances, characteristics and health beliefs of non-western women. The results indicate that non-western women's use of prenatal care is influenced by a variety of factors, and that several factors may simultaneously exert their effect. The categories migration, culture, position in the host country, social network, expertise of the care provider and personal treatment and communication were found to include both facilitating and impeding factors for non-western women's prenatal care utilisation. The category demographics, genetics and pregnancy and the category accessibility of care only included impeding factors. The only aspect of the conceptual framework of Foets *et al.* that was not found in the studies included in this review was 'professionally defined need'.

In a systematic review conducted by Feijen-de Jong *et al.*, ethnic minority was found to be one of the determinants of inadequate prenatal care utilisation in high income countries [16]. As ethnic minority status does of itself not explain prenatal care utilisation, our review adds relevant information to the review by Feijen-de Jong and colleagues, and gives more insight into the factors behind these women's prenatal care utilisation, at least for those of non-western origin. The demographic and socioeconomic

factors found in our review are largely in line with the results of Feijen-de Jong *et al.*. However, we did not find any factors concerning pattern or type of prenatal care, planned place of birth, prior birth outcomes and health behaviour. Our results are also in line with the review by Heaman *et al.*, who reported that demographic, socioeconomic and language factors affected prenatal care utilisation by first generation migrant women [17]. In addition to these two reviews, we found several other factors at the individual and health service levels that impeded or facilitated non-western women's prenatal care utilisation.

To our knowledge, this is the first review of prenatal care utilisation by non-western women that has combined quantitative, qualitative and mixed-methods studies. By doing this, we were able to find a very wide range of factors affecting non-western women's prenatal care utilisation. This is clearly evident from the barriers. A comparison shows that the quantitative studies made a full contribution to inadequate users' demographic, genetic and pregnancy characteristics. All three factors in this category: namely being younger than 20, multiparity and unplanned pregnancy were derived from one quantitative study. The qualitative studies contributed fully to expertise factors as well as personal treatment and communication factors. Care providers lacking knowledge of cultural practices, poor communication and perceiving yourself as having been badly treated by a care provider were only derived from qualitative studies and the qualitative part of the mixed methods study. Besides providing all the barriers in a specific category, quantitative and qualitative studies also complemented each other by both providing barriers in the same category (migration, culture, position in the host country, social network, accessibility), sometimes even by means of the same barrier. The factors: lack of knowledge of or information about the western healthcare system, poor language proficiency, dependency on husband, belief that prenatal care is not necessary, financial problems, lack of time, acquiring or following advice from family and friends, and transport and mobility factors were all reported in quantitative as well as qualitative studies.

By combining different study designs, we were also able to provide more in-depth insight into the mechanisms of some factors. For instance, we obtained more insight into the mechanisms of the factor multiparity reported in two previous quantitative studies. Qualitative studies showed that multiparous women did not perceive prenatal classes as necessary because they had already given birth. Furthermore, multiparous women

reported lack of childcare as a reason for not attending prenatal classes. Perhaps these two reasons also play a role in multiparous women's utilisation of medical care during pregnancy.

In the introduction, non-western women's risk for adverse pregnancy outcomes was described according to region of origin. By placing this review's findings in a regional perspective, some noteworthy insights were gained about factors affecting these high risk groups' health care utilisation. As to individual barriers, lack of knowledge of the western healthcare system was described among all four regional groups distinguished in this review (sub-Saharan African, North African, Asian and Turkish). Health beliefs were reported among sub-Saharan African (Somali) and Asian women. Dependency on husband was reported among Asian and North African women. However, adherence to cultural practices, acquiring or following advice from family and friends, lack of assertiveness and lack of time were only described in studies conducted among Asian women. As to health service barriers, accessibility factors were reported in studies conducted among Asian and North African woman. On the other hand, expertise and personal treatment factors were only found among sub-Saharan African (Somali) women.

These insights can be used to develop a more targeted approach towards specific groups. For example by placing emphasis on 'dependency on husband' for Asian and North African women, and 'personal treatment' for sub Saharan women. However, this should be done carefully. Some factors may seem to play no role for certain ethnic groups, while they were simply not included or discussed in these studies.

The individual and health service facilitators were all derived from qualitative studies conducted among Asian women and Turkish women. Nevertheless, these facilitating factors can be applicable to other ethnic groups, as they relate to difficulties also reported by these groups (e.g. improved communication).

Several factors such as lack of knowledge or information of the western healthcare system, poor language proficiency and poor communication applied to women of various ethnic origins. On the other hand, some factors were highly specific to a country, culture or religion. Muslim women, for example, were found to refuse combined session with males while other women might have fewer gender issues. Extrapolation of the results is therefore less applicable. The factors reported to facilitate prenatal care utilisation were mostly suggestions made by women. As

women based these suggestions on their own experiences with prenatal care, we decided to include these in our review.

In a systematic review conducted by Simkhada *et al.*, perceiving pregnancy as a normal state and seeing little direct benefit from antenatal care were reported as barriers to antenatal care utilisation in developing countries [36]. In our review, we found somewhat similar impeding beliefs about prenatal care in two studies conducted among first generation women. Furthermore, Simkhada and colleagues reported unsupportive family and friends as a barrier to antenatal care utilisation which was also found in our review. These similarities between non-western women in industrialised western countries and women in developing countries indicate that some women seem to continue to have certain beliefs, attitudes and needs they had prior to migration. A comparison between first and second generation non-western women would be very useful, but was not possible. Only one study included second-generation women but presented the results in combination with first-generation women.

Even though we included only high-income countries with universally accessible healthcare, we found that financial factors did affect non-western women's prenatal care utilisation. One explanation for this finding might be that women may not be aware of the universal accessibility of care, and therefore perceive lack of money as a barrier to prenatal care. It might also be that, even though women are currently legally resident (which was an inclusion criterion of our review), they reflect back on periods when this was not the case.

Methodological reflections

One noteworthy point is the large number of qualitative studies included in this review, as compared to quantitative studies. During the review process, we identified several quantitative studies focusing on factors affecting prenatal care utilisation by non-western women among their study population. Regrettably, we had to exclude most of these studies as they lacked a sub-analysis specifically for non-western women. By doing a sub-analysis specifically for non-western women in future quantitative studies on prenatal care utilisation, more insights can be gained on factors affecting their use of prenatal care.

The studies included in this review all considered different subgroups of non-western women. However, the immigrant generation of the women was not reported in five studies and factors were not specified according to

generation in the only study that included first and second-generation women.

The factors found in the qualitative studies were mostly part of women's experiences, needs and expectations with prenatal care. These studies did not specifically focus on inadequate users, and therefore did not include a definition. On the contrary, two of the three quantitative studies defined inadequate use, but did so differently (Additional file 3). This difference in definition between the quantitative studies and the lack of definition in qualitative studies complicates comparison and integration of the study results.

The included studies showed a large variance in methodological quality. Nevertheless, we decided not to exclude studies with a low quality score, in order to prevent loss of any relevant factors in this review. Instead we compared the results of the high and low methodological quality studies against each other, and did not find any contradictory results.

Two main strengths of this study are the use of a broad search string and not applying a language restriction, to minimize the chance of missing relevant studies. Also the inclusion of quantitative, qualitative and mixed-methods studies adds to the strength, as this increases the chance of finding different types of relevant factors affecting prenatal care utilisation. Another strength is the restriction to countries with universally accessible healthcare. Therefore, results are more comparable and generalisable to other countries with a similar organisation of their healthcare system. The use of a theoretical framework to sort the factors found is another strength of the study, as this gives a clear overview of the factors and the level at which they exert their effect.

Conclusions

Sixteen studies heterogeneous in methodological quality were included in this review. A variety of factors at the individual and health service levels were found to affect non-western women's use of prenatal care. Lack of knowledge of the western healthcare system and poor language proficiency were the most frequently reported impeding factors, while provision of information and care in women's native language was the most frequently reported facilitating factor. The factors found could all be classified according to the conceptual framework of Foets *et al.*, and covered all categories with the exception of 'professionally defined need'.

The factors reported were mainly derived from qualitative studies, and more detailed quantitative research with sub-analyses for non-western women is needed to determine the magnitude of these factors' effects on prenatal care utilisation. Furthermore, more qualitative studies specifically aimed at non-western women making inadequate use of prenatal care are necessary.

The factors found in this review provide specific indications for identifying non-western women at risk of inadequate use of prenatal care, and developing interventions and adequate policy aiming at improving their prenatal care utilisation.

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Additional file 1. Search strategy in PubMed

The strategy used in PubMed is given below. This strategy consists of four strings and was adapted for use in the other databases.

1

Search (((((((((prenatal care) OR antenatal care) OR pregnancy care) OR midwifery care) OR postnatal care) OR postpartum care) OR maternity nursing) OR maternal child nursing) OR maternal-child nursing) OR maternal healthcare) OR maternal health care

((((((((("prenatal care"[MeSH Terms] OR ("prenatal"[All Fields] AND "care"[All Fields]) OR "prenatal care"[All Fields]) OR ("prenatal care"[MeSH Terms] OR ("prenatal"[All Fields] AND "care"[All Fields]) OR "prenatal care"[All Fields] OR ("antenatal"[All Fields] AND "care"[All Fields]) OR "antenatal care"[All Fields])) OR ("prenatal care"[MeSH Terms] OR ("prenatal"[All Fields] AND "care"[All Fields]) OR "prenatal care"[All Fields] OR ("pregnancy"[All Fields] AND "care"[All Fields]) OR "pregnancy care"[All Fields])) OR (("midwifery"[MeSH Terms] OR "midwifery"[All Fields]) AND care[All Fields])) OR ("postnatal care"[MeSH Terms] OR ("postnatal"[All Fields] AND "care"[All Fields]) OR "postnatal care"[All Fields])) OR ("postnatal care"[MeSH Terms] OR ("postnatal"[All Fields] AND "care"[All Fields]) OR "postnatal care"[All Fields] OR ("postpartum"[All Fields] AND "care"[All Fields]) OR "postpartum care"[All Fields])) OR ("maternal-child nursing"[MeSH Terms] OR ("maternal-child"[All Fields] AND "nursing"[All Fields]) OR "maternal-child nursing"[All Fields] OR ("maternity"[All Fields] AND "nursing"[All Fields]) OR "maternity nursing"[All Fields])) OR ("maternal-child nursing"[MeSH Terms] OR ("maternal-child"[All Fields] AND "nursing"[All Fields]) OR "maternal-child nursing"[All Fields] OR ("maternal"[All Fields] AND "child"[All Fields] AND "nursing"[All Fields]) OR "maternal child nursing"[All Fields])) OR ("maternal-child nursing"[MeSH Terms] OR ("maternal-child"[All Fields] AND "nursing"[All Fields]) OR "maternal-child nursing"[All Fields] OR ("maternal"[All Fields] AND "child"[All Fields] AND "nursing"[All Fields]) OR "maternal child nursing"[All

Fields])) OR (("mothers"[MeSH Terms] OR "mothers"[All Fields] OR "maternal"[All Fields]) AND ("delivery of health care"[MeSH Terms] OR ("delivery"[All Fields] AND "health"[All Fields] AND "care"[All Fields]) OR "delivery of health care"[All Fields] OR "healthcare"[All Fields])) OR ("maternal health services"[MeSH Terms] OR ("maternal"[All Fields] AND "health"[All Fields] AND "services"[All Fields]) OR "maternal health services"[All Fields] OR ("maternal"[All Fields] AND "health"[All Fields] AND "care"[All Fields]) OR "maternal health care"[All Fields])

#2

Search (((((((ethnicity) OR ethnic group) OR ethnic groups) OR ethnic minority) OR ethnic minorities) OR immigrants) OR migrants) OR foreigners) OR foreign nationals

((((((((("ethnology"[Subheading] OR "ethnology"[All Fields] OR "ethnicity"[All Fields] OR "ethnology"[MeSH Terms] OR "ethnicity"[All Fields] OR "ethnic groups"[MeSH Terms] OR ("ethnic"[All Fields] AND "groups"[All Fields]) OR "ethnic groups"[All Fields]) OR ("ethnic groups"[MeSH Terms] OR ("ethnic"[All Fields] AND "groups"[All Fields]) OR "ethnic groups"[All Fields] OR ("ethnic"[All Fields] AND "group"[All Fields]) OR "ethnic group"[All Fields])) OR ("ethnic groups"[MeSH Terms] OR ("ethnic"[All Fields] AND "groups"[All Fields]) OR "ethnic groups"[All Fields])) OR (("ethnic groups"[MeSH Terms] OR ("ethnic"[All Fields] AND "groups"[All Fields]) OR "ethnic groups"[All Fields] OR "ethnic"[All Fields]) AND ("minority groups"[MeSH Terms] OR ("minority"[All Fields] AND "groups"[All Fields]) OR "minority groups"[All Fields] OR "minority"[All Fields])) OR ("ethnic groups"[MeSH Terms] OR ("ethnic"[All Fields] AND "groups"[All Fields]) OR "ethnic groups"[All Fields] OR "ethnic"[All Fields]) AND ("minority groups"[MeSH Terms] OR ("minority"[All Fields] AND "groups"[All Fields]) OR "minority groups"[All Fields] OR "minorities"[All Fields])) OR ("emigrants and immigrants"[MeSH Terms] OR ("emigrants"[All Fields] AND "immigrants"[All Fields]) OR "emigrants and immigrants"[All Fields] OR "immigrants"[All Fields])) OR ("transients and migrants"[MeSH Terms] OR ("transients"[All Fields] AND "migrants"[All Fields]) OR "transients and

migrants"[All Fields] OR "migrants"[All Fields])) OR ("emigrants and immigrants"[MeSH Terms] OR ("emigrants"[All Fields] AND "immigrants"[All Fields]) OR "emigrants and immigrants"[All Fields] OR "foreigners"[All Fields])) OR (("internationality"[MeSH Terms] OR "internationality"[All Fields] OR "foreign"[All Fields]) AND nationals[All Fields])

#3

(#2) AND #1

#4

(#2) AND #1 AND ("1995/01/01"[PDAT] : "2012/07/05"[PDAT])

Additional file 2. Overview of the study characteristics

Authors	Goal/aim	Study design	Sample size & ethnic group	Non-western women			Methodological quality score
				Generation	Age	Parity	
# 20: Alderliesten <i>et al.</i> 2007 (the Netherlands (Amsterdam))	To investigate the difference in timing of the first antenatal visit between ethnic groups and to explore the contribution of several noneconomic risk factors	Quantitative: prospective cohort study	8238 women: -Surinamese:458 -Antillean: 95 -Turkish: 342 -Moroccan:604 -Ghanaian: 203 -Other non-western:767 -Dutch: 5071 -Other western:698	Not mentioned	<20 years: -Surinamese: 3.1% -Antillean: 14.7% -Turkish: 5.3% -Moroccan: 3.6% -Ghanaian: 2.0% -Other non-western: 3.8%	Multiparity: -Surinamese: 60.1% -Antillean: 38.9% -Turkish: 63.2% -Moroccan: 59.9% -Ghanaian: 62.6% -Other non-western: 51.8%	100%

Authors	Goal/aim	Study design	Sample size & ethnic group	Non-western women			Methodological quality score
				Generation	Age	Parity	
# 21: Choté <i>et al.</i> 2011 (the Netherlands (Rotterdam))	To examine whether and to what extent ethnic differences between Dutch and several non-Dutch groups in late entry into antenatal care by community midwives can be explained by need, predisposing and enabling factors	Quantitative: prospective cohort study	2093 women: -Turkish: 240 -Moroccan: 208 -Surinamese Creole: 76 -Surinamese Hindustani: 86 -Antillean: 108 -Cape Verdean: 133 -Dutch: 1242	First and second generation	Mean age/Standard deviation: -Turkish: 25.7 (4.4) -Moroccan: 27.7 (4.9) -Cape Verdean: 26.7 (5.7) -Antillean: 25.7 (4.7) -Surinamese Creole: 26.9 (6.1) -Surinamese Hindustani: 26.4 (4.9)	≥1 child (%): -Turkish: 46.7% -Moroccan: 65.9% -Cape Verdean: 36.8% -Antillean: 38.9% -Surinamese Creole: 40.8 % -Surinamese Hindustani: 40.7%	75%
# 22: Brar <i>et al.</i> 2009 (Canada (Calgary, Alberta))	To assess the use of perinatal services by newly immigrated South Asian women and Canadian-born women, and to determine any perceived barriers to receiving care	Quantitative: matched-sample, stratified, cross-sectional, descriptive telephone survey	30 South Asian women: -Indian: 16 -Pakistani: 13 -Bangladeshi: 1 & 30 Canadian born women of any ethnicity	First generation	Mean age: 25.8 years	Median: 1.5 children	75%

Authors	Goal/aim	Study design	Sample size & ethnic group	Non-western women			Methodological quality score
				Generation	Age	Parity	
# 23: Büchi <i>et al.</i> 2006 (Switzerland)	To study the needs and expectations of Sri Lankan Tamil women to promote their satisfaction and optimal use of prenatal care	Qualitative: problem centred interviews before and after delivery	7 Tamil women of Sri Lanka	First generation	Age range: 22-33 years	1 child: 3 women 2 children: 3 women 4 children: 1 woman	50%
# 24: Hoang <i>et al.</i> 2009 (Australia (Tasmania))	To investigate Asian migrant women's childbirth experiences in a rural Australian context	Qualitative: semi-structured interviews	10 Asian women: -Vietnamese: 4 -Chinese: 2 -Japanese: 2 -Korean: 1 -Filipino: 1	First generation	Not reported	All 10 women had one to two children born in Australia	50%
# 25: Reitmanova and Gustafson 2008 (Canada (St. John's))	To document and explore the maternity healthcare needs and the barriers to accessing maternity health services from the perspective of immigrant Muslim women living in St. John's, Canada	Qualitative: in-depth semi-structured interviews	6 Muslim women	First generation	Age range: 25-40 years	These 6 women had a total of 18 children	75%

Authors	Goal/aim	Study design	Sample size & ethnic group	Non-western women			Methodological quality score
				Generation	Age	Parity	
# 26: Stewart <i>et al.</i> 1998 (Australia (Brisbane))	To understand and explore the notion of empowerment in relation to the childbirth experiences of Filipino women in Brisbane, Australia	Qualitative: in-depth face to face interviews	30 Filipino women	First generation	Not reported	Not reported	50%-
# 27: Sutton <i>et al.</i> 2007 (Canada (London, Ontario))	Exploring Vietnamese women's breastfeeding experience, and their families' needs for prenatal and postpartum health professional programs and services	Qualitative: in-depth interviews	11 Vietnamese women	Mostly first generation women	21 years: 1 woman 24 years: 2 women 25 years: 1 woman 31 years: 1 woman 34 years: 1 woman 35 years: 1 woman 37 years: 1 woman 38 years: 1 woman 39 years: 1 woman 42 years: 1 woman	1 child: 5 women 2 children: 3 women 4 children: 1 woman 6 children: 2 women	50%

Authors	Goal/aim	Study design	Sample size & ethnic group	Non-western women			Methodological quality score
				Generation	Age	Parity	
# 28: McAree <i>et al.</i> 2010 (United Kingdom)	To explore women's perceptions of care with a midwifery group practice compared to experiences of standard maternity care in an ethnically diverse area	Qualitative: individual semi-structured interviews	18 Women: -Indian: 7 -Sri Lankan: 1 -Pakistani: 2 - African/ African British: 1 -Black Caribbean/ Black: 1 -White British/ European: 6	Not reported	Not reported	Not reported	75%
# 29: Essén <i>et al.</i> 2000 (Sweden)	To explore the culturally determined attitudes, strategies and habits of Somali immigrant women towards pregnancy and childbirth in Somalia as well as Sweden, in order to gain an understanding of how such factors affect perinatal outcome	Qualitative: interpreter assisted in-depth interviews	15 Somali women	First generation	Age range: 20-55 years	Range: 2-9 children	75%

Authors	Goal/aim	Study design	Sample size & ethnic group	Non-western women			Methodological quality score
				Generation	Age	Parity	
# 30: Bhagat <i>et al.</i> 2002 (Canada (Lower mainland of British Columbia))	To explore how community mobilisation strategies could be used to improve the health of pregnant women in the Punjabi community	Qualitative: focus groups	Punjabi (Indian) women. Sample size not reported	Not reported	Not reported	Not reported	25%*
# 31: Bollini <i>et al.</i> 2007 (Switzerland (La-Chaux-de-Fonds; Bern; Zurich; Fribourg))	To explore the issues of pregnancy and delivery in migrant women in their interaction with the Swiss healthcare system	Qualitative: focus groups	40 women: -Turkish: 14 -Portuguese: 17 -Swiss: 9	First generation	<30 years: 2 women 31-50 years: 9 women >50 years: 3 women	1 child: 3 women 2 children: 5 women >2 children: 6 women	75%
# 32: Davies and Bath 2001 (the United Kingdom (in a northern English city))	To explore the maternity information concerns of a group of Somali women in a Northern English city and to investigate the relationships of these women with maternity health professionals	Qualitative: a focus group and semi-structured interviews	13 Somali women	Not reported	21-30 years : 6 women 31-40 years: 7 women	The 6 women between 21 and 30 had borne a total of 18 children. The 7 women between 31 and 40 had borne a total of 22 children.	75%
# 33: Binder <i>et al.</i> 2012 (United Kingdom (Greater London))	To gain a deeper understanding of the multi-ethnic care setting and the roles that ethnicity and language	Qualitative: in-depth individual and focus group interviews	60 Women: -Somali: 39 -Ghanaian: 11 -White British: 10 & 62 Obstetric care	First generation	Age range: 18-48 years	Range: 1-10 children	100%

Authors	Goal/aim	Study design	Sample size & ethnic group	Non-western women			Methodological quality score
				Generation	Age	Parity	
	play during the sensitive care encounter between immigrant women and their western care providers		providers: -Somali: 4 -Other African or Caribbean: 34 -Asian: 3 -White British: 21				
# 34: Rice and Naksook 1998 (Australia (Melbourne))	To identify the perceptions and experience of pregnancy care, labour and birth of Thai women in Melbourne, Australia	Qualitative: ethnographic interviews and participant observation	30 Thai women	First generation	20-30 years: 9 women 31-40 years: 15 women 41-50 years: 4 women 50+ years: 2 women	1 child: 13 women 2 or 3 children: 15 women 4-6 children: 2 women	50%

Authors	Goal/aim	Study design	Sample size & ethnic group	Non-western women			Methodological quality score
				Generation	Age	Parity	
# 35: Baken <i>et al.</i> 2007 (Italy (Cesena area)) Only the qualitative part is included in this review!	To study the health needs, the demand for inpatient care and access to health services by immigrant children and women in the district Cesena, with the purpose to gain useful insights to improve service organisation and program interventions focused specifically on the maternal and infant population	Mixed methods: -Quantitative: cohort study -Qualitative: separate focus groups with immigrants, cultural mediators and health professionals	Qualitative part: 103 persons: Chinese women, Northwest African women (Maghreb), other immigrant women otherwise unspecified, cultural mediators and health professionals	Not reported	Not reported	Not reported	25%

Ad* Partially met the first and second criterion

Additional file 3. Additional information of the included studies

Authors	Definition for adequacy of prenatal care utilisation	Other characteristics of the non-western women	Barriers	Facilitators
# 20: Alderliesten <i>et al.</i> 2007 (the Netherlands (Amsterdam)) (<i>continues</i>)	Late start: gestational age at first visit ≥ 18 weeks Very late start: gestational age at first visit ≥ 24 weeks	Unplanned pregnancy: Surinamese: 15.3% Antillean: 12.9% Turkish: 19.4% Moroccan: 8.9% Ghanaian: 14.1% Other non-western: 12.1% Pregnancy unwanted: Surinamese: 1.1% Antillean: 1.1% Turkish: 5.0% Moroccan: 2.5% Ghanaian: 2.0% Other non-western: 1.7% Low maternal education: Surinamese: 43.0% Antillean: 42.6% Turkish: 64.3% Moroccan: 60.9% Ghanaian: 56.1% Other non-western: 39.5%	Turkish, Moroccan, Ghanaian, Other non-western women: 1) Less than 5 years education after primary school 2) Unplanned pregnancy 3) Being younger than 20 4) Multiparity 5) Poor Dutch language proficiency	Not reported

Authors	Definition for adequacy of prenatal care utilisation	Other characteristics of the non-western women	Barriers	Facilitators
20: Alderliesten <i>et al.</i> 2007 (the Netherlands (Amsterdam)) (continued)		<p>Poor language proficiency in Dutch:</p> <p>Surinamese: 1.1%</p> <p>Antillean: 1.1%</p> <p>Turkish: 43.1%</p> <p>Moroccan: 34.2%</p> <p>Ghanaian: 46.3%</p> <p>Other non-western: 37.9%</p> <p>Risk awareness:</p> <p>Surinamese: 25.3%</p> <p>Antillean: 26.3%</p> <p>Turkish: 22.2%</p> <p>Moroccan 24.1%</p> <p>Ghanaian 31.0%</p> <p>Other non-western: 21.9%</p>		
# 21: Choté <i>et al.</i> 2011 (the Netherlands (Rotterdam)) (continues)	Late entry: gestational age at first visit more than 14 weeks	<p>Pregnancy planned:</p> <p>Turkish: 55.8%</p> <p>Moroccan: 60.6%</p> <p>Cape Verdean: 37.6%</p> <p>Antillean: 30.6%</p> <p>Surinamese Creole: 40.8%</p> <p>Surinamese Hindustani: 44.2%</p>	Turkish women: 1) Enabling factors : low or intermediate educational level, not having a paid job	Not reported

Authors	Definition for adequacy of prenatal care utilisation	Other characteristics of the non-western women	Barriers	Facilitators
<p>21: Choté <i>et al.</i> 2011 (the Netherlands (Rotterdam)) (<i>continued</i>)</p>		<p>Paid job: Turkish: 28.3% Moroccan: 19.2% Cape Verdean: 42.9% Antillean: 19.4% Surinamese Creole: 39.5% Surinamese Hindustani: 30.2%</p> <p>Married or cohabiting: Turkish: 90.1% Moroccan: 95.7% Cape Verdean: 44.3% Antillean: 45.3% Surinamese Creole: 42.1% Surinamese Hindustani: 73.3%</p> <p>Higher educational level: Turkish: 12.1% Moroccan: 12.0% Cape Verdean: 9.0% Antillean: 12.0% Surinamese Creole: 15.8% Surinamese Hindustani: 10.5%</p>		

Authors	Definition for adequacy of prenatal care utilisation	Other characteristics of the non-western women	Barriers	Facilitators
# 22: Brar <i>et al.</i> 2009 (Canada (Calgary, Alberta))	Not applicable	<p>Recently delivered a live born term healthy singleton in an uncomplicated vaginal delivery at the Peter Lougheed Centre, an academic community hospital in NE Calgary</p> <p>Speaking Hindi, Punjabi and/or English</p> <p>Having a permanent address</p> <p>Having access to a telephone</p> <p>Intending to parent</p>	<p>South Asian women (Indian, Pakistani, Bangladeshi):</p> <ol style="list-style-type: none"> 1) Language barriers 2) Transport or mobility problems 3) Lack of money 4) Not advised to attend prenatal education classes 5) Unaware of prenatal education classes 6) Arriving in Canada late in pregnancy 7) Acquiring prenatal knowledge from family and friends 8) Husband unwilling to attend prenatal classes 9) Having attended classes previously 10) Having previous children 11) Lack of time 	Not reported

Authors	Definition for adequacy of prenatal care utilisation	Other characteristics of the non-western women	Barriers	Facilitators
# 23: Büchi <i>et al.</i> 2006 (Switzerland)	Not applicable	<p>All women were married</p> <p>The women lived between 1 and 16 years in Switzerland</p> <p>The women's education ranged from eight to ten years. They did not finish their education, except for one (secretary)</p>	<p>Tamil (Sri Lanka) women:</p> <ol style="list-style-type: none"> 1) Shame about being undressed during consultations 2) Limited communication 3) Financial problems 4) Inappropriate timing 5) Lack of time 6) Lack of childcare 7) Unfamiliarity with prenatal classes 8) Prenatal classes not recommended by Tamil friends 	<p>Tamil (Sri Lanka) women:</p> <ol style="list-style-type: none"> 1) Reducing uncertainty or fear about the child's health or pregnancy through regular consultations 2) Care providers should show respect by being interested and allowing for women's sense of shame about nudity 3) Care providers should alleviate worries and fears by giving a sense of security through careful monitoring, assessment and supervising, and by acknowledging women's fears and reassuring them 4) Care providers should make up for women's lack of experience and knowledge by asking specific questions and by giving customised information, demonstrations and explanations 5) Care providers should ensure communication by providing translation and creating conversation space

Authors	Definition for adequacy of prenatal care utilisation	Other characteristics of the non-western women	Barriers	Facilitators
# 24: Hoang et al. 2009 (Australia (Tasmania))	Not applicable	Two women spoke limited English, the other women could communicate in English	Asian women (Vietnamese, Chinese, Japanese, Korean, Filipino): 1) Lack of English language skills 2) Too reluctant or embarrassed to express their needs or enquire about services, because in most Asian cultures people are taught to be unassertive and inhibited	Not reported

Authors	Definition for adequacy of prenatal care utilisation	Other characteristics of the non-western women	Barriers	Facilitators
<p># 25: Reitmanova and Gustafson 2008 (Canada (St. John's))</p>	<p>Not applicable</p>	<p>All participants considered themselves believing Muslim's, however the level of their religious practices varied</p> <p>All participants were married to men of the same ethnic and religious background</p> <p>The participants socioeconomic status varied depending on their husband's employment circumstances</p> <p>All participants were stay-at-home mothers, while they all had a high school diploma or university degree</p>	<p>Muslim women:</p> <ol style="list-style-type: none"> 1) Prenatal check-ups are considered to be a routine that does not provide any important benefits. In some instances they are perceived to be more as a burden than benefit, as the same procedure is performed every time and doctors are too busy and don't have much time to provide pregnancy related information. 2) Not being told about or not understanding the purpose of prenatal classes 3) No care arrangements for other children 4) Prenatal classes were not designed exclusively for women which contravenes to their religious beliefs 5) Maternity care providers were uninformed about religious practices, and thus unable to provide knowledgeable health guidance taking these religious needs into consideration and also more likely to display insensitive behaviour 	<p>Not reported</p>

Authors	Definition for adequacy of prenatal care utilisation	Other characteristics of the non-western women	Barriers	Facilitators
<p># 26: Stewart <i>et al.</i> 1998 (Australia (Brisbane)) (<i>continues</i>)</p>	<p>Not applicable</p>	<p>Post-partal women, who had experienced their first birth in Brisbane</p> <p>Resident in Australia: more than 4 years (20); less than 4 years (10)</p> <p>English language capacity (speak, read, write): good (26); poor (4)</p> <p>Educational level (completed): secondary (15); tertiary (14)</p> <p>Employment: paid employment (26); domestic duties (4)</p> <p>Occupational status: white collar (8); blue collar (18)</p>	<p>Filipino women:</p> <ol style="list-style-type: none"> 1) Language barriers 2) Not familiar with/informed about additional services such as antenatal care (shared care or midwives clinic) 3) Public transport 	<p>Not reported</p>

Authors	Definition for adequacy of prenatal care utilisation	Other characteristics of the non-western women	Barriers	Facilitators
26: Stewart <i>et al.</i> 1998 (Australia (Brisbane)) (<i>continued</i>)		<p>Partner employment: employed (16); aged pensioner (14)</p> <p>Personal income: up to \$16000 (18); \$16001-\$23000 (8)</p> <p>Family income per month: \$1000-2000 approx. (27); \$2000 or more (3)</p> <p>Partner origins: white Australian (20); Filipino (10)</p>		

Authors	Definition for adequacy of prenatal care utilisation	Other characteristics of the non-western women	Barriers	Facilitators
<p># 27: Sutton <i>et al.</i> 2007 (Canada (London, Ontario))</p>	<p>Not applicable</p>	<p>All women had given birth in the previous two years</p> <p>All women were of relatively low socioeconomic status.</p> <p>Marital status: married (9); divorced (1); single (1)</p> <p>Education: grade 5 (2); grade 7 (1); grade 8 (1); grade 9 (1); grade 12 (4); college (1); unknown (1)</p> <p>Employment: bookkeeper (1); dressmaker (3); nail technician (1); stayed at home (5); unknown (1)</p> <p>Years in Canada: 2 years (1); 4 years (2); 6 years (1); 7 years (1); 9 years (2); 10 years (1), 12.5 years (1); 14 years (1); unknown (1)</p>	<p>Vietnamese women:</p> <ol style="list-style-type: none"> 1) Language (poor comprehension of English) 2) Transport (no access to automobiles) 3) Time constraints (too busy at home or at work) 4) Never heard about prenatal support services (e.g. prenatal care) 	<p>Vietnamese women:</p> <ol style="list-style-type: none"> 1) Prenatal classes conducted in Vietnamese 2) Prenatal support by trained Vietnamese health workers or peers 3) Audio-visual material instead of written material

Authors	Definition for adequacy of prenatal care utilisation	Other characteristics of the non-western women	Barriers	Facilitators
# 28: McAree <i>et al.</i> 2010 (United Kingdom)	Not applicable	The women interviewed gave birth two to three years ago	Not reported	Indian, Sri Lankan, Pakistani women: 1) Group prenatal care classes are more accessible when practice midwives speak several community languages.
# 29: Essén <i>et al.</i> 2000 (Sweden)	Not applicable	Time elapsed since last birth was between 6 months and 7 years. Two women had given birth only in Somalia, five only in Sweden, and eight in both Somalia and Sweden The women migrated to Sweden between 1989 and 1995	Somali women: 1) Not understanding why the antenatal care practice should be viewed as necessary, as pregnancy is seen as a normal healthy state	Not reported

Authors	Definition for adequacy of prenatal care utilisation	Other characteristics of the non-western women	Barriers	Facilitators
# 30: Bhagat <i>et al.</i> 2002 (Canada (Lower mainland of British Columbia))	Not applicable	Not reported	<p>Punjabi (Indian) women:</p> <ol style="list-style-type: none"> 1) Lack of knowledge about the Western health care system 2) Lack of knowledge about the importance of prenatal care 3) Language barrier: the need to have some English to use while in hospital 4) No time to attend six prenatal classes 	<p>Punjabi (Indian) women:</p> <ol style="list-style-type: none"> 1) The health care provider facilitating the groups should be a Punjabi speaking woman with childbirth experience 2) For women to attend prenatal classes, prenatal care needs to be recognised as an important issue in the community. The community should be mobilised through three channels: word of mouth, radio and television 3) Renaming prenatal classes to prenatal sessions
# 31: Bollini <i>et al.</i> 2007 (Switzerland (La-Chaux-de-Fonds; Bern; Zurich; Fribourg)) (<i>continues</i>)	Not applicable	<p>Have at least one pregnancy in Switzerland</p> <p>Not married or living with a Swiss national</p> <p>Marital status: Single (1); Married (10); Separated/divorced (3)</p>	<p>Turkish women:</p> <ol style="list-style-type: none"> 1) Not attending prenatal courses because of language problems and lack of proper information 2) Not aware of the need to regularly consult a gynaecologist during pregnancy 3) Problems obtaining appropriate medical leave from work 	<p>Turkish women:</p> <ol style="list-style-type: none"> 1) More information in women's own language 2) More efforts by the institutes to improve communication 3) Better socioeconomic follow up

Authors	Definition for adequacy of prenatal care utilisation	Other characteristics of the non-western women	Barriers	Facilitators
<p>Bollini <i>et al.</i> 2007 (Switzerland (La-Chaux-de-Fonds; Bern; Zurich; Fribourg)) (<i>continued</i>)</p>		<p>Current occupation: Housewife (7); Unskilled manual work (5); Clerical work (1); Professionals (1)</p> <p>Education: Primary school or less (6); Secondary school (3); Professional training (2); University or equivalent diploma (3)</p> <p>Length of stay in Switzerland: <5 years (2); 5–14 years (6); >14 years (6)</p>	<p>4) Poor socioeconomic conditions which affected the ability to pay for health insurance, especially during the initial years in Switzerland</p>	
<p># 32: Davies and Bath 2001 (the United Kingdom (in a northern English city)) (<i>continues</i>)</p>	<p>Not applicable</p>	<p>Living in a Northern English city</p> <p>Having used maternity and women's health services in this Northern English city</p> <p>One woman did not have children, while another woman had given birth in the Netherlands shortly before</p>	<p>Somali women:</p> <p>1) Unfamiliarity with the multi-layered organisation structure of the National Health Service (NHS). The general practitioner is the only point of reference</p> <p>2) Language barrier and poor communication with healthcare professionals</p>	<p>Not reported</p>

Authors	Definition for adequacy of prenatal care utilisation	Other characteristics of the non-western women	Barriers	Facilitators
Davies and Bath 2001 (the United Kingdom (in a northern English city)) <i>(continued)</i>		arriving in the UK	3) Booking appointments three days in advance if the interpreting service is needed. Because of this, contact with health professionals is often delayed 4) Sometimes refused to be seen by a general practitioner if someone who could provide interpretation is not brought along	
# 33: Binder <i>et al.</i> United 2012 Kingdom (Greater London)	Not applicable	Time spent in the United Kingdom ranged from 1 to 20 years for the Somali and Ghanaian women All women interviewed had at least one child within the British health care system All women interviewed were living in Greater London at the time of data collection	Somali women: 1) Perceiving yourself as having been badly treated by a care provider	Not mentioned
# 34: Rice and Naksook 1998 (Australia (Melbourne)) <i>(continues)</i>	Not applicable	Religion: Buddhist (30) Education level: primary (11); secondary (5); tertiary (13); no education (1)	Thai women: 1) Already experienced birth in Thailand 2) Husband was working and did not know how to get to the hospital by	Thai women: 1) Antenatal care is seen as an important aspect of pregnancy which can assure women about their baby's well-being

Authors	Definition for adequacy of prenatal care utilisation	Other characteristics of the non-western women	Barriers	Facilitators
Rice and Naksook 1998 (Australia (Melbourne)) <i>(continued)</i>		<p>Occupation: home duties (15); self-employed (5); office based (4); casual (2); part-time (3); pension (1)</p> <p>Marital status: Married (25); divorced (1), separated (1); widowed (1); single mother (2)</p> <p>Length of stay in Australia: 1-5 years (16); 6-10 years (12); 11-15 years (1); 16+ years (1)</p> <p>Husband's ethnic background: Anglo-Australian (8); European English speaking (6); other European (4); Thai (6); Other Asian (5); Middle East (1)</p> <p>Length of marriage: 0-5 years (19); 6-10 years (6); 11-15 years (3); 16+ years (2)</p>	herself 3) Feelings of fear and embarrassment to watch a video to prepare for birth	2) Believing in looking after your own health and body, and wanting everything about the baby to be as perfect as possible 3) Being worried about the baby's health 4) Husband with an English speaking background who told them to go for antenatal check-ups

Authors	Definition for adequacy of prenatal care utilisation	Other characteristics of the non-western women	Barriers	Facilitators
<p># 35: Baken <i>et al.</i> 2007 (Italy (Cesena area))</p> <p>Only the qualitative part is included in this review!</p>	<p>Not applicable</p>	<p>Not reported</p>	<p>Chinese women, Northwest African women (Maghreb):</p> <ol style="list-style-type: none"> 1) Communication problems due to language 2) Lack of information about services in Italy 3) Logistic problems: transport, opening hours (incompatible with women's own working hours, their husbands' or accompanying persons') 4) Little or no support from family 5) Social inequalities (education, economic resources and residence (rural or urban)) 6) Lack of autonomy and dependency of women on their husband (Northwest African women) 7) Isolation of the community (Chinese women) 	<p>Not mentioned</p>

3

Explanatory factors for first and second-generation non-western women's inadequate prenatal care utilisation: a prospective cohort study

This article has been submitted for review as:

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Explanatory factors for first and second-generation non-western women's inadequate prenatal care utilisation: a prospective cohort study.

Abstract

Background

Little research into non-western women's prenatal care utilisation in industrialised western countries has taken generational differences into account. In this study we examined non-western women's prenatal care utilisation and its explanatory factors according to generational status.

Methods

Data from 3300 women participating in a prospective cohort of primary midwifery care clients in the Netherlands (the DELIVER study) was used. Gestational age at entry and the total number of prenatal visits were aggregated into an index. The extent to which potential factors explained non-western women's prenatal care utilisation was assessed by means of blockwise logistic regression analyses and percentage changes in odds ratios.

Results

The unadjusted odds of first and second-generation non-western women making inadequate use of prenatal care were 3.26 and 1.96 times greater than for native Dutch women. For the first generation, sociocultural factors explained 43% of inadequate prenatal care utilisation, socioeconomic factors explained 33% and demographic and pregnancy factors explained 29%. For the second generation, sociocultural factors explained 66% of inadequate prenatal care utilisation.

Conclusion

Irrespective of generation, strategies to improve utilisation should focus on those with the following sociocultural characteristics (not speaking Dutch at home, no partner or a first-generation non-Dutch partner). For the first generation, strategies should also focus on those with the following demographic, pregnancy and socioeconomic characteristics (aged ≤ 19 or ≥ 36 , unplanned pregnancies, poor obstetric histories (extra-uterine pregnancy, molar pregnancy or abortion), a low educational level, below average net household income and no supplementary insurance.

Background

Prenatal care provides an opportunity to address pregnancy complications, promote a healthy lifestyle and prepare women and their families for the birth and parenting [1]. The benefits of early prenatal care entry are well recognised and supported by studies which have demonstrated an association between late prenatal care entry and adverse pregnancy outcomes [2,3]. A Cochrane review, which was updated in 2010, showed that women in prenatal care programmes with reduced numbers of visits had a borderline significant increase in perinatal mortality compared to women receiving standard prenatal care (RR 1.14; 95% CI 1.00-1.31) [4]. However, the ideal number of prenatal visits has been much debated.

In most industrialised western countries, prenatal care is universally accessible. Nevertheless, previous research suggests that certain groups of women (including non-western women) are more likely to make inadequate use of prenatal care, i.e. late entry and/or an insufficient number of visits. In the United Kingdom, Asian and black women were found to be more likely to enter prenatal care late than white women [5-7]. Pakistani and Indian women were found to attend significantly fewer prenatal care visits than native British women [8]. In Australia, migrants from developing countries were more likely to enter prenatal care late than non-Aboriginal Australian-born women (OR 2.18; 95% CI 2.1-2.26) [9]. However, non-western ethnicity does not of itself explain these women's inadequate utilisation of prenatal care; instead, via a number of underlying factors, it influences the need, propensity and ability to make use of care [10].

In a systematic review on factors affecting non-western women's use of prenatal care in industrialised western countries, lack of knowledge of or information about the western healthcare system, poor language proficiency, dependency on husband, adherence to cultural and religious practices, financial problems, lack of time, acquiring or following advice from family and friends, transport and mobility problems, care providers lacking knowledge of cultural practices and poor communication were some important impeding factors found [11]. These factors were mostly derived from qualitative studies.

Quantitative research specifically aimed at exploring the factors behind non-western women's prenatal care utilisation in industrialised western countries with universally accessible healthcare is limited. Three studies, coincidentally all conducted in Dutch urban regions, reported teenage pregnancies [12], multiparity [12], unplanned pregnancy [12], low educational level [12,13] and not having a paid job [13] as explanatory factors of non-western women's late entry, and age [14], gravidity [14] and parity [14] as explanatory factors for non-western women's late entry and /or insufficient number of visits.

Recently, another regional Dutch study has yielded new insights [15]. First-generation non-western women are more likely to enter prenatal care late than those of the second generation. This delay is explained primarily by a less active attitude towards healthy behaviour. This new insight raises the question of whether generational differences also exist in overall prenatal care utilisation. In this national study we therefore wanted to explore first and second-generation non-western women's prenatal care utilisation, taking not only the gestational age at entry but also the numbers of visits into account. The following research question was formulated: How do first and second-generation non-western women utilise prenatal care compared to native Dutch women and – if there is a difference – what factors can explain this?

Methods

Data collection

Data from the national DELIVER study, a multi-centre prospective dynamic cohort study that aimed to evaluate the quality, organisation and accessibility of primary midwifery care in the Netherlands, was used for this study [16]. The cohort consisted of primary midwifery care clients who had completed up to three questionnaires between their first prenatal appointment and six weeks postpartum. The first questionnaire was completed before 35 weeks of gestation, the second between 35 weeks of gestation and birth, and the third around 6 weeks postpartum. Ethical approval was obtained from the medical ethics committee of the VU University Medical Center in the Netherlands (WC 008-100).

The women in this cohort were recruited between September 2009 and February 2011 by the midwives from 20 midwifery practices spread all over the country. These midwifery practices were selected according to three stratification criteria: region, level of urbanisation and practice type. A total of 14148 clients were invited to participate. Of these, 12398 were eligible. The response rate for at least one questionnaire was 62% [16]. For each participating client, questionnaire data was linked to data from the national Netherlands Perinatal Registry and the electronic client record in the midwifery practices by means of unique anonymous identifiers for the client and midwifery practice.

Study population

This study included native Dutch and non-western women who had completed the first questionnaire of the DELIVER study. Migrant women of western origin, women lacking additionally linked data and women who did not start prenatal care with a primary care midwife were excluded.

Figure 1 shows a schematic draft of the selection process of the study population. Of the 5590 native Dutch and non-western women who had completed the first questionnaire of the DELIVER study, 3749 (67.1%) had additionally linked data on prenatal care utilisation. Of these, 3300 women had started prenatal care with a primary care midwife. Table 1 shows the characteristics of these 3300 women according to ethnic origin.

Of the 2998 native Dutch women, 234 (7.8%) made inadequate use of prenatal care – 6.5% entering late and 1.3% with an insufficient number of visits. Of the 203 first-generation non-western women, 45 (22.2%) made inadequate use of prenatal care – 20.7% entering late and 1.5% with an insufficient number of visits. Of the 99 second-generation non-western women, 16 (16.2%), made inadequate use of prenatal care – 14.1% entering late and 2.0% with an insufficient number of visits.

Table 2 shows the ethnic origin of the 302 non-western women. The majority (64.9%) belonged to one of the four major non-western groups in the Netherlands: Turkish, Moroccan, Surinamese, Dutch Antillean/Aruban.

Figure 1. Schematic draft of the selection process of the study population

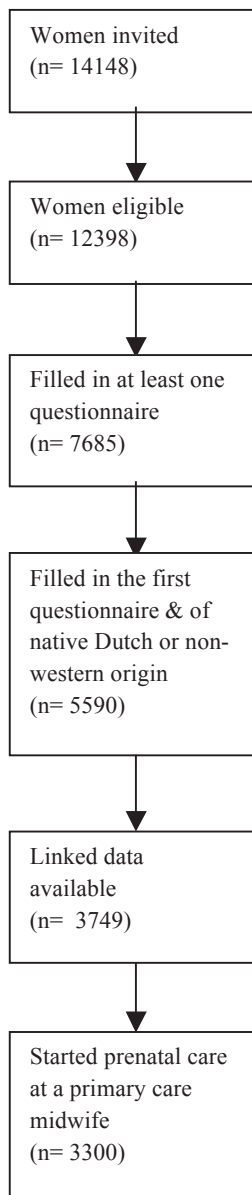


Table 1. Characteristics of the study population (N=3300)

	Native Dutch (N=2998)	First - generation non-western (N=203)	Second- generation non-western (N=99)
	N (%)	N (%)	N (%)
Prenatal care utilisation			
Adequate	2764 (92.2%)	158 (77.8%)	83 (83.8%)
Inadequate	234 (7.8%)	45 (22.2%)	16 (16.2%)
- entered on time, but insufficient number of visits	38 (1.3%)	3 (1.5%)	2 (2.0%)
- entered late	196 (6.5%)	42 (20.7%)	14 (14.1%)
Age			
<= 19	25 (0.8%)	2 (1.0%)	2 (2.0%)
20-35	2545 (85.0%)	174 (86.1%)	93 (93.9%)
>= 36	425 (14.2%)	26 (12.9%)	4 (4.0%)
Parity			
Nulliparous	1262 (42.1%)	65 (32.3%)	45 (45.5%)
Primi-/multiparous	1735 (57.9%)	136 (67.7%)	54 (54.5%)
Educational level			
High	1461 (48.8%)	63 (31.2%)	41 (41.8%)
Medium	1104 (36.9%)	59 (29.2%)	37 (37.8%)
Low	428 (14.3%)	80 (39.6%)	20 (20.4%)
Net household income			
Average	629 (21.1%)	32 (16.1%)	20 (20.6%)
Below average	381 (12.8%)	101 (50.8%)	26 (26.8%)
Above average	1452 (48.6%)	34 (17.1%)	37 (38.1%)
Did not want to say	524 (17.5%)	32 (16.1%)	14 (14.4%)

Table 2. Ethnic origin of the non-western population (N= 302)

	N (%)
Turkish	67 (22.2%)
Moroccan	80 (26.5%)
Surinamese	32 (10.6%)
Dutch Antillean/Aruban	17 (5.6%)
Other	106 (35.1%)

Dependent variable

An index was compiled to assess women's prenatal care utilisation as comprehensive as possible by taking both prenatal care entry and the number of prenatal visits into account (see additional file 1). This index was derived from the Kotelchuck index [17], and adapted to the Dutch primary midwifery care context.

Prenatal care entry was determined based on the gestational age at the first prenatal visit (derived from the ultrasound scan or the first day of the last menstrual period) and classified into 'on time' (gestational age at onset < 12 weeks) and 'late' (gestational age at onset \geq 12 weeks).

The number of prenatal visits was derived from the electronic client record, and compared to the expected number of visits derived from the guidelines of the Royal Dutch Organisation of Midwives (KNOV) [18]. The expected number of prenatal visits was based on the gestational age at which women gave birth. For women who were referred to secondary care, the expected number of prenatal visits was based on the gestational age at referral.

For this study, the modified index (see additional file 1) was dichotomised into:

- 1) Inadequate utilisation: onset at \geq 12 weeks *and/or* received < 50% of expected visits
- 2) Adequate utilisation: onset < 12 weeks *and* received \geq 50% of expected visits. (This category also includes women who made more than adequate use of prenatal care (i.e. received \geq 110% of expected visits))

Main independent variable

The main independent variable was women's ethnicity, which was categorised into native Dutch, first-generation non-western and second-generation non-western. The classification into native Dutch and non-western was made according to the definition used by Statistics Netherlands [19]. Women are considered native Dutch when both of their parents were born in the Netherlands, and non-western when at least one of their parents was born in Asia (excluding Indonesia and Japan), Africa, Latin America or Turkey. Non-western women were subdivided into first generation (born outside the Netherlands) and second generation (born in the Netherlands).

(Potential) Explanatory independent variables

Based on Andersen's healthcare utilisation model [20] and the conceptual framework of Foets *et al.* [10], several factors were considered as potential explanatory variables for the association between ethnicity and prenatal care utilisation. These variables were derived from the first questionnaire of the DELIVER study and assigned to the following blocks of conceptually linked variables:

Demographic and pregnancy factors: maternal age (≤ 19 , 20-35, ≥ 36 years); parity (nulliparous, primi-/multiparous); pregnancy intention (planned and wanted, unplanned but wanted, unplanned and unwanted); an ectopic pregnancy, molar pregnancy or abortion in the obstetric history (no, yes).

Socioeconomic factors: level of maternal education (high, medium, low); net household income (average, below average, above average, won't say); supplementary insurance (no, yes).

Sociocultural factors: partner's ethnicity (native Dutch, first-generation non-Dutch, second-generation non-Dutch, no partner); language spoken at home (Dutch or other).

Psychological factors: perceived locus of control concerning their own health (a lot, no or hardly); perceived health status (good, poor); fear of giving birth (not so anxious, anxious); fear of bearing a handicapped child (not so anxious, anxious); pregnancy-related concerns about their appearance (not so anxious, anxious,).

Health behaviour: currently smoking (no, yes); alcohol use since discovering pregnancy (no, yes); folic acid use (yes, no); Body Mass Index (BMI) (not overweight (<25), overweight (25-30), obese (≥ 30)).

Accessibility of the midwifery practice: calling the practice (no problem or never tried, problem); visiting the practice (no problem, problem); booking appointments with the practice (no problem, problem).

Data analysis

Data analysis consisted of several stages. Firstly, descriptive analyses were carried out on the independent and dependent variables. Secondly, univariable logistic regression analyses were carried out to determine the association between the potential explanatory independent variables and the dependent variable. Only potential explanatory independent variables associated with the dependent variable ($p < 0.25$) were retained in the corresponding category for further analyses. Thirdly, blockwise multivariable logistic regression analyses were conducted, because of the

dichotomous outcome measure and the focus on groups of explanatory factors [21]. The first block consisted only of the main independent variable, namely ethnicity. After this, six separate logistic regression analyses were conducted, adjusting each time for one block of explanatory variables. In addition to these separate logistic regression analyses, a blockwise structured model was constructed by adding the blocks of explanatory independent variables one by one. The blocks of explanatory variables most proximate to the individual were added first and those most distant last, until a final model consisting of the main independent variable and all six blocks was constructed. In both the univariable and blockwise multivariable logistic regression analyses, the hierarchical nature of the data, i.e. clients (level 1) nested within midwifery practices (level 2), was taken into account by means of multilevel analyses. If the multilevel model resulted in a significantly better fit than the ordinary univariable or blockwise multivariable logistic regression model, the former was preferred and presented. Lastly, the percentage change in odds ratio (OR) was calculated for each model, using the following formula: $\frac{((OR_{(model\ 2-13)} - OR_{(model\ 1)}) / (OR_{(model\ 1)} - 1)) \times 100}{}$ [22].

Using the percentage changes in OR, the overall and direct contributions of each block of explanatory variables to inadequate prenatal care utilisation were calculated with the following formulas:

1) Overall effect (x) = percentage change in OR from the separate block wise analysis (x)

2) Direct effect (x) = [percentage change in OR from the blockwise structured model (x)] - [percentage change in OR from the blockwise structured model (x-1)]

All analyses were conducted in IBM SPSS Statistics (version 20.0), except for the multilevel analyses which were conducted in Stata (version 12).

Results

Explanatory independent variables

Table 3 shows the results of the univariable analysis. Fifteen of the 21 potential explanatory variables were significantly associated with prenatal care utilisation and retained in the corresponding category for use in the blockwise multivariable logistic regression analyses. The potential explanatory variables excluded from further analysis were alcohol use, fear

of bearing a handicapped child, pregnancy-related concerns about appearance, perceived health status and accessibility of the midwifery practice (calling the practice and visiting the practice).

Table 3. Association between the potential explanatory independent variables and inadequate prenatal care utilisation (assessed by multilevel univariable logistic regression analyses) (N=3300)

	Odds ratio	95% CI	p Value
Demographic and pregnancy factors			
Age			
<= 19	5.30	2.15 to 13.05	0.00
20-35*	1		
>= 36	1.57	1.12 to 2.18	0.01
Parity			
Nulliparous*	1		
Primi-/multiparous	0.843	0.65 to 1.09	0.19
Pregnancy intention			
Planned and wanted*	1		
Unplanned but wanted	1.91	1.41 to 2.59	0.00
Unplanned and unwanted	44.47	7.92 to 249.75	0.00
Obstetric history (extra-uterine pregnancy, molar pregnancy or abortion)			
No*	1		
Yes	1.53	1.04 to 2.24	0.03
Socioeconomic factors			
Educational level			
High*	1		
Medium	1.07	0.80 to 1.45	0.64
Low	1.92	1.36 to 2.70	0.00
Net household income			
Average*	1		
Below average	1.64	1.11 to 2.44	0.01
Above average	0.73	0.51 to 1.04	0.08
Did not want to say	1.20	0.80 to 1.80	0.37

- Table 3 continues -

- Table 3 continued -

Supplementary insurance			
Yes*	1		
No	1.51	1.07 to 2.14	0.02
Sociocultural factors			
Partner			
Native Dutch*	1		
First-generation non-Dutch	3.27	2.23 to 4.80	0.00
Second-generation non-Dutch	1.23	0.7 to 2.07	0.43
No partner	4.87	2.51 to 9.48	0.00
Language spoken at home			
Dutch*	1		
Other	3.73	2.48 to 5.61	0.00
Psychological factors			
Perceived locus of control concerning their own health			
A lot*	1		
No or hardly	1.60	1.16 to 2.20	0.00
Perceived health status			
Good*	1		
Poor	1.10	0.83 to 1.47	0.50
Fear of giving birth			
Less anxious*	1		
Anxious	1.28	0.98 to 1.66	0.07
Fear of bearing a handicapped child			
Less anxious*	1		
Anxious	0.86	0.66 to 1.13	0.29
Pregnancy-related concerns about their appearance			
Less anxious*	1		
Anxious	0.99	0.75 to 1.30	0.94
Health behaviour factors			
Smoking			
No*	1		
Yes	1.36	0.90 to 2.04	0.14

- Table 3 continues -

- Table 3 continued -

Alcohol			
No*	1		
Yes	0.99	0.65 to 1.49	0.96
Folic acid			
Yes*	1		
No	3.99	2.85 to 5.57	0.00
Body mass index			
Not overweight*	1		
Overweight	1.18	0.85 to 1.64	0.32
Obese	1.63	1.06 to 2.49	0.02
Accessibility of the midwifery practice			
Calling the midwifery practice			
No problem or never tried*	1		
Problem	1.00	0.71 to 1.40	0.98
Visiting the midwifery practice			
No problem*	1		
Problem	1.38	0.75 to 2.54	0.30
Booking appointments with the midwifery practice			
No problem*	1		
Problem	2.03	1.24 to 3.33	0.01

* = Reference category

Significance level: $p < 0.25$.

Variables in bold were significantly associated with prenatal care utilisation and retained in the corresponding category for the multilevel blockwise logistic regression analysis

First and second-generation non-western women's prenatal care utilisation compared to native Dutch women

Table 4 shows the results of the multivariable logistic regression analyses. The unadjusted odds of first and second-generation non-western women making inadequate use of prenatal care are 3.26 (95% CI 2.13-5.00) and 1.96 (95% CI 1.08-3.57) times greater than for native Dutch women.

Table 4. Unadjusted and adjusted odds ratios, 95% confidence intervals (95% CI) and percentage change in odds ratios for inadequate use of prenatal care according to generation (assessed by multilevel blockwise logistic regression analyses; reference category: native Dutch women)

	First-generation non-western			Second-generation non-western		
	OR	95% CI	% change	OR	95% CI	% change
1. Unadjusted	3.26	2.13 to 5.00		1.96	1.08 to 3.57	
Separate blockwise analyses:						
2. Adjusted for demographic and pregnancy factors	2.61	1.65 to 4.13	-29%	1.94	1.04 to 3.59	-2%
3. Adjusted for socioeconomic factors	2.13	1.32 to 3.43	-50%	1.78	0.97 to 3.27	-19%
4. Adjusted for sociocultural factors	1.14	0.59 to 2.18	-94%	1.10	0.55 to 2.22	-90%
5. Adjusted for psychological factors	2.94	1.87 to 4.62	-14%	1.74	0.93 to 3.23	-23%
6. Adjusted for health behavioural factors	1.80	1.08 to 3.02	-65%	1.79	0.94 to 3.42	-18%
7. Adjusted for accessibility factors	3.31	2.16 to 5.08	2%	1.99	1.09 to 3.63	3%
Blockwise structured model:						
8. Adjusted for demographic and pregnancy factors	2.61	1.65 to 4.13	-29%	1.94	1.04 to 3.59	-2%
9. Model 8 & socioeconomic factors	1.87	1.12 to 3.10	-62%	1.86	1.00 to 3.47	-10%
10. Model 9 & sociocultural factors	0.89	0.44 to 1.83	-105%	1.23	0.61 to 2.50	-76%
11. Model 10 & psychological factors	0.93	0.45 to 1.91	-103%	1.21	0.58 to 2.50	-78%
12. Model 11 & health behavioural factors	0.62	0.27 to 1.40	-117%	1.11	0.51 to 2.44	-89%
13. Model 12 & accessibility factors	0.64	0.28 to 1.45	-116%	1.12	0.51 to 2.47	-88%

Read % changes higher than 100% as 100%

In the *separate blockwise analyses*, the percentage changes in odds ratios demonstrate that first and second-generation non-western women's inadequate prenatal care utilisation could largely be explained by the overall effects of sociocultural factors (at 94% and 90% respectively) and to a lesser extent by health behaviour factors (65% and 18% respectively) and socioeconomic factors (50% and 19% respectively). In addition to these corresponding explanatory factors, the overall effects of demographic and pregnancy factors explained 29% of first-generation women's inadequate prenatal care utilisation, and the overall effects of psychological factors 23% of that of second-generation women.

In the *blockwise structured model*, adjusting first for demographic and pregnancy factors, then for socioeconomic factors and then for sociocultural factors resulted in a continued reduction of both first and second-generation non-western women's higher odds of inadequate prenatal care utilisation to that of native Dutch women. After adjusting for these three blocks of factors, 105% and 76% of first and second-generation non-western women's inadequate prenatal care utilisation respectively could be explained. The percentage changes in odds ratios demonstrate that first and second-generation non-western women's inadequate prenatal care utilisation could largely be explained by the direct effects of sociocultural factors, at 43% (105%-62%) and 66% (76%-10%) respectively. For first-generation women, the direct effects of two other blocks of factors also explained a large part of their inadequate prenatal care utilisation: socioeconomic factors, at 33% (62%-29%), and demographic and pregnancy factors, at 29%.

Discussion

Up to now, very few studies have examined non-western women's prenatal care utilisation according to generational status. In our study, both first and second-generation women were more likely to make inadequate use of prenatal care compared to native Dutch women, mainly as a result of late entry. After adjusting concurrently for all 6 blocks of explanatory variables, the difference in prenatal care utilisation for first and second-generation non-western women compared to native Dutch women, could be explained fully and nearly fully (88%) respectively. This lower percentage for the

second generation indicates that other factors besides those included in our study may play a minor role in the explanation of their prenatal care utilisation.

There were not only similarities but also differences in the explanatory factors for first and second-generation non-western women. Sociocultural factors contributed substantially, irrespective of generation. Socioeconomic, demographic and pregnancy factors also contributed substantially, but only for first-generation women. Explanatory factors for this difference between the first and second generations may include the second generation's higher educational level and better financial situation [23].

The major contribution from sociocultural factors sheds new light on non-western women's prenatal care utilisation. In a qualitative study conducted in Australia, Thai women whose husband spoke the official language reported that their husbands arranged prenatal care [24]. Poor language proficiency has previously been reported to be an explanatory factor for non-western women's prenatal care entry [12]. In this study we were able to quantitatively explore this further by including the ethnic origin of the partner and the language spoken at home as sociocultural factors. Our study revealed that these factors provide the bulk of the explanation of non-western women's inadequate prenatal care utilisation. However, it should not be overlooked that the language spoken at home was used as a surrogate of women's Dutch language proficiency. It might be possible that some women with good Dutch language proficiency still speak another language at home.

The substantial contribution of socioeconomic factors to the explanation of first-generation non-western women's inadequate prenatal care utilisation corresponds to findings of previously conducted studies, which reported low maternal education [12,13] and not having a paid job [13] as factors explaining at least part of non-western women's late prenatal care entry. The universal accessibility of prenatal care in the Netherlands makes this substantial contribution an interesting finding. This finding may perhaps reflect first-generation women's limited knowledge about the organisation of the Dutch prenatal care system (e.g. at what gestational age to enter prenatal care) or their daily occupations and concerns.

Demographic and pregnancy factors also contributed substantially to the explanation of first-generation non-western women's inadequate prenatal care utilisation. This corresponds to the results of previous studies, which have reported multiparity [12]; having an unplanned and unwanted pregnancy [12]; and young age [12] as factors explaining non-western women's late prenatal care entry. To gain a better understanding, the mechanisms by which some of these separate factors may affect prenatal care utilisation need to be explored further, for instance, the possible reasons behind multiparous women's inadequate prenatal care utilisation, such as less appreciation of prenatal care or the lack of childcare for the other children [11].

Our findings also show similarities to those of a systematic review on determinants of inadequate prenatal care utilisation in industrialised western countries [25]. This review, which did not specifically focus on non-western women, also reported socioeconomic factors (e.g. low educational level, living in neighbourhoods with higher rates of unemployment) and demographic and pregnancy factors (e.g. high parity) as determinants. This demonstrates that these groups of factors are not unique to non-western women. However, our sociocultural variables (i.e. language spoken at home, origin of partner) were not found in this review, and therefore do seem to relate more specifically to non-western women in industrialised western countries.

Contrary to previous research findings that pointed to folic acid use as an explanatory factor [15], the block of health behaviour factors was not found to contribute substantially as an explanatory factor in our study. The large overall effect of health behaviour factors in the separate blockwise model, but small direct effect in the blockwise structured model indicates that they mainly exert their effect on prenatal care utilisation indirectly through other factors.

The blocks with psychological and accessibility factors contributed the least, even though many new potential explanatory variables were included. It should be noted that in the blockwise structured model, these blocks of variables were added to the model last. This may have led to an underestimation of their direct effect. However, their overall effect in the separate blockwise model was also minimal.

The index used to measure prenatal care utilisation was adjusted to the guidelines of the Royal Dutch Organisation of Midwives (KNOV), and is therefore only applicable in the Dutch primary midwifery care context. Furthermore, this index only measured prenatal care utilisation (the gestational at entry and the number of prenatal visits), and did not take the content of prenatal care into account. However, adequate utilisation of prenatal care does not necessarily mean that women have received prenatal care of adequate content. Therefore, future studies combining the adequacy of the content of prenatal care and the adequacy of prenatal care utilisation are recommended. A tool assessing these two prenatal care aspects has already been developed and applied in scientific research [26,27].

Strength and limitations

A major strength of this study is the national dataset containing a large number of variables. Another strength is the adjustment of the Kotelchuck index in line with the guidelines of the Royal Dutch Organisation of Midwives (KNOV). A Kotelchuck index adjusted to the guidelines of the Dutch Society of Obstetrics and Gynaecology (NVOG) already existed [12], but this seemed less appropriate as we were focusing on primary midwifery care. The selection and classification of the explanatory variables based on theoretical frameworks may also be considered as another strength. Despite of the strengths, some limitations need to be taken into account. Firstly, we were not able to distinguish different ethnic groups within the groups of first and second-generation non-western women because this would have resulted in small subgroups. Secondly, we were not able to compare first and second-generation non-western women's prenatal care utilisation against each other, because the numbers were insufficient. Thirdly, the adjusted response rate of 62% with highly educated women being overrepresented in this sample (47.5%), may have led to an underestimation of the number of inadequate users and the contribution of socioeconomic factors.

Conclusions

There are not only similarities but also differences in the explanatory factors for first and second-generation non-western women's prenatal care utilisation. Irrespective of generation, strategies to improve utilisation should focus on women with the following sociocultural characteristics: not speaking Dutch at home, and having no partner or a first-generation non-Dutch partner. For the first generation, strategies should also focus on women with the following demographic, pregnancy and socioeconomic characteristics: age ≤ 19 or ≥ 36 years, unplanned pregnancy, poor obstetric history (extra-uterine pregnancy, molar pregnancy or abortion), low educational level, below average net household income and no supplementary insurance. These findings underline the importance of taking generational differences into account when developing strategies to improve non-western women's prenatal care utilisation. They are therefore also relevant to other western countries with substantial non-western populations, and need to be supported by more and larger studies.

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Additional file 1. Index for assessment of the adequacy of prenatal care utilisation in the Dutch primary midwifery care context (by A.W. Boerleider and E.I. Feijen-de Jong)

Gestational age at birth	Gestational age at prenatal care entry	Number of prenatal visits	Categories
0 weeks – < 12 weeks	< 12 weeks	≥ 3	4
		1-2	3
		0	1
12 weeks – < 27 weeks	< 12 weeks	≥6	4
		3-5	3
		2	2
		≤1	1
		≥ 12 weeks	*
27 weeks – < 37 weeks	< 12 weeks	≥10	4
		6-9	3
		4-5	2
		≤ 3	1
		≥ 12 weeks	*
37 weeks – < 38 weeks	< 12 weeks	≥ 13	4
		10-12	3
		6-9	2
		≤5	1
		≥ 12 weeks	*
38 weeks – < 39 weeks	< 12 weeks	≥ 14	4
		10-13	3
		6-9	2
		≤5	1
		≥ 12 weeks	*
39 weeks – < 40 weeks	< 12 weeks	≥ 15	4
		11-14	3
		7-10	2
		≤6	1
		≥ 12 weeks	*
40 weeks – < 41 weeks	< 12 weeks	≥ 16	4
		12-15	3
		7-11	2
		≤6	1
		≥ 12 weeks	*

41 weeks – < 42 weeks	< 12 weeks	≥ 17	4
		12-16	3
		8-11	2
		≤7	1
	≥ 12 weeks	*	1

Ad Irrespective of the number of visits*

1. Inadequate (gestational age at prenatal care entry ≥ 12 weeks *and/or* received < 50% of expected visits)
2. Intermediate (gestational age at prenatal care entry < 12 weeks *and* received 50%-79% of expected visits)
3. Adequate (gestational age at prenatal care entry < 12 weeks *and* received 80%-109% of expected visits)
4. Adequate Plus (gestational age at prenatal care entry < 12 weeks *and* received ≥ 110% of expected visits)

4

‘Unaware, unable and unready’: a qualitative study on the reasons for late prenatal care entry by non-western migrant women

This article has been submitted for review as:

Agatha W. Boerleider, Melanie C. Aveloo, Anneke L. Francke, Judith Manniën, Therese A. Wieggers, Walter L.J.M. Devillé. *“Unaware, unable and unready”: a qualitative study on the reasons for late prenatal care entry by non-western migrant women.*

Summary

Background

Non-western women living in western industrialised countries are more likely to enter prenatal care late than native women. Quantitative research has tried to explore the factors associated with late entry, but has not been able to give a full explanation. The main objective of our study was to find more explanations in greater depth for why some non-western women in the Netherlands enter prenatal care late, in contrast to non-western women who had entered prenatal care in good time.

Method

Qualitative semi-structured interviews were conducted. Thirty-six non-western women were interviewed individually between February 2012 and March 2013. Interview transcripts were analysed by two researchers who compared and discussed their results. Analytical codes were organised into subthemes and main themes.

Results

All women, whether entering prenatal care on time or late, perceived prenatal care as an important way of ensuring their babies' health and their own. However, late starters reported various underlying reasons for late entry which could be classified into three subthemes: not aware of the pregnancy, not able to access prenatal care and not yet ready to start prenatal care in terms of emotions, perceptions or circumstances.

Conclusion

Those starting late and on time share a common motivation for prenatal care entry. However, various practical and personal reasons may lead to late entry. These can be addressed by improving non-western women's knowledge of pregnancy symptoms, what to do next if a pregnancy has been confirmed, the organisation of the prenatal care system, illegal women's entitlement to prenatal care and the benefits of early prenatal care.

Background

One of the characteristics of our globalising world is the worldwide phenomenon of international migration. Thirty-three of the 36 million people who migrated between 1990 and 2005 settled in industrialised countries, and approximately half of all migrants worldwide are women [1]. Research in these industrialised countries has revealed that non-western women from Asia, North Africa and sub-Saharan Africa are at higher risk for adverse pregnancy outcomes, such as foeto-infant mortality [2]. This finding directs attention to non-western women's prenatal care utilisation, as prenatal care is generally acknowledged to be effective in preventing adverse pregnancy outcomes when started early in pregnancy. Its benefits are undisputed, and it is considered to be effective in detecting and treating complications, providing timely interventions, promoting a healthy lifestyle and facilitating informed choice in prenatal screening [3]. Nonetheless, non-western women in industrialised countries are more likely to enter prenatal care late [3-5].

In the Netherlands - which has a substantial non-western population in general (11.6%) and even more so specifically in maternity care (18.7% of all live births) - late prenatal care entry has also been reported as being more likely among non-western women than among native Dutch women [6]. A few studies have been conducted in the Netherlands aiming to understand the factors associated with non-western women's late entry. The most important factors found were young age, multiparity, unplanned pregnancy, low maternal education, unemployment, poor language proficiency [7,8]. However, these factors did not statistically provide a complete explanation for all non-western ethnic groups' late prenatal care entry [7,8]. In another study – a telephone survey conducted in Canada – language barriers, lack of knowledge about the western healthcare system and arriving in the new country late in pregnancy were some important barriers reported as affecting South Asian women's access to perinatal care [9]. Because the quantitative studies were only partially able to explain non-western women's late entry or did not examine the extent to which reported factors explained non-western women's late prenatal care entry, it was reasoned that qualitative literature might be able to provide additional understanding on this topic.

Qualitative research exploring the reasons behind non-western women's late prenatal care entry in western industrialised countries is scarce. Qualitative studies that have given some insights into this topic have mostly reported these findings as part of non-western women's experiences with the maternity care systems of Australia, the USA, Canada and Germany (among others). Some important reasons reported by these studies are lack of knowledge of the western healthcare system [10], poor language proficiency [11,12], shame of being undressed [13], reluctance to be touched by health workers [14], prioritising resettlement over prenatal care entry [15] and late discovery of the pregnancy [16]. Whether these studies provide a full picture of the reasons behind non-western women's late entry is unclear. It can be argued that a qualitative study specifically designed to explore the reasons behind these women's late entry might provide hitherto unknown reasons for late entry and thus more insight into this topic.

To our knowledge, thorough qualitative research specifically exploring the reasons why some non-western women enter prenatal care late is still lacking. We therefore decided to conduct this study ourselves. Late entry was defined as entry at a gestational age of 12 full weeks, a definition that was based on a number of arguments. Firstly, pregnant women should receive health education, lifestyle advice, information and counselling about prenatal care screening in good time. Secondly, ultrasound scans conducted at 12 weeks' gestation or earlier let the pregnancy be dated better [17]. Finally, the optimum gestational age for conducting prenatal serum screening for Down's syndrome in the Netherlands is between 10 and 12 weeks [18,19]. The focus of our study was on the four major non-western groups in the Netherlands (Turks, Moroccans, Surinamese and Antilleans/Arubans), who also have a longer history of migration to the Netherlands than other non-western groups. The research question addressed was: why are some non-western women of Turkish, Moroccan, Surinamese and Antillean/Aruban origins in the Netherlands late in entering prenatal care with a primary care midwife (i.e. the designated professional for first line prenatal care in the Netherlands), whereas other women with same origins enter in good time?

Methods

A generic qualitative approach was used for this study. This approach attaches importance to a declaration of the researcher's position, congruence between methodology and method, a clear articulation of the researcher's approach to rigour and an explanation of the analytic lens, without using one specific qualitative methodology as a guide [20]. As we were interested in the personal motives and reasons that play a role in some non-western women's late prenatal care entry, individual interviews seemed most suitable. Emotional and sensitive topics in particular might be more readily discussed in individual interviews rather than for instance in focus groups.

Recruitment and sample

Criterion sampling was used to recruit non-western women. This type of purposive sampling is characterised by selecting individuals who meet some predefined criteria and seemed most appropriate to explicitly select participants who are likely to provide useful data to answer the research questions [21]. The predefined inclusion criteria were: 1) belonging to one of the four major non-western groups in the Netherlands (Turks, Moroccans, Surinamese and Antilleans/Arubans); 2) being pregnant or having given birth less than one year ago at the time of the interview; 3) having started prenatal care with a primary care midwife either on time (< 12 weeks' gestation) or late (\geq 12 weeks' gestation).

Recruitment of participants used several strategies and was focused on those who started both late and on time. Initially, participants were invited through the midwives of five primary midwifery care practices located in urban areas known to have large numbers of non-western residents. Because this yielded only five interviews, several other strategies were then adopted. Firstly, women were approached face-to-face by researchers in the waiting rooms of four primary midwifery care practices in urban areas. This recruitment strategy was more successful and resulted in 21 interviews. Secondly, nine women were recruited through the researchers' network. Lastly, one woman was recruited through snowball sampling. During the course of recruitment, late starters lagged behind those who started on time and so the final months of recruitment were focused entirely on late starters.

A total of 36 non-western women were interviewed individually; 22 who started on time and fourteen late starters. Table 1 gives an overview of the characteristics of the women included. The women who started on time were aged between 20 and 38 and parity ranged from zero to two. Six were of Surinamese origin, four Antillean/Aruban, six Turkish and six Moroccan. Fourteen were first-generation non-western women (i.e. born outside the Netherlands) and eight belonged to the second generation (i.e. born in the Netherlands). The late starters were aged between 18 and 39 with parity ranging from zero to four. Eight were of Surinamese origin, one Antillean, two Turkish and three Moroccan. Twelve were first-generation non-western women, and two belonged to the second generation.

Twenty-three interviews were conducted by AB or MA, who studied medicine/public health and nursing/health sciences respectively. Their interest in this topic was awakened by their non-western (Surinamese) background, and their knowledge of non-western women's prenatal care entry in the Netherlands. In addition, five interview assistants of Moroccan (2), Turkish (2) and Dutch origin (1) carried out thirteen interviews. The researchers and the interview assistants all presented themselves as researchers to the interviewees. To avoid late starters feeling they were perhaps being reproached, all interviewees were told that the interviews were being conducted to gain insights into non-western women's experiences of prenatal care.

The interviews - data collection

The interviews were guided by a semi-structured topic list, but interviewees were also encouraged to raise relevant matters not included in the list. The topic list consisted *inter alia* of questions about how the pregnancy was discovered, what happened between then and the first prenatal first visit and the experience with prenatal care. The list was compiled by AB, MA and WD after reviewing existing relevant literature on non-western women's prenatal care utilisation and on factors determining healthcare use [22].

The interviews were conducted in Dutch. For Turkish or Moroccan migrant women who did not speak good Dutch, the interviews were conducted in Turkish or Arabic (migrants from Suriname and the Dutch Antilles/Aruba speak Dutch, as these are former Dutch colonies). In total, 33 interviews were conducted in Dutch, one in Turkish and two in Arabic. The average

Table 1. Characteristics of the women according to timeliness of prenatal care entry (N= 36)

	Started prenatal care on time (N= 22)	Started prenatal care late (N=14)
Ethnicity		
Surinamese	6	8
Antillean/Aruban	4	1
Turkish	6	2
Moroccan	6	3
Age		
≤ 19	1	0
20-35	20	11
≥ 36	1	3
Parity		
Nulliparous	8	3
Primiparous/multiparous	14	11
Marital status		
Single or living apart together	6	5
Married or living together	16	9
Educational level		
Low	4	4
Medium	9	6
High	9	4
Generation		
First generation	14	12
Second generation	8	2

length of an interview was 48 minutes. They were conducted at the interviewees' preferred locations: at home, a room at the midwifery practice or a public place such as a park. All interviews were audiotaped, except in three cases where the interviewees objected. In these cases, hand-written notes were made by the interviewer. Recruitment of new interviewees was continued until data saturation was attained, i.e. the point at which no new information or themes were observed in additional

data [23], for those who started both late and on time. After each interview, the participant received a gift certificate of ten euros.

Analyses of the data

Each audiotape was transcribed fully, verbatim. Analysis of interview transcripts was part of a cyclic process of data collection and data analysis. After each interview, the first author read the transcript several times, listened to the audiotape, gave codes to interview fragments related to the research questions and analysed each interview thematically [24]. The second researcher also independently coded and analysed 50% of the interviews – those which had generated the richest data – after which the researchers compared and discussed their results. The analytic lens was focused on both the discovery of pregnancy and the circumstances, considerations and subsequent actions up until prenatal care began. The subthemes and main themes emerging from this process of analysis were ordered with the help of the software program MAXQDA [25].

Ethical aspects

This study obtained ethical approval from the medical ethics committee of the VU University Medical Center in the Netherlands. All interviewees received written and verbal information about the aim and content of the interviews, whereupon they individually gave written informed consent to be interviewed. They also gave written informed consent to be audiotaped, except the three mentioned earlier who refused audiotaping. The researcher promised that the interview data would be handled confidentially and confirmed this by signing the confidentiality agreement on each interviewee's consent form.

Results

The interviewees talked enthusiastically about their pregnancies and prenatal care in the Netherlands. The prenatal care system in their countries of origin was discussed much less, as very few had any knowledge or experience of this. Several reasons explaining the timing of these non-western women's prenatal care entry were identified. These reasons were categorised into two main themes: (1) ensuring the health of mother and child, as the reasons for entering

prenatal care on time; (2) being unaware, unable or unready, as the reasons behind late prenatal care entry.

Ensuring the health of mother and child

All women who had started prenatal care on time described ensuring their babies' health and their own as their motivation to start prenatal care early, although the vast majority did not know at what gestational age they were expected to register for this type of care. For many of these women, starting prenatal care early to ensure their babies' and their own health was the most obvious thing to do.

It wasn't a question of being motivated – it just had to happen. I didn't have any particular motivation behind it. It was just something that had to be done. That's how it should be!...Yes, for me there wasn't anything like that.
(Antillean/Aruban, 22 years, nulliparous)

Some women reported other reasons. They explained that they were very aware of the impact of their own health on their baby's, and therefore wanted to start prenatal care early. Furthermore, a few reported fear of an adverse pregnancy outcome as another reason. The fear was caused by previous adverse pregnancy outcomes e.g. extrauterine pregnancy or close contact with disabled children in daily life. Anxiety that this might occur (again) led them to start prenatal care early.

Look, I'm a bit older, so they say I'm at higher risk for complications. I don't know. But just checking your blood pressure, checking whether your baby is growing well or if it is too big. Just the normal check-ups to check everything. Then it's obvious that you're going to the midwife who checks this, so yes.
(Moroccan, 40 years, primiparous)

I'm just scared. With my daughter [first pregnancy] I also wanted to do an amniocentesis, but that's when you're 35 years and so. I don't know. I don't know, really I don't. But with my daughter it was also like this. Because I often went with my

mother [to a nursing home for disabled children] and there you see... I have seen how hard it is. I wouldn't be able to do it.
(Antillean/Aruban, 26 years, primiparous)

Being unaware, unable or unready

Similarly to the women who started prenatal care early, all the women who started late mentioned ensuring their own and their babies' health as their main reason for entering prenatal care. Nevertheless, various underlying reasons had led to their late start. These underlying reasons were categorised into three subthemes: 1) *being unaware*, for women who recognised their pregnancy symptoms late; 2) *being unable*, for women who experienced difficulties accessing prenatal care on time; 3) *not being ready*, for women whose beliefs and personal reasons stopped them from entering prenatal care on time.

Being unaware

Several women explained that they started prenatal care late due to late recognition of their pregnancy signs. Some women explained that they discovered their pregnancy after visiting their general practitioner for complaints which they had not associated with a pregnancy. Others explained that even though they had pregnancy symptoms such as fatigue and nausea, they did not consider themselves to be pregnant, as they were still "menstruating".

How did I discover it... I became nauseous. Then I was in doubt. I wasn't sure because I had been menstruating. Then I called the midwife. So then I made an appointment to be sure. Then she said that I could be pregnant. That it could be nine weeks. When I was there, it turned out to be 12 weeks. And... I was pregnant while menstruating and I didn't know. I was pregnant but also menstruating in the meanwhile. So it is possible.
(Moroccan, 28 years, multiparous)

Another woman explained that she thought she could not get pregnant anymore, as she was older than 40. Therefore she did not connect her amenorrhoea to pregnancy. This woman recognised and confirmed her

pregnancy in a later stage and was therefore unable to start prenatal care on time.

I felt it [the baby], but I thought... no, I can't be pregnant... it can't be. I am so old. I can't get pregnant anymore.
(Surinamese, 41 years, multiparous)

Within the group who started on time, there were none who reported having had complaints that were eventually associated with a pregnancy by their general practitioner. Furthermore, there were also none who reported menstruating during their pregnancy or who initially denied their pregnancy symptoms.

Being unable

Being unable to access prenatal care on time was another reason for entering prenatal care late. For one illegal immigrant woman, lack of information about entitlement to prenatal care and fear of high charges kept her from registering for prenatal care. She was afraid of being deported back to her home country. She only started prenatal care after family members had informed and reassured her that she was entitled to prenatal care. Another woman, wife of an expat, explained that she had immigrated to the Netherlands while she was pregnant and that it took a while before her insurance was arranged. She also reported a fear of high charges as a reason for not starting prenatal care before her insurance was arranged, which led to late entry.

Because I was afraid that... I was not insured. I really thought: what will happen? Interviewer: What were you afraid of? Interviewee: the costs. Interviewer: The costs. So not so much afraid in the sense of: I am not insured, people should not know this otherwise I will be deported. Interviewee: I also thought about that. Interviewer: You also thought about that. Interviewee: Yes. But my niece and aunt reassured me. They said: no, you are entitled to healthcare. That. It made me feel a bit more calm.
(Surinamese, 26 years, primiparous)

Got delayed yes... when everything was okay...only then could I go to a midwife. First you have to be insured, everything has to be checked. Because I've heard you have to pay a lot [if you're not insured]. Yes, if I just go somewhere for some medicine I instantly get a bill.

(Surinamese, 29 years, nulliparous)

Being unable to confirm a pregnancy was another reason for late prenatal care entry. One unmarried woman explained that she did not know where to do a pregnancy test during her vacation in Turkey, and how she dared not ask her father or younger sisters.

Well I actually had a feeling but I didn't want to believe it. And at that moment I was on vacation in Turkey, so I didn't know how to do a test there and so on. And I also couldn't ask anybody, because I only had my father and my younger sisters with me. So when we returned to the Netherlands I did a test; no, I made an appointment with my general practitioner. And he felt my belly and immediately said that I was pregnant. And then I cried at once.

(Turkish, 18 years, nulliparous)

None of those who started on time was an illegal resident or had migrated very recently to the Netherlands. Within this group, there were also no reports of difficulty accessing prenatal care or diagnosing the pregnancy.

Being unready

Not being ready to accept or reveal their pregnancy was also mentioned as another reason for entering prenatal care late. For one woman, not being ready to accept an unplanned pregnancy led to her considering an abortion. After much deliberation she decided to keep the baby, but by the time prenatal care was started her pregnancy was in an advanced stage. For another woman, not being ready to reveal the pregnancy was caused by an overwhelming fear of disapproval from her religious family. This led her to keep the pregnancy secret and start prenatal care late.

I wasn't sure if I wanted to keep it, so I checked whether I could remove it. Blablabla... I don't know. And then I decided to do it, but eventually I didn't dare. And then I thought: well, leave it. So first to my general practitioner. Then I thought for a while: will I keep it or not? And then...? Let's check. I first... I think I had an ultrasound first. But by then it was already 10 weeks and 2 days I think. And then I said: well, I will check whether I will do it or not. And eventually I didn't do it.

(Surinamese, 31 years, nulliparous)

Yes, but only I was afraid to tell my grandmother. That was the only reason. I don't know. I thought: she will be mad at me and yes we are religious. She always told me, I want you to marry first.

(Surinamese, 22 years, nulliparous)

Besides not being ready to accept or reveal a pregnancy, not being ready to start prenatal care was also mentioned as another reason for late entry. Perceiving pregnancy as a natural process which does not need early attendance, especially when the mother has given birth before, was given as an explanation. In addition, the total number of prenatal care visits, which some perceive as being 'too many', is automatically reduced by entering late. Another reason for not being ready to start prenatal care was the need to resolve socioeconomic problems that seemed to outweigh the need to start prenatal care early. It is worth noting that these women did report appreciating prenatal care. Nevertheless, they entered late because they saw prenatal care as starting too early and involving too many prenatal visits that they thought unnecessary for multiparous women and because of serious socioeconomic problems outweighing the importance of early prenatal care.

Yes, but I am already used to that. It's just a pregnancy. Why should I walk back and forth? I am already so tired. So it's only... yes the ultrasound is important. But the rest... walking back and forth to the midwife, I do not like it. No, I went [to the midwife], but I found it... Once I have registered, I have to comply. But I find it annoying. It's not like I didn't attend my appointments, because then they'll be nagging at me. But I

always postpone it [first visit] for a very long time. What they don't know won't hurt them, right?
(Antillean/Aruban, 39, multiparous)

In the beginning I didn't go, we had some problems. You know, we don't have a house and so on. I went much later.
(Moroccan, 25 years, primiparous)

Within the group who started on time, there was one woman who was initially not ready to accept her pregnancy as she wanted to travel around with her husband before starting a family. However, a close family member convinced her very early on that the pregnancy was a gift from God and that travelling with her husband would still be possible. This made her embrace her pregnancy and start prenatal care early. Believing that pregnancy did not need early attendance was not raised during the interviews with any of those who started on time.

Discussion

This study explored reasons behind some non-western women's late prenatal care entry in contrast to non-western women who had started prenatal care on time. A reason behind the timely use of prenatal care concerns the first theme, namely 'ensuring the health of mother and child'. This theme is in line with previous research, which reported that believing that prenatal care ensures the baby's well-being [13,26], and believing in looking after your own health for a healthy baby [26] do positively affect non-western women's prenatal care entry. From the existing literature on health-seeking behaviour, it is known that fear can be a motivator or barrier, depending on its cause and the way it is coped with [27]. Our study revealed that fear of an adverse pregnancy outcome positively affected the timing of a few women's prenatal care and thus their babies' health and their own. It also revealed that those who did not start on time also appreciated prenatal care and believed it was important to assure their own and their baby's health.

The second theme, 'being unaware, unable or unready', gives new insights into the reasons for non-western women's late prenatal care entry. It demonstrates that the reasons for late entry reflect three different aspects of the prenatal trajectory: discovery of the pregnancy, being ready for the pregnancy and prenatal care, and access to prenatal care. Some previous quantitative studies have classified factors associated with or explaining non-western women's late entry according to theoretical frameworks such as the Andersen model of healthcare utilisation, which distinguishes between predisposing, enabling and need factors [7]. This qualitative study reported the reasons for late entry according to the moment at which they exert their effect during the course of pregnancy. For example, our study shows that socioeconomic problems exert their effect at different points during the course of pregnancy: access to prenatal care ('being unable') and readiness to enter prenatal care ('being unready').

In a previously conducted American study among Caucasian, African American and Latino women, late pregnancy discovery was reported as a reason for late entry [16]. Our study confirms this, but now specifically for various groups of non-western women. Furthermore, our study revealed several explanations for the late pregnancy discovery: not recognising pregnancy symptoms, 'menstruating' while having symptoms of pregnancy and assuming yourself to be too old to get pregnant. As for barriers to accessing prenatal care, our study corresponds to findings of previous studies which have reported problems with the Immigration Service [28] and fear of deportation [29] as barriers to prenatal care for illegal women. Accumulating bills have also been reported as a barrier to prenatal care [24]. The delay in entry by newly arrived pregnant immigrant women who still have to arrange insurance is in line with findings from a quantitative Canadian study, which reported arriving in the new country late in pregnancy as a reason for not attending prenatal classes among South Asian women [9]. Not being ready for pregnancy and prenatal care yielded several new insights into non-western women's delayed prenatal care entry: considering an abortion, fear of disclosing the pregnancy to a religious family who might disapprove and attempting to reduce the total number of prenatal visits. The other reasons falling under this theme have been described in two previously conducted studies: socioeconomic problems, which may outweigh the need to enter prenatal care early [15],

and viewing pregnancy as a normal healthy state that does not require special medical attention [30].

In the Netherlands, healthcare is universally accessible in the sense that all residents and individuals paying income tax are compelled to purchase health insurance that covers healthcare, including prenatal care. Persons residing illegally in the Netherlands are not entitled to purchase health insurance, but – in the case of ‘medically necessary care’ that they cannot afford to pay for – care providers may get 80% of the costs reimbursed. Only in cases of pregnancy and childbirth are care providers fully reimbursed [31]. Nevertheless, our study shows that this provision is not sufficient to guarantee early prenatal care entry. Illegal women may not be informed about their entitlement to prenatal care, while recently immigrated pregnant women may get caught up in the application procedure for health insurance. A different organisation of the prenatal care system in the country of origin has also been suggested as a reason for late entry by some non-western women in the Netherlands [8]. In our study, most of the women interviewed had no knowledge of the prenatal care system in their country of origin. Those who did know about it did not report this as affecting their prenatal care entry. Most of the women who entered prenatal care on time in our study did not know at what gestational age they were expected to register with a midwife. These women were aiming for prenatal care early in general, rather than trying to be on time for some specific moment. It is striking that the Royal Dutch organisation of midwives (KNOV) views pregnancy as a natural process that can be supervised in primary care with an emphasis on a patient-centred focus and appropriate risk selection, while our study showed that a client perspective that views pregnancy as a natural process may lead to late entry. A shared belief in pregnancy being a normal process does not therefore necessarily mean a corresponding opinion about the timing of prenatal care entry. In practice, clients may shape this belief by entering late, contrary to what midwives expect them to do.

Strengths and limitations

This qualitative study adds to the existing qualitative and quantitative literature, and its design - defining and comparing women who had entered prenatal care on time and late with each other - may be considered a strength. The focus on the four major non-western groups who have a

longer history of migration in the Netherlands than other non-western groups in the Netherlands may also be considered a strength. Although other industrialised countries might have different non-western groups or different cut-off points for late entry, our findings may still be relevant. This might mean that it is worth listing the reasons for not entering prenatal care along the timeline of the pregnancy; a clear overview showing when they play a role could help target the measures. One limitation of this study is the lack of a uniform definition of late prenatal care entry in the existing literature, which limits direct comparison of our findings with those of other studies. Another limitation of this study is the lack of separate analysis according to ethnic background. This would have required recruitment of many more non-western women from all four ethnic groups, which was not feasible due to financial and time constraints, and the arduous recruitment process.

Implications

The insights gained from this study are useful for developing measures aimed at improving non-western women's prenatal care entry in the Netherlands and other western countries. The subtheme of 'being unaware' implies that more knowledge about pregnancy symptoms is needed if pregnancies are to be recognised early. The subtheme of 'being unable' implies that knowledge about the organisation of prenatal care and entitlement to it is needed if prenatal care is to be accessed in good time. Both can be achieved by providing information about pregnancy symptoms, what to do next if a pregnancy has been confirmed, organisation and entitlement to prenatal care through community and cultural organisations. Also, midwifery and general practices should provide this information on their websites and on leaflets. The second subtheme also implies that pregnant women who immigrated recently should qualify for an accelerated registration procedure for health insurance. The reasons falling under the last subtheme of this study, 'being unready', reflect personal beliefs and circumstances, which are more difficult to address. Nevertheless, this should be attempted by placing emphasis on the benefits of early prenatal care in the aforementioned education materials. Perhaps these benefits may outweigh these women's fear for disclosure of their pregnancy or serious socioeconomic worries. Women still considering an abortion at a later point in pregnancy should be advised to start prenatal care while awaiting their final decision. Finally, future research focused on

the reasons behind late prenatal care entry among non-western groups with a shorter history of migration may add to the existing knowledge.

Conclusions

The findings of this study show that women who had entered prenatal care on time and late both appreciated prenatal care and believed it was important to assure their babies' health and their own. However, various underlying reasons may lead to late entry. These reasons were categorised into three groups: late discovery of the pregnancy, difficulties accessing prenatal care on time and personal beliefs and circumstances leading to late entry. These reasons for late entry can be addressed by improving non-western women's knowledge of pregnancy symptoms, what to do next once a pregnancy has been confirmed, the organisation of and entitlement to prenatal care, and the benefits of early prenatal care.

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'A mixture of positive and negative feelings': a qualitative study of primary care midwives' experiences with non-western clients living in the Netherlands

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Abstract

Background

Non-western women living in the Netherlands are diverse in origin, which implies diversity in their needs and expectations for midwifery care. Furthermore, it has also been shown that non-western women make suboptimal use of prenatal care. Midwives may therefore face difficulties when caring for these clients.

Objective

The main objective of our study was to explore Dutch primary care midwives' experiences with non-western clients.

Methods

A qualitative design was used. Thirteen midwives were interviewed individually and 8 participated in a focus group. All interviews were transcribed and analysed by two researchers who compared and discussed their results. Analytical codes were organised into subthemes and main themes.

Results

Midwives perceived ethnic diversity as both difficult and interesting. Caring for these women was perceived as demanding, but also rewarding. They experienced a variety of difficulties when caring for these women: communication problems, suboptimal health literacy, socioeconomic problems, lack of knowledge of the maternity care system, pressure from the family and a strong preference for physicians. In spite of these difficulties, midwives aim for optimal care by being alert and proactive, taking these women by the hand and making use of alternative resources.

Conclusion

Provision of care to non-western clients can be difficult and may require additional measures. These problems and measures should be included in midwifery education programmes as well as training programmes for midwives.

Introduction

Migration to the more developed regions of the world has shown a rising trend over the past years. The proportion of migrants worldwide living in more developed regions of the world increased from 53% in 1990 to 60% in 2010. Female migrants exceeded male migrants in number and comprised 51.5% of the migrant population in these regions [1]. Several studies conducted in developed countries have shown that the needs and expectations of migrants in terms of maternity care are not always met by the healthcare system [2-4]. Healthcare systems tend to focus their care mainly on the majority population and are not responsive enough to the ethnic diversity within the client population [2-5].

In the Netherlands, 11.4% of the population in 2011 was of non-western migrant origin, in the sense that at least one parent was born in Africa, Asia, Latin America or Turkey. Data from 2010 show that non-western women contributed 17.7% of all live births [6]. In the three major cities of the Netherlands – Amsterdam, Rotterdam and The Hague – they in fact contributed 47, 48 and 42% of the births respectively [7]. It can be concluded from this data that Dutch midwives, especially those working in the major cities, are providing care to a client population of which a substantial part is non-western in origin. These non-western clients are very diverse in origin, with Turks, Moroccans, Surinamese and Antilleans/Arubans comprising the largest groups in the Netherlands. This diversity in country of origin implies a diversity in cultural backgrounds and hence a variety of needs and expectations regarding maternity care. The Royal Dutch Organization of Midwives (KNOV) attaches great importance to placing women at the centre of care. This implies that midwives have to take the cultural background and the specific needs and expectations of their clients into account.

Non-western clients have also been shown to make suboptimal use of prenatal care compared to the majority population of the Netherlands [8,9]. This less than optimal use is mainly characterised by late start of prenatal care, and may delay detection and treatment of pregnancy complications, concurrent illnesses and health problems. Two Dutch studies have reported that the late start of prenatal care explains at least part of the high perinatal mortality observed among certain non-western groups [10,11]. Furthermore, non-western clients have been shown to be at higher risk of maternal mortality and congenital disorders [12]. Thus, both the

suboptimal use of prenatal care and the different needs and expectations may complicate the provision of optimal care to non-western clients who are at greater risk for poor pregnancy outcomes.

Only a few studies in developed countries have explored the experiences of midwives or other maternity care providers with women from ethnic minorities. In a survey conducted among midwives in Spain, 67% of the 102 respondents stated that language barriers were a key difficulty in providing health education to African women [13]. Fifty-four per cent of the respondents used additional materials such as books, videos and leaflets to educate these women. In the UK, maternity care professionals were interviewed about their perceptions of the effect that ethnic background, social status and class have on service delivery for UK-born ethnic minority women [14]. The maternity care professionals perceived UK-born ethnic minority women to be more assertive and to have better language proficiency and better comprehension of the healthcare system than ethnic minority women born elsewhere. In an ethnographic study carried out in a British hospital, midwives were found to have stereotypical ideas about South Asian women that were used to make decisions about the care these women want, need and deserve [15]. These stereotypes were centred on four themes: communication problems, lack of compliance with care and misuse of services, making a fuss about nothing, and a lack of maternal instinct. In a qualitative study conducted in Ireland, communication difficulties, cultural differences and suboptimal knowledge and use of services were some of the main issues raised by maternity service providers about ethnic minority women [16]. In another qualitative study conducted in Canada, health care providers reported several differences in expectations between them and immigrant clients: language, cultural competency, the type of care provided and the medicalisation of pregnancy [17]. A focus group study conducted in Norway revealed that midwives and public health nurses encountered health challenges and cultural challenges when caring for migrant women [18]. The first three studies each focused specifically on a certain aspect of experiences with ethnic minority women: communication, the effect of the migrant's background, social status and class on service delivery or stereotypes. Only the remaining three studies considered various aspects of maternity care providers' experiences with ethnic minority women. These studies were conducted in Ireland, Canada and Norway, countries with a different migration history and different migrant groups than the Netherlands. Furthermore, the maternity care

system in the Netherlands is unique, with primary care midwives being the lead professionals providing care to women with uncomplicated pregnancies and births [19]. Dutch primary care midwives may have different experiences with non-western clients, so we decided to conduct a sub study within a national midwifery study to look at their experiences. The following questions are addressed in this article:

- 1) What specific issues do primary care midwives in the Netherlands experience in their working relationship with non-western clients?
- 2) Do these primary care midwives adjust their care for non-western clients and if so in what way?

Methods

A generic qualitative approach was used, implying that not one specific qualitative methodology was used as guidance, and that a declaration of the researcher's position, congruence between methodology and method, a clear articulation of the researcher's approach to rigour and an explanation of the analytic lens are provided [20]. Our interest in the subjective experiences and perceptions of midwives providing care to non-western clients meant that holding qualitative interviews seemed most suitable. We conducted both individual interviews and a focus group interview with midwives, letting these two methods complement each other. Particularly delicate topics might be more readily discussed in individual interviews, whereas for other topics this might be the case in a group interview, where there is a more dynamic interaction between participants.

Recruitment and sample

The individual interviews

Initially, convenience sampling was carried out by recruiting midwives from the 20 midwifery practices participating in the national DELIVER study, a large research project in the Netherlands focusing on the quality, organisation and accessibility of primary care midwifery in the Netherlands [21]. The representatives of these midwifery practices to the DELIVER study were all approached. Eight practices were willing to participate: four by their representative and four by another midwife of the practice. The main

reasons that the remaining twelve practices gave for declining to participate were few or no non-western clients or being too busy.

During the course of data collection, purposive sampling was adopted. Midwives taking a compulsory training course for intercultural midwifery care organised by their employers were approached at the end of the training by the first author, who also gave a presentation about her study during the training course. Nine midwives showed interest and were later approached by e-mail. In the end, two were willing to be interviewed. To achieve variation in our sample, final recruitment was targeted at specific categories of midwives, such as those with little work experience. Three midwives from these target categories were recruited via midwifery researchers. Interested midwives received an information letter by e-mail. Those willing to be interviewed made an appointment by e-mail or telephone with the first author.

Individual interviews were held with thirteen midwives. The midwives were all women, aged between 23 and 58. Eleven were of native Dutch origin and two of non-western origin. All the midwives were qualified to work in the Netherlands. Twelve of them were practising in primary care, while one was practising four years in secondary care after having worked for three years as a primary care midwife. As we were interested in the experiences of primary care midwives, the interview with this last midwife focused only on her experience in primary care. Ten midwives were practising in urban areas, which are known to have large numbers of non-western clients, whereas three midwives were practising in rural areas. Their experience with non-western clients ranged from 11 months to 19 years.

All individual interviews (likewise the focus group interview, see below) were conducted by the first author; a female Dutch researcher whose interest in this topic was awakened by her own non-western (Surinamese) background. She studied medicine and public health, and had a training in qualitative research methods in medical anthropology. She presented herself as a researcher to the interviewees, who were all unfamiliar to her beforehand. Interviewees were explained that the interviews were conducted as part of a larger study exploring factors affecting midwifery care utilisation by non-western women in the Netherlands.

The focus group interview

For the focus group, the head of a regional midwifery group (Verloskundigen Kring) located in an urban area was asked permission to

hold a small focus group within one of the group's regular meetings. A total of 8 primary care midwives were present at this regional midwifery meeting, which we were allowed to attend. They were all females of native Dutch origin, aged between 28 and 58, whose experience with non-western clients ranged from 6 to 19 years.

Interviews; data collection

The individual interviews

A semi-structured topic list was used to guide the interviews, although the interviewees were also encouraged to raise issues that were relevant to them but not included in the topic list. As Dutch midwives provide care in the prenatal, natal and postnatal periods, the list explored their experiences in all these three stages of care. It was reviewed by six research experts (including two midwives) and was drawn up using existing literature and the model of Foets *et al.* The latter is an elaboration of the Andersen model of healthcare utilisation in which ethnic differences in healthcare use are explained by various underlying factors such as migration-related characteristics, cultural factors, socioeconomic status, social network, accessibility of healthcare, personal treatment by healthcare professionals and communication [22]. Prior to data collection, the topic list and semi-structured interview style were tested in a pilot interview with a midwife. The interviews were conducted in Dutch, varying in length between approximately 60 and 90 min. They were conducted at the preferred location of the midwives: eleven in the midwifery practice, one at the coordinating health centre to which the midwifery practice was connected, and two at home. The number of midwives to be interviewed was not predetermined. Interviewing was continued until data saturation was attained, i.e. the point at which no new information or themes were observed in additional data [23].

The focus group interview

The focus group was conducted after finalisation of the individual interviews. Like the individual interviews, it was guided by a semi-structured topic list and participants were also encouraged to bring forward any other relevant information. The topic list also covered all three stages of care and focused on the subthemes and main themes that emerged from the individual interviews.

The focus group was conducted in Dutch and lasted approximately 35 min due to time constraints of the midwives. An assistant was responsible for audiotaping the interview and taking notes. The focus group was conducted in the meeting room of a healthcare organisation.

Analyses of the data from the individual interviews and the focus group interview

The audiotapes of each individual interview and the focus group interview were transcribed fully and verbatim. Analysis of the individual interviews was part of a cyclic process of data collection and data analysis. Shortly after each conducted interview, the first author read the transcript several times and listened to the audiotape. Subsequently each interview was analysed thematically [24]. Each of the co-authors independently analysed two or three interviews as well, whereupon they discussed their results with the first author. As the data collection and analysis progressed, new transcript sections were assigned an existing or new code, while some already coded transcript sections were recoded into more meaningful codes. Also, codes were combined and recombined into subthemes and overarching main themes (such as having a mixture of positive and negative feelings) which were also discussed with the co-authors. To improve the reliability of the analysis, the software program MAXQDA was used to support the coding and ordering of the interview material [25].

To assess the credibility of our findings, the final subthemes and main themes were discussed in a group session of a Dutch midwifery care conference and with several individual midwives.

Ethical aspects

This study was carried out as part of the mentioned national DELIVER study, which obtained ethical approval from the medical ethics committee of the VU University Medical Center in the Netherlands. All interviewees from the individual interviews and focus group received written and verbal information about the aim and content of the interviews, whereupon they individually gave written informed consent to be interviewed and audiotaped. The researcher promised confidential handling of the interview data and affirmed this by signing the confidentiality agreement on each interviewees' consent form.

Results

Several themes could be identified in the experiences of midwives providing maternity care to non-western clients. These aspects were categorised into three main themes: (1) Having a mixture of positive and negative feelings, describing the feelings midwives have about caring for non-western clients, (2) Facing challenges in the provision of care, describing the difficulties midwives experience when providing care to non-western clients, (3) Aiming for optimal care in the interests of both mother and child, describing the efforts and adjustments midwives make to guarantee good quality care for non-western clients and their babies.

Having a mixture of positive and negative feelings about caring for non-western women

All the midwives expressed feelings about caring for non-western women; some very outspoken, others less so. These feelings were best described as a mixture of positive and negative feelings, and concerned both the ethnic diversity and workload.

Finding the ethnic diversity fascinating but also quite difficult

All the midwives liked the ethnic diversity in their client population and perceived differences in customs and traditions surrounding pregnancy and birth as fascinating and interesting. Some midwives spontaneously stated that working in a midwifery practice with non-western clients and thus having a variety of cultural backgrounds among their client population was a deliberate choice and that they would not want to miss it. Simultaneously with feelings of fascination and interest in non-western clients, midwives also encountered less pleasant feelings. Some non-western clients were also experienced as difficult, particularly those not proficient in Dutch. Communicating with these clients was perceived to be more awkward.

People who can handle the language well enough. . . yes that's fine, no problem. They're like anyone else and then it's nice to notice the differences and deal with them. It gets a bit difficult with people who don't speak the language. You have to use the telephone interpreter then. And dealing with asylum seekers: I thought I would really like that but I don't, because it often doesn't go smoothly. I find that tricky. (R5)

In a few cases, midwives even expressed feelings of frustration and irritation along with feelings of fascination and interest.

Interesting, difficult. . . sometimes demanding, especially in terms of time and giving explanations. Don't get me wrong: I wouldn't want to miss it. Sometimes it frustrates me so much that I think, 'My God, why am I working in a region like this [with a lot of migrant clients]'. But I think I'd be very unhappy if I wasn't. In that sense, I am grateful. (R1)

Having a demanding but also rewarding job

When talking about the workload associated with non-western clients, a clear difference was noticed between practices with many non-western clients and those with just a few. Midwives working in urban practices with a lot of non-western clients indicated clearly that caring for some of these clients was very demanding. Some midwives working in rural areas with few non-western clients said the same, but reckoned it was manageable. They explained that the small number of non-western clients meant that the work was not experienced as very demanding, whereas it would have been if they had more non-western clients.

The main reasons mentioned by the midwives for the work being so demanding were the language barrier, a lack of knowledge of the Dutch maternity care system and the low socioeconomic status. A few midwives even felt that sometimes they were virtually in the role of a cleaning lady or police officer, as they sometimes had to do some cleaning at women's home or had to be vigilant to make sure that additional examinations such as laboratory tests were conducted.

Although midwives experienced caring for non-western clients as demanding on the one hand, they also experienced caring for them as rewarding on the other. Several midwives said that satisfaction after caring for non-western clients was high, especially when they were able to solve problems encountered during maternity care.

She had given birth in the hospital, a short-stay hospital birth. The next day, I went for a postnatal checkup. She had not arranged maternity care assistance; the whole house was dirty and the child was lying on the floor. I then had to arrange everything: maternity care assistance and the general practitioner (GP). Social work too,

because she had three children, her house was not clean and she had told me she didn't have any money. So it all had to be arranged straight away, and so you lose a whole day. I could also have said I wasn't going to do it and only arranged maternity care assistance, but social services need to know that this woman has had her third child and that she's at home. [. . .] Once everything was arranged, I could leave. But it takes a lot of time. Not everybody is as easily accessible as the midwife, especially GPs. You can't phone them in the afternoon. [. . .] and then you have to arrange it the next day. It also gives a lot of satisfaction, because then you're thinking, 'Okay, I've been very busy; all the problems have been solved and it's all fine'. (R13)

Facing difficulties in the provision of care

Various difficulties in the provision of care to non-western clients were reported by midwives. These problems could be organised into two main groups: practical challenges that complicate the provision of care, and different cultural values that cannot always be met or may interfere with the provision of care. These difficulties were more pronounced among non-western clients born outside the Netherlands, compared to those born in the Netherlands.

Facing practical difficulties

Communication problems and suboptimal health literacy. Communicating with clients who do not have a good command of Dutch was described as difficult by midwives. This was especially the case during telephone conversations, when it was not possible to use alternative means of communication such as telephone interpreters. Besides communication problems, midwives are also confronted with health literacy problems. The impact of a limited ability to read, understand and use health information was clear in the utilisation of maternity care by some clients. Notifying the midwife in the event of delayed or missed appointments, attending appointments for laboratory or ultrasound examinations outside the midwifery practice, attending group meetings about childbirth, and applying for postnatal care do not always go smoothly.

Sometimes I find it frustrating when I can't express myself to other people because of a language barrier. That sometimes makes it

difficult to explain what you mean, and so you sometimes also get the feeling that maybe you are holding things back from them... even if you're trying really hard with an iPod or Google Translate. (F)

The second generation often speaks Dutch reasonably or very well. But there are still people from the second generation who have trouble with Dutch and then. . . When they can speak a bit of Dutch or a bit of English, it can be dangerous. We think, 'Okay, we can communicate' – but then it sometimes turns out that they didn't understand. (R4)

And it's sometimes awkward with laboratory examinations, because then we have to explain that they need to go somewhere else at a certain time or for their next appointment, for example. That doesn't always happen. They may have forgotten, or not understood us, or only handed in one of the two forms given to them so we receive only half the results. But if they have someone with them who does understand, someone who understands the language and goes along with them to take care of things, then it goes very well. (R9)

Lack of knowledge of the maternity care system. The second practical problem midwives reported was limited knowledge of the Dutch maternity care system. Non-western clients, especially those not born in the Netherlands, do not always understand the role of primary care midwives and sometimes are surprised to hear that uncomplicated pregnancies and births are supervised by midwives. The appointments system in midwifery practices is also not always understood. Non-western clients are more often late for appointments, but often assume that they will still be seen by a midwife. When that is not possible and a new appointment needs to be made, they do not always understand. Another area where knowledge is lacking concerns the place of birth. They are not always aware that they can choose to give birth either at home or during a short stay at the hospital under the supervision of the primary care midwife (if they have a low risk of complications) and sometimes expect an obstetrician to lead these short stay hospital births. When the midwife informs non-western clients about postnatal care by maternity care assistants, it sometimes becomes clear

that the importance of this and the application procedure are not always understood. This lack of knowledge of the maternity care system is sometimes also seen among partners of clients, who try to insist on care being provided as they expect it to be.

Sometimes we assume that people know how it works at a birth, but there are a lot of people planning a short-stay hospital birth who think, 'Now we're going to the hospital and we'll be looked after by someone else'. And sometimes they're surprised to see that we [the midwives] go along with them, 'Hey, aren't we going to the hospital?' 'But I'll still be supervising your labour and the birth.' – 'Oh, that's nice.' Then they're very happy. Or that we'll visit them in the first week after giving birth. They don't always know that we'll come along to their home and do some checkups. They think, 'It all ends with the birth and then the maternity care assistant takes over, and I won't see the midwife anymore'. And when we tell them after the birth that we'll see them tomorrow, they think: 'Tomorrow?' And that's apparently something else they don't know. We do tend to assume they know, but it's not always the case. (R10)

The impact of socioeconomic status. The midwives indicated that they encountered socioeconomic problems among native Dutch clients as well as non-western clients. However, a few midwives did state that they encountered these issues more frequently among non-western clients in their working region. Some difficulties concerned midwifery care directly, e.g. not being able to buy the necessities for the delivery and the baby, lack of transportation options to the midwifery practice or the hospital in the case of a short-stay hospital delivery or lack of prepaid credit to telephone the midwife in the event of an emergency. Other problems influenced midwifery care more indirectly, such as debts or domestic violence. These situations often require other services such as maternity care assistance and social work to be informed and sometimes collaborated with.

If you are working here in XXX, and you go to native Dutch family with two incomes, you'll find nappies in different colours. If you go to immigrant families [...] She was having a home birth, and was from Suriname I think. She was here illegally; it was her fifth child,

and she didn't have anything at home. So we had to fill cola bottles with warm water and wrap them in clothes to keep the baby warm. She didn't have anything. She did not have a chair, nor absorbent nappies. Luckily we had spares of everything in our car. And she gave birth on the floor. It went beautifully, the birth was beautiful, but the contrast was huge. (R13)

Well, because that population [low socioeconomic status] requires much more collaboration. It requires more collaboration with other disciplines such as social work, gynaecologists and GPs. And that's difficult, because there are an awful lot [of disciplines]. (R12)

Being confronted with different cultural values

Pressure from the family. Midwives reported close involvement of the families, with the exception of refugees and asylum seekers who often do not have many family members around. This is especially apparent during the postnatal period, when family members come to stay with the new mother and take over domestic chores. As well as taking over domestic chores, the family also gives a lot of advice and information to the new mother. Most of this advice is culturally based and innocent enough, but in a few cases it can contradict the advice of healthcare professionals. In these instances, it is not always easy for midwives to convince the clients and their families about the potential hazards of certain practices.

And then I said, 'no, no, you really shouldn't do that'. The mother-in-law didn't understand Dutch, and so I said to the mother, 'You must absolutely not do this. It is very dangerous', and I explained the danger to her. Then they called me at night. 'Help, the child...' They had indeed given honey to the baby. Yeah. . . that happens sometimes. The mother in law, the way she looked at me. . . She looked at me like: you're not telling me anything, I'm older than you are, you don't have to tell me what's wise. I could see it in her eyes. You can feel that you're not being taken seriously. (R1)

Strong preference for physicians. Although Dutch midwives are autonomous medical practitioners, qualified to provide full maternity care under their own responsibility to all women with an uncomplicated pregnancy and childbirth, many midwives recognised a strong belief in physicians among

their non-western clients. The midwives sometimes referred to this belief in doctors as believing in ‘the impression of the white coat’. They talked about situations where non-western clients were anxious or worried about the pregnancy or the coming birth. In some of these cases, the clients could only be reassured by consulting an obstetrician who could convince them that everything was okay.

You notice that some people find it very pleasant to come here. They really like the fact that we are women and also emphasise it. But at the same time, they’d [some people] actually also like it if we wore white coats – that would be even better, so to speak. The white coat is actually part of it. Therein lies the duality sometimes, I think. There are still a lot of people who only feel they are being taken seriously when they are referred to a hospital or when they are in hospital. (R8)

Aiming for optimal care in the interests of both mother and child

Even though midwives sometimes experienced challenging situations in the provision of care to non-western clients, they all talked about their willingness and efforts to achieve optimal care in the interests of mother and child.

Being alert and proactive

One of the ways some midwives tried to achieve optimal care for non-western clients was by being alert. They do this by asking clients to recite the information given to them, checking whether they have the necessities for childbirth and the baby, keeping an updated overview of clients who have missed appointments and checking clients’ knowledge of the Dutch maternity care system. Some midwives also try to be proactive. Clients who do not show up for appointments are called and asked to explain the reason for missing the appointment and to make a new appointment. In cases of language difficulties, extra time is reserved for consultations. Because of anticipated difficulties in locating the laboratory or ultrasound clinic, clients may be given a printout from a route planner. In the case of a client with lower socioeconomic status, some midwives call the maternity care agency and ask them to assign an experienced maternity care assistant to these clients. Some midwives also place additional emphasis on the benefits of breastfeeding to clients who prefer formula feeding but cannot

afford it. The midwives also described how they were more likely to pay home visits to clients with whom they had difficulty communicating by telephone.

My personal experience is that it's best to pay them a home visit. I often came across some big problems by paying them a home visit. They sometimes called for something that did not seem really urgent, but when I went on a home visit, I came across something very urgent. The information I got from them wasn't complete. So most times I thought, 'I'll just pay them a home visit, and then I am reassured that everything is okay'. (R13)

Taking them by the hand

The midwives were also confronted with situations where non-western clients had received care in their native country. These clients sometimes expect the same kind of care in the Netherlands, e.g. more laboratory investigations or more ultrasound scans. In these situations, midwives have to spend extra time explaining the Dutch maternity care system, the leading role of the midwife during uncomplicated pregnancies and childbirth, and the importance of postnatal care to these clients

Well, most people are quite well aware of how it works. It also depends a bit on how big their network of family or friends is in the Netherlands. I guess they tell each other how it works. And if you have a very small network, you have no idea where to go. So, you always need to kind of check how much people actually know. I mean, she'll probably know that she needs to visit you for checkups, but may have no idea what the maternity care assistant does and may sometimes be a bit reluctant because they think, 'Well, my mother-in-law will come and do all the housework'. So then you have to invest extra time explaining that the maternity care assistant has more functions than just cleaning the house. (R2)

Using alternative methods of communication

All the midwives talked about using alternative methods of communication. Several midwives said that telephone interpreting is essential in their work with non-western clients. Even if clients bring someone along as an interpreter, it is not always possible or appropriate to discuss everything

with these lay interpreters. Telephone interpretation is preferred when discussing sensitive issues or providing important instructions to make sure that the client understands the instructions, e.g. at the beginning and at the end of childbirth. Other resources used are translated leaflets with important information about prenatal screening, preparing for childbirth and coping with pain. These leaflets can be found in various languages on the websites of the National Institute for Public Health and the Environment (RIVM) and the Royal Dutch Organization of Midwives (KNOV). The Internet was also used to show non-western clients films about childbirth. In addition to the Internet, midwives also use pictures, drawings and non-verbal communication in their contact with non-western clients who do not have sufficient command of the Dutch language.

My experience when we use telephone interpretation is that we see people perk up when they are addressed in their own language. You can use hands and feet and ask if the baby is moving well, but now she can really tell me how it is. And I must say that this always encourages me to use this method when I see what it does to people. (R7)

Discussion

This study aimed to explore the experiences of primary care midwives with non-western clients in the Netherlands. Data were collected through individual interviews and a focus group. Three main themes emerged from the analysis: *having a mixture of positive and negative feelings, facing difficulties in the provision of care and aiming for optimal care in the interests of mother and child.*

The mixture of positive and negative feelings sheds new light on the experiences of care providers with non-western clients. Whereas studies conducted previously had described negative feelings such as frustration [5,26,27] and the difficulties encountered, this study revealed that the midwives interviewed also derive positive feelings such as satisfaction from working with non-western clients.

The difficulties faced in providing care are consistent with the results of studies conducted in other western countries among midwives or other maternity care providers. These studies also reported communication

problems [13,16-18], limited knowledge of the healthcare system [14], family involvement [14] and preference for physicians [17]. Studies conducted among other health professionals have also reported communication problems [27-29], lack of knowledge of the healthcare system [29] and social deprivation [29] as issues when caring for non-western clients. Like the study by Puthussery *et al.*, we also found that those who were proficient in Dutch – mostly second generation migrants – were often perceived as less problematic. According to the model of Foets *et al.*, these factors may affect healthcare utilisation [22]. It may be argued that as the topic list was drawn upon the model of Foets *et al.*, it could be expected that the experienced difficulties would emerge as themes in this study. However, the other themes found in this study refute this argument, as they are not described in the model of Foets *et al.*

Language difficulties may affect the care given to clients and may also contribute to stereotyping behaviour by care providers who interpret these difficulties differently [30]. Use of alternative resources such as telephone interpretation, family members or friends as interpreters and translated leaflets is very helpful [5,31] but these resources are not always available and suitable. From 1 January 2012, the Dutch Ministry of Health, Welfare and Sports stopped the reimbursement for use of interpretation services in healthcare [32]. This decision was justified by placing the responsibility for a command of the Dutch language on the clients and their representatives. This may lead to less use of interpretation services, which may impede clients' ability or willingness to take an active role. Moreover, midwives' efforts to achieve optimal care in the interests of mother and child may be made more complex.

Lack of knowledge may not only affect clients' use of care, but also their expectations. This is seen when care in the Netherlands is compared to care in their native country. The Netherlands has a unique system of independently working midwives, and lack of familiarity with this unique maternity care system may explain the strong reliance on physicians by some non-western clients. Socioeconomic problems may affect the care given to clients. In this study, midwives particularly found contacting and collaborating with other institutions such as social services to be a very time-consuming aspect of care. In the task description of primary care midwifery in the Netherlands, caring for clients with a low socioeconomic status (including clients of migrant origin) was reported to require 23% more time for all healthcare activities [33]. Since 1 January 2009, the Dutch

Healthcare Authority (NZa) has implemented an extra fee for midwives working in socially deprived neighbourhoods, but not all the clients who require greater effort live in these neighbourhoods. This means that midwives are not always reimbursed for their additional efforts.

Limited literacy among some non-western clients may create difficulties in the provision of care. Clients' ability or willingness to take an active role in their own care may be hampered [34]. This also applies for the language barrier and the socioeconomic problems. Furthermore, limited knowledge of the maternity care system may also impede clients' ability to take an active role, as the clients may not be familiar with this approach in their country of origin. In the present study it was found that midwives had to take over this active role to ensure optimal care in the interest of both mother and child. This more active role was expressed by being alert and proactive, taking these women by the hand and utilising alternative resources. This more alert and proactive approach adds to the existing literature on the experiences of midwives and other maternity care providers with non-western clients.

Strengths and limitations

One of the strengths of this study is its originality. To our knowledge, this study is the first to explore the experiences with non-western clients in Dutch midwifery care setting. Also, the combination of individual and focus group interviews, using these two methods to complement each other may be considered a strength. A limitation of this study might be that the researcher who conducted all the interviews is of non-western origin. This might have influenced the interviews in that midwives might then have expressed their experiences with non-western clients more cautiously in order not to be accused of discrimination or racism. Nevertheless, this did not deter them from expressing negative feelings. A second limitation might be the focus group participants who knew each other. This may have caused participants to withhold certain experiences from their colleagues and therefore from the focus group. On the other hand, this may have facilitated the discussion because they already knew each other.

Implications

The insights gained in this study point into the direction that the training for midwives and midwifery practice in the Netherlands and other countries with large non-western populations needs to be adapted. The difficulties

midwives face with non-western clients may affect the quality of care if there is no proper response. The experiences of midwives make clear that they have all developed their own ways of coping with these issues. As midwifery students will be confronted with the same challenges as current midwives, the difficulties faced and the responses to them should be included in midwifery education programmes. Future midwives will then be better prepared for working with non-western clients and will take a creative approach towards the difficulties encountered. In addition to midwifery colleges, midwifery organisations could also benefit from the findings in this study by developing training programmes for pooling and sharing existing strategies for dealing with these clients. Furthermore, there are also implications for the government and healthcare insurers. The financing for longer consultations, home visits and telephone consultations needs to be considered, especially where midwives are not receiving an extra fee in cases of clients who do not live in socially deprived areas. Also, stopping the reimbursement for interpretation services might have a negative impact on the quality of care provided by midwives to non-western clients and should therefore be reconsidered. Finally, future research on non-western women's perspective on midwifery care is needed to gain a more complete picture of how midwives support non-western clients.

Conclusions

The study results indicate that midwives see providing care to non-western clients as difficult and demanding, but simultaneously as fascinating and rewarding. As midwives aim for optimal care in the interests of both mother and child, they take a variety of additional measures, some of which they have invented themselves. The quality of midwifery care might be improved by collecting these measures and including them in midwifery education programmes and training programmes for midwives.

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'Being flexible and creative': a qualitative study on maternity care assistants' experiences with non-western immigrant women

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Abstract

Background

Several studies conducted in developed countries have explored postnatal care professionals' experiences with non-western women. These studies reported different cultural practices, lack of knowledge of the maternity care system, communication difficulties, and the important role of the baby's grandmother as care-giver in the postnatal period. However, not much attention has been paid in existing literature to postnatal care professionals' approaches to these issues. Our main objective was to gain insight into how Dutch postnatal care providers – 'maternity care assistants' (MCA) – address issues encountered when providing care for non-western women.

Methods

A generic qualitative research approach was used. Two researchers interviewed fifteen MCAs individually, analysing the interview material separately and then comparing and discussing their results. Analytical codes were organised into main themes and subthemes.

Results

MCAs perceive caring for non-western women as interesting and challenging, but sometimes difficult too. To guarantee the health and safety of mother and baby, they have adopted flexible and creative approaches to address issues concerning traditional practices, socioeconomic status and communication. Furthermore, they employ several other strategies to establish relationships with non-western clients and their families, improve women's knowledge of the maternity care system and give health education.

Conclusion

Provision of postnatal care to non-western clients may require special skills and measures. The quality of care for non-western clients might be improved by including these skills in education and retraining programmes for postnatal care providers on top of factual knowledge about traditional practices.

Introduction

Skilled professional care is as important during the postnatal period as during pregnancy and childbirth. According to the WHO, the major goals of postnatal care are to maintain and promote the health of mother and child and to foster an environment that offers help and support to the extended family and community, for physical and mental health as well as social and cultural issues that can affect health and wellbeing. Also, postnatal care offers new parents support for parenting and the responsibilities that come with it [1].

Migration to developed countries has increased the ethnic diversity in healthcare, including postnatal care. A substantial proportion of this migration comes from developing countries where women receive less postnatal care [2]. Several studies conducted in developed countries have explored the experiences of non-western women with postnatal care, reporting both positive and negative experiences. A recurrent negative issue was the limited help received from postnatal care providers [3,4]. Women expected support from care providers to look after the baby and allow them to rest, but this contradicted to the Western postnatal care system's ideas of self-care and mother-child bonding. Another negative issue concerned the traditional postnatal customs which are often encouraged by family members such as the mother or mother-in-law, who are very influential in the postnatal period. Some women in these studies reported a lack of knowledge about their traditional postnatal customs on the part of their care providers [4] and lack of opportunity to practice these customs [5]. Language difficulty was found to complicate communication with care providers [6,7] which led to dissatisfaction with the care received. In a few of these studies, the negative experiences even led to women opting for early discharge from hospital [6,7].

The perspectives of professionals who provide postnatal care to non-western women have also been explored in research, although less widely. These studies revealed different cultural practices [8], communication problems [8–10] and lack of knowledge of the care system [8]. However, postnatal care professionals' approach to these difficulties has received little attention in the existing literature. One study conducted in Australia describes how culturally competent midwives preserved and accommodated their Chinese and Islamic clients' cultural preferences in the postnatal period by, for example, accepting and appreciating the mother or

mother-in-law as the caretaker of the baby and the new mother and heeding women's customs of keeping their hair and body covered [11]. A Dutch study conducted between 1996 and 1998 reported a list of qualities needed to provide postnatal care to Turkish and Moroccan women. Flexibility and the ability to adapt were the two of the qualities most frequently reported by the postnatal care professionals in this study [12].

There are no recent studies on Dutch postnatal care providers' approaches to difficulties with non-western women, whereas these women represent a large proportion (17%) of the total number of live births in the Netherlands [13]. Furthermore, non-western women in the Netherlands are at higher risk of adverse pregnancy outcomes such as perinatal and maternal mortality [14,15]. They are also very diverse in origin. Turks, Moroccans, Surinamese and Antilleans/Arubans are the largest immigrant groups in the Netherlands and may have different needs and expectations for postnatal care. The Dutch postnatal care system is also quite unique. In cases of an uncomplicated childbirth, whether at home or in hospital, professional postpartum care is provided by a maternity care assistant (MCA) who attends the new mother at home for at least three hours a day during the first seven or eight days after birth [16]. MCAs are responsible for monitoring the health of mother and baby and reporting on it to the midwife. They also give instructions to the new mother (such as how to breastfeed or bathe a baby) and may do some household tasks (such as laundry) or look after the other children if time permits. In addition to the care provided by MCAs, midwives pay an average of five home visits to the new mother during the first two weeks after the birth.

Because of the large and diverse non-western client population and the unique Dutch postnatal care system, we were interested in how MCAs address the difficulties encountered in the provision of care to non-western clients. These approaches may also be useful in other developed countries with large non-western populations, as the core content of postnatal care is more or less the same across countries. We therefore conducted a study on the experiences of MCAs with non-western clients. Two questions are addressed in this article:

- 1) How do Dutch MCAs feel about providing care to non-western clients?
- 2) Do Dutch MCAs adjust their care to non-western clients and if so in what ways?

Methods

A generic qualitative research design was used for this study. Generic qualitative research does not use one specific qualitative methodology as guidance, but does underline the theoretical positioning of the researcher, the congruence between methodology and methods, strategies to establish rigour and the analytic lens through which data are examined [17]. Individual interviews were conducted as these are suitable for obtaining rich and well explored data on the experiences and perceptions of individuals and give the opportunity to discuss sensitive topics.

Recruitment and sample

A purposive sample of fifteen MCAs was obtained. Firstly, MCAs were recruited via employers, i.e. home care agencies or MCA agencies, located in urban areas or neighbourhoods with large non-western populations. Regional managers of these agencies were sent a letter with information about our study. They were invited to inform their MCAs providing care to non-western clients about our study and ask them if they were willing to participate. Of the nine agencies approached, six responded and brought eleven MCAs into contact with us. One of the interviewees suggested inviting another colleague as well, as this colleague had a great deal of work experience with non-western clients. This resulted in one additional interviewee. Secondly, MCAs with experience providing care to non-western women were recruited through the researchers' personal networks. This resulted in three more interviewees. All MCAs who were willing to participate received a letter with information about the study from their regional manager or the researchers. Interview appointments were made by e-mail or telephone.

Individual interviews were held with fifteen MCAs between January and March 2012. The interviewees were all women, aged between 32 and 61. Twelve were of native Dutch origin, two of non-western origin and one of western migrant origin. Their experience as an MCA ranged from one and a half to 29 years, and specifically with non-western clients from one and a half to 27 years. The MCAs differed in their client population. Most had a mixed client population which consisted of native Dutch, other western and non-western women. Two were specialised in maternity care assistance for non-Dutch women and were scheduled by their agency to provide care almost exclusively to western and non-western immigrant women. The

interviews were conducted by two female researchers; nine by the first researcher (AWB) and six by the second researcher (MvdR). AWB studied medicine and public health, was trained in qualitative research methods and interviewing techniques in medical anthropology. Her interest in this topic was triggered by her own non-western background as well as her medical background. MvdR is of native Dutch origin and was trained in qualitative methodology and in-depth interviews in her medical anthropology study. Her interest in this topic arose from her master's thesis, which focused on the relationship between culture and the experience of pregnancy and childbirth in the Netherlands, as well as previous working experiences as an assistant in an urban midwifery practice.

Interviews; data collection

A semi-structured interview guide was constructed to explore MCAs' experiences with providing care to non-western clients. This guide was reviewed by six research experts (including two midwives), and the interview questions were inspired by existing literature and the conceptual framework of Foets *et al.* [18], an elaboration of the Andersen model of healthcare utilisation. This conceptual framework was developed to explain ethnic differences in healthcare utilisation through various underlying factors such as migration-related characteristics, cultural factors, socioeconomic status, social network, accessibility of healthcare, personal treatment by healthcare professionals and communication. The interviewers were flexible in how the interview guide was used. The sequence of questions and the way they were asked were not predetermined and interviewees were encouraged to raise other issues not included in the guide. All relevant issues raised were added to the interview guide for subsequent interviews.

All interviews were conducted in Dutch and varied in length between 38 and 87 minutes. Eight interviews were conducted at home, six in a room at an agency, and one at a midwifery practice. They were all audiotaped. The number of interviews was not predetermined. Data saturation, the point at which the two researchers did not observe any new information or themes in the additional data, was attained after 13 interviews. Subsequently, two more interviews were conducted to confirm this. A summary was made of every interview conducted. These summaries were sent by e-mail to the

interviewees, to confirm the accuracy of the summary or to suggest corrections or additions.

Data analysis

In accordance with qualitative research principles, data collection and analysis were conducted in a cyclical process. Shortly after each interview was conducted, the full verbatim transcript was read several times by both researchers. Subsequently it was analysed thematically [19], focusing on how the MCAs approach the specific difficulties encountered among non-western women and the feelings aroused from caring for these women. To enhance the rigour, the initial analysis of each transcript was done independently by both researchers, after which they compared and discussed the main themes arising from the interview material and the related codes. The interview material was coded and ordered with the software programme MAXQDA [20]. To enhance the rigour of the analysis further, all main themes and subthemes were also discussed with the other co-authors.

Ethics statement

Interviews were carried out as part of the national DELIVER study, which obtained approval from the medical ethics committee of the VU University Medical Center in the Netherlands (WC 008-100). All interviewees received written and verbal information about the aim and content of the interviews, the voluntariness of participation and the right to discontinue the interview or not to answer particular questions. Thereafter they gave written informed consent to be interviewed and audio recorded. The interviewers also signed the interviewees' consent form guaranteeing confidential handling of the obtained interview data.

Results

The MCAs' experiences with non-western women were clustered into four main themes: (1) Being flexible and creative to enhance health and safety of mother and baby, describing MCAs' approaches to guarantee the health and safety of non-western women and their babies while taking their culture into account, (2) Imparting information, describing MCAs' efforts to improve non-western women's knowledge of the Dutch maternity care

system, (3) Building a trusting relationship, describing the MCAs' approaches to establishing a good relationship with non-western women and their families and (4) Having predominantly positive, but also negative feelings, describing the MCAs' feelings about caring for non-western women.

Being flexible and creative to enhance health and safety of mother and baby

Even though the MCAs encounter difficulties in the provision of care to non-western women, they all endeavoured to ensure the health and safety of mother and baby. This was achieved by being flexible towards women's preferred postnatal practices and by finding a compromise solution if these practices pose a risk. They also tried to ensure health and safety by being creative when faced with communication problems or clients with financial constraints.

Being flexible. The MCAs described a variety of postnatal practices among non-western women and considered most of these as innocent. However, a few such as dressing babies too warmly were considered to be harmful or dangerous. When the risk of these practices is pointed out, new mothers often seemed willing to change their behaviour. However, the MCAs also described situations where they encountered the same practice on arriving the next day, as new mothers were not able to convince their family members, mostly from the first generation, of the harm or danger. The MCAs explained that in situations where clients observe 'different' postnatal practices, flexibility is very important. Practices that are not consistent with the MCAs' working protocols are not rejected, as long as they pose no danger to the health and safety of mother and child. If the practice does pose a danger, the MCAs have to intervene and find a compromise solution which satisfies the mother and family, yet and at the same time does not jeopardise the health or safety of mother and baby. In situations where a compromise cannot be reached, the MCAs have no other choice but to tolerate the practice and protect themselves by recording this in their daily report and reporting it to the midwife

I'm not a huge fan of knives in the bed as Turkish people do. And then I kindly request... I won't tell them that they have to take it out, but that it is placed on the side [sic]. Because those cots are very often large. And they often don't use cradles, but cots from the

start. That helps, putting it on the other side of the bed. That. (MCA 9)

Dressing the baby. It should all be as warm as possible. Put everything on. And then we try to say, 'You shouldn't do that'. And they find that annoying, because they want to do what they have learned: dressing the baby warmly because it is cold. And that of course causes conflict. And then I say, 'Okay, we will dress him this way, and then we will wrap him in a blanket'. Then you have a bit of, okay, not quite, but still something. You have to find a balance. The golden mean. And if you've found it, you'll make progress. Because you're not quite with them, but you have responded to their expectations. (MCA 3)

Being creative. The MCAs also talked about financial constraints, which they encounter more often among non-western women than among native Dutch women. Some clients could not afford to buy the necessities for a new-born baby, and some lived in harrowing circumstances. Other clients lacked the necessities for a new-born baby because of cultural tradition. In these situations the MCAs adopt a more creative approach. By being more practical and by improvising with the scarce resources available they try to guarantee care and thus the health and safety of mother and child.

Well, what I find most distressing is that some people, for example, have no heating. So you have to boil water to fill a bath. Then I think, 'It shouldn't be like that'. They are cut off from everything. Sometimes there are very serious matters. It's hard. You can do a lot with all kinds of emergency alternatives. You can use one of the mother's towels to dry the child, instead of a hydrophilic nappy. But sometimes it is very harrowing. (MCA 10)

We also need to improvise to help them. You are not going to demand, 'You just have to go and buy a bathtub, because that child has to be bathed'. You're not going to do that. Then you just have to clean the sink and bathe the child in it....If they have no cloths, you have to find an old sheet. It [the sheet] is being washed. You just improvise. (MCA 8)

The MCAs also described their efforts to improve communication with women who do not have a good command of Dutch; mainly first-generation women with origins outside the former Dutch colonies. Suitable family members and professional telephone interpreters were described as useful alternative methods of communication. However, these are not always available. In these situations the MCAs have to be creative. This means that they either use picture books or proceed to nonverbal communication, which they often called 'talking with their hands and feet', to demonstrate their instructions as clearly as possible. Some MCAs explained that this creative way of communication works well for aspects of postnatal care where language hardly plays a role e.g. showing mothers how to bathe or feed their babies.

The mother [mother-in-law] had been living here for 25 years, but her Dutch was poor. He [the husband] could [speak Dutch], but he was at work. And she hardly spoke Dutch and no English. That's when hands and feet are used. And we also have, which is nice, our organisation is really good, we have plasticised - what do you call that? - pictograms. And then you say, 'Look at this picture'. And you yourself demonstrate it. I must say, I always figure it out with hands and feet. It is sometimes quite hilarious and we have to laugh at each other. (MCA 11)

Imparting information

Non-western women's limited knowledge of the Dutch maternity care system also came up as an important issue when caring for non-western women. The MCAs described situations where they were perceived as a guest by non-western clients. These clients tried to look after them and get them to sit down with a cup of coffee, instead of the other way around. A few MCAs described situations where they were perceived as government observers who were visiting to check how well the baby is being taken care of. In these situations, the MCAs tried to improve these women's knowledge and understanding of maternity care assistance by explaining the organisation of postnatal care in the Netherlands and the tasks of an MCA. Furthermore, the MCAs described how they educated people who were following harmful or dangerous practices about the risks of those practices. Those too ashamed to be examined were educated on the

importance of certain intimate physical examinations such as inspecting stitches.

A small example: in some immigrant families they tend to wrap babies very warmly. Well, that's common in their culture. But often when you start talking about the issue, you end up with a conversation about this issue in relation to sudden infant death syndrome (SIDS) in the Netherlands. Then I say, 'Yes, but in the country you come from, houses are much less insulated, the houses are far too cold. Here in the Netherlands, everything is very warm, insulated, heating [sic]'. And then they say, 'Really?' [and then I say] 'It's true'. And if you explain it clearly, they also see that the blanket can be taken off, or the cap can be taken off. (MCA 6)

And they do it because the midwife wanted them to have maternity care assistance. Well, then they register for it. Then they get the papers. But I have the idea that the people do not read. [They think:] 'I have registered and will get maternity care assistance'. And they don't read further, about what maternity care assistance means. So when we come, we always ask first, 'Do you know what maternity care assistance is?' Well, they don't. So then we tell them - this and that. And occasionally they are shocked, because we have to look in their cupboards. (MCA 3)

Building a relationship with the client and the family

Building a relationship with every new client is pivotal. According to the MCAs, this requires more effort with some non-western women, especially with those who are not familiar with maternity care assistance. Nevertheless, they all tried to establish a trusting relationship in a number of ways.

Showing respect and interest. The MCAs explained that building a trusting relationship with every new client, irrespective of ethnic origin, starts by behaving as a guest in their house and not starting to set rules on the first day of work. This gives them the opportunity to gradually get used to each other. With non-western clients, the MCAs further establish a relationship by showing respect for their culture. Unusual customs or habits such as a husband who does not want to shake hands could easily be perceived as an offence, but they explained that these should be respected. Also, the MCAs

further establish their relationship with non-western clients by showing interest and eagerness to learn more about their culture. On the other hand, the MCAs expected respect and understanding from their clients as well.

But I think that's very important. Respecting their culture. Respect gives them, I think, confidence in you. And you should also be interested in how they do things and why they do it like that. That you don't only talk about your own thing, but also show interest: 'Hey, why do you do it like that?' They like to tell you about it. (MCA 14)

But also shaking hands with a man. I always wait: what does the man himself do. I say, 'Hello, I'm XXX. Congratulations on your child'. And I wait to see what the man does. Does he offer to shake hands or not? Because some men absolutely refuse to. And then I think, 'Yes, maybe you're also embarrassing them by offering your hand'. I wait to see what they do. I think you should have respect for all religions. Just as I think I should have the opportunity to pray before eating with a family, I also find that I must show respect towards their religion. (MCA 4)

Involving the family. The MCAs explained that building a relationship with the client alone is not enough. In most non-western families, except for asylum seekers and refugees who often do not have extended family around, family members take over household chores and are involved in the care of the baby and other children. Besides giving support, families also exercise great influence on postnatal women by motivating them to go back to their roots and observe their traditional postnatal practices. The MCAs therefore also considered building a relationship with the client's family to be very important. By joining family activities such as lunch and providing information to family members, the MCAs also try to build a harmonious relationship with the client's family.

So getting grandma on your side is important. Not winning her over in a slimy way, but just showing that you respect grandma... Winning grandma over by showing that you respect her and that you are willing to take over their habits and rituals. To respect

them. But when [harmful or dangerous] things happen, you have to show that you can draw the line: this really is not right. And you also have to be able to give proper reasons. (MCA 12)

We always say that you have to win grandma over to your side. Once you've got grandmother on your side, it's totally okay. And you will notice it. If you have a good relationship with grandma, it will be fine. Then she will also want to listen to your advice. Otherwise, in no time it will all be about what they thought and how it was in their country and how they used to do things. (MCA 1)

Having predominantly positive, but also negative feelings

The MCAs all described the ethnic diversity and the variety in postnatal customs and traditions as interesting and nice. Some MCAs even perceived it as educative. Despite these predominantly positive feelings, the MCAs do find it difficult to care for those persisting on observing harmful or dangerous practices and ignoring their advice and instructions. Furthermore, they described caring for people who do not have a good command of Dutch as difficult, intensive and sometimes even frustrating. They also felt very positively about the hospitality received from most families, which they perceived as very special. However, a few MCAs described situations where clients seemed aloof or suspicious at the start of care, or ignored them. Some MCAs did not perceive the issues in the provision of care to non-western women as difficult, but instead as motivating and challenging.

I always find it challenging to work there. Not only because of what you can learn from them, but also their customs. Always interesting. But sometimes it's very difficult to get inside, because they don't want to accept things. If they are the second generation, they may be more willing to accept, but then you still have the first generation telling them how it was done previously, or how they used to do it. And then it's hard to eliminate that. (MCA 4)

But if you are at a refugee centre, and they can only speak their own language... well, I feel sorry for those people. It touches me, because you cannot talk about their emotions...'How are you?

How do you feel?’ You try to do the basic things through telephone interpretation. But then you only do the most important things. You won’t ask, ‘How do you feel at the moment? How did the birth go?’ You do have the letters from the hospital, because they usually give birth at the hospital. But not the personal things. I always think they seem very lonely ... I feel a bit unhappy. I would like to do much more. No, unhappy isn’t the right word: frustrated. You know – I want more, I want to tell more or give more attention, and that’s not possible. (MCA 14)

You have people who can really ignore you. As if you are talking to each other and they pretend you aren’t standing there. You also experience that. Then they both speak the foreign language. But it can also happen, for example, that a friend is in the house, or a sister, or someone who speaks Dutch and acts as an interpreter. And then you’re just a trinity [sic], the three of you together. That’s very different. (MCA 1)

Discussion

This study explored Dutch MCAs’ experiences with non-western clients using a generic qualitative research approach. Data were collected by conducting individual interviews. Four main themes were found: *Being flexible and creative to enhance health and safety of mother and baby, imparting information, building a trusting relationship with the client and the family and having predominantly positive, but also negative feelings.*

This study adds to what is known from a previous study by Cioffi [11], which reported preservation and accommodation of non-western women’s cultural preferences by midwives in the postnatal period. Our study reveals that preservation and accommodation can be accomplished by being flexible and by finding a compromise solution in cases where the health or safety of mother or child are jeopardised. In addition, this study reveals that creativity is needed to guarantee postnatal care when the necessities for taking care for a new baby are not present, regardless of whether this is due to cultural traditions or low socioeconomic status. This study also adds to what is known from the study by El Fakiri *et al.* [12], by showing the circumstances in which flexibility and creativity are useful. The final

relevant insight from this study is the development of a relationship with the family. The above-mentioned study by Cioffi reported the family's role in taking care of the mother and child, whereas this study not only confirmed this but also highlighted the importance of developing a relationship with them. This is important, as family members – usually from the first generation – play an important role in the observance of cultural and traditional postnatal practices.

Being flexible, finding a compromise solution if necessary, being creative and gaining trust from not only the client but also the (first generation) family can allow postnatal care to be made more culturally competent and tailored to the individual needs and circumstances of non-western women. These insights are therefore relevant findings for postnatal care professionals in western countries with a large non-western client population, irrespective of the setting of care: in the hospital or at home.

The MCAs in this study responded to women's lack of knowledge of the maternity care system by providing them with information. This approach is consistent with the results of a study conducted by Priebe *et al.* [21], which reported explanation and education about the healthcare system by medical professionals as a good practice in healthcare for immigrants. This approach seems essential, as lack of knowledge may affect clients' expectations as well as their utilisation of care.

Language difficulties were reported to be far more pronounced among first-generation women who did not come from former Dutch colonies. It is interesting to note that the MCAs perceived communicating with women who do not have a good command of Dutch as difficult, but also thought they were able to manage well with nonverbal communication. This may be explained by the more practical nature of their tasks compared to other care professionals such as midwives who have to provide their clients with more technical information. The MCAs' approach towards these language difficulties is consistent with the results of other studies, which also reported family members, friends and professional interpreters as well as non-verbal communication as alternative methods of communication in healthcare [11,22].

The respectful and interested attitude found in this study indicates that acceptance and understanding are prerequisites for a relationship between MCAs and non-western clients. On the one hand, all the MCAs emphasised the importance of respect for and interest in their clients' cultural traditions and practices. However on the other hand, they also expected clients to be

respectful and understanding towards them. This respectful and interested attitude towards non-western women allows the MCAs to obtain a clear picture of women's needs and expectations, which is reflected in their flexible approach. As providers' cultural sensitivity has been shown to have an effect on treatment adherence [23], it may also be argued that the respectful and interested attitude may positively affect women's adherence to advice and instructions given by MCAs.

A comparison of the experiences of non-western MCAs against those of their western counterparts revealed no striking differences. The difficulties encountered and the approaches adopted by the non-western MCAs were similar to those of the other MCAs. This finding indicates that the MCAs, irrespective of origin, adjusted their care to non-western women by means of similar approaches.

Strength and limitations

The combination of a researcher with a medical/public health background and one with a medical anthropology background can be considered an advantage, because it prevented a narrow or one-sided approach to the study.

Despite this strength, limitations need to be taken into account. Eleven of the fifteen MCAs were recruited via their maternity care agency, which may have led to selection bias, in the sense that MCAs with a more positive attitude towards non-western women might have been put forward. On the other hand, these MCAs may have more working experience with non-western women than MCAs with less positive attitudes. Because we were interested in MCAs' approaches to non-western clients, this could be considered an advantage. As there is no public register of MCAs, contacting them through their agency was the only viable way.

Implications

The insights gained from this study result in several implications for education programmes of postnatal care providers in the Netherlands and other western countries with substantial non-western populations. This study made clear that the MCAs have all developed their own ways of coping with the difficulties encountered in caring for non-western clients. These approaches should therefore be pooled and included in education and retraining programmes as examples of 'best practices'. Future and current MCAs will then be better prepared for working with non-western

clients and their families, and may be able to provide more culturally competent care. Also, this will prevent MCAs from reinventing the wheel when caring for these clients.

Agencies could also benefit from the results of this study by including the role of the family in the guidelines for intake consultations with every new client who registers for postnatal care. By discussing the intrinsic value of an MCA to the family in these intakes, non-western clients may be better prepared about what to expect from their MCA. Finally, a study of non-western women's experiences with MCAs is suggested for future research, in order to gain a more complete picture of the interactions between MCAs and their non-western clients.

Conclusions

The study results indicate that MCAs experience providing care to non-western clients as interesting and challenging, but sometimes difficult as well. In order to enhance the health and safety of mother and baby, MCAs have adopted flexible and creative approaches with compromise solutions where necessary. Furthermore, they have also adopted several other strategies to establish relationships with non-western clients and their families, to improve these people's knowledge of the maternity care system and to give health education. Pooling these findings and including them in education and retraining programmes for postnatal care providers may allow the quality of postnatal care to non-western women to be improved.

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7

Summary and discussion

In this chapter the findings described in chapter 2-6 are summarised and discussed in the view of previous research findings. Also, the methodological strengths and limitations of this research are discussed. This chapter then concludes with implications and recommendations for prenatal and postnatal practice, education and future research.

Summary

Aim

This research aimed to gain insight into factors and reasons explaining non-western women's inadequate prenatal care utilisation, and the experiences of midwives and maternity care assistants with non-western women.

The following research questions were answered:

Factors explaining non-western women's inadequate prenatal care utilisation

- Which factors are known to affect non-western women's prenatal care utilisation in industrialised western countries?
- How do first and second-generation non-western women in the Netherlands make use of prenatal care compared to native Dutch women, and by which factors can this difference (statistically) be explained?
- Why do some non-western women in the Netherlands make less adequate use of prenatal care compared to other non-western women?

The experiences with non-western women in maternity care

- In what way does the delivery of care for non-western women differ compared to native Dutch women, according to midwives and maternity care assistants, and how do they address these differences?

Main findings

Factors explaining non-western women's inadequate prenatal care utilisation

In chapter 2, the systematic review of the scientific literature between 1995 and 2012 on factors affecting non-western women's prenatal care utilisation in industrialised western countries with universally accessible healthcare revealed a range of factors that were categorised according to an elaborated version of Andersen's healthcare utilisation model. These factors were identified as impeding or facilitating and covered all eight categories of the conceptual framework (Table 1).

Facilitating factors mentioned in the literature reviewed were:

- migration-related factors (recognition of prenatal care as an important issue in the local community)
- cultural factors (ethnic matching between health workers and pregnant women; belief in the value of prenatal care for babies' or pregnant women's wellbeing)
- women's position (monitoring of socioeconomic status)
- social network factors (a husband speaking the host country's official language)
- expertise (mature experienced midwives with command of the woman's native language; respect and interest in migrant pregnant women; giving women a sense of security)
- personal treatment and communication factors (use of women's native language; provision of translation; conversation space; asking specific questions and giving customised information; demonstrations and explanations; audio-visual material; renaming prenatal classes to prenatal sessions)

Impeding factors on the contrary were described in more categories:

- demographic, genetic and pregnancy-related factors (multiparity; being younger than 20; unplanned pregnancy)
- migration-related factors (lack of knowledge of or information about the western healthcare system; arriving in the new country late in pregnancy)
- cultural factors (adherence to cultural and religious practices; poor language proficiency; lack of assertiveness; dependency on the husband; perceiving pregnancy as a normal state; perceiving

prenatal care more as a burden than a benefit; believing that prenatal classes are not necessary)

- women's position (financial problems; unemployment; social inequalities; low or intermediate educational level; lack of time; lack of childcare; no medical leave from work)
- social network factors (limited support from family or acquiring or following advice from family and friends; isolated community)
- accessibility factors (inappropriate timing of prenatal appointments and incompatible opening hours of prenatal services; transport and mobility problems; indirect discrimination)
- expertise factors (lack of knowledge of cultural practices)
- personal treatment and communication factors (poor communication; perceiving oneself as having been badly treated by a care provider)

The most frequently reported facilitating factor was provision of information and care in women's native languages. The most frequently reported impeding factors were: lack of knowledge of the western healthcare system and poor language proficiency.

In chapter 3, non-western women's prenatal care utilisation was examined by conducting a quantitative analysis of data collected in a national cohort of pregnant women from 20 midwifery practices. Gestational age at entry and the total number of prenatal visits were aggregated into an index. This analysis revealed that the unadjusted odds of first and second-generation non-western women making inadequate use of prenatal care are 3.26 and 1.96 times greater than for native Dutch women. This inadequate use of prenatal care by non-western women was mainly characterised by late entry. Factors fully explaining first-generation non-western women's higher odds for inadequate use of prenatal care utilisation from this analysis were in order of importance:

- sociocultural factors, i.e. partner's ethnicity, language spoken at home (Table 1)
- socioeconomic factors, i.e. level of maternal education, net household income, supplementary insurance (Table 1)
- demographic and pregnancy factors, i.e. maternal age, pregnancy intention, ectopic pregnancy/molar pregnancy/abortion in the obstetric history (Table 1)

For second-generation non-western women only sociocultural factors could explain two thirds of their higher odds for inadequate use of prenatal care when compared to native Dutch women.

In chapter 4 non-western women's view on prenatal care utilisation was further explored through semi-structured interviews with non-western women who had started prenatal care timely or late. The interviews specifically focused on late entry, as this constituted the major part of non-western women's inadequate prenatal care utilisation in the statistical analysis conducted in chapter 3. Both timely and late starters reported that they perceived prenatal care as an important way of ensuring their own and babies' health. Despite this importance attached to prenatal care, some non-western women started late because they were not aware of being pregnant, not able to access prenatal care or not ready to start prenatal care in terms of emotions, perceptions or circumstances. (Table 1)

Table 1. Summary of the factors/reasons for inadequate use of prenatal care across the three conducted substudies

Systematic literature review	Quantitative data analysis	Client interviews
<p>Demographic, genetic and pregnancy characteristics:</p> <p>Being younger than 20</p> <p>Multiparity</p> <p>Unplanned pregnancy</p>	<p>Aged ≤ 19 or ≥ 36</p> <p>Unplanned pregnancy</p> <p>Poor obstetric history (extra-uterine pregnancy, molar pregnancy or abortion)</p>	<p>Considering oneself too old to get pregnant</p> <p>Considering an abortion</p> <p>Late recognition of pregnancy symptoms</p>
<p>Migration-related characteristics:</p> <p>Lack of knowledge or information about the western healthcare system</p> <p>Arriving in the new country late in pregnancy</p>		<p>Recent migration while pregnant with insurance being arranged</p>
<p>Cultural characteristics:</p> <p>Adherence to cultural and religious practices</p> <p>Poor language proficiency</p> <p>Lack of assertiveness</p> <p>Dependency on husband</p> <p>Perceiving pregnancy as a normal state</p> <p>Belief that prenatal care is more a burden than a benefit</p> <p>Belief that prenatal classes are not necessary</p>	<p>Speaking a non-Dutch language at home</p>	<p>Perceiving pregnancy as a natural process which does not need early attention</p> <p>Attempting to reduce the total number of prenatal visits by entering late</p> <p>Still 'menstruating' despite symptoms of nausea and vomiting</p>

- table 1 continues -

- table 1 continued -

Systematic literature review	Quantitative data analysis	Client interviews
<p>Position in host country: Financial problems Unemployment Low or intermediate educational level Social inequality Lack of time Lack of childcare No medical leave from work</p>	<p>Below average net household income No supplementary insurance Low educational level</p>	<p>Serious economic problems outweighing the importance of early prenatal care Illegal status</p>
<p>Social network: No support from family Acquiring or following advice from family Isolated community</p>	<p>No partner or a first generation non-Dutch partner</p>	<p>Fear of pregnancy being disapproved by the religious family</p>

- table 1 continues -

- table 1 continued -

Accessibility:		
Inappropriate timing of prenatal appointments and incompatible opening hours of prenatal services Transport and mobility problems Indirect discrimination		No access to pregnancy test during vacation
Expertise:		
Care provider lacking knowledge of cultural practices		
Personal treatment and communication:		
Poor communication Perceiving oneself as having been badly treated by a care provider		

The experiences with non-western women in maternity care

In chapter 5, midwives' experiences with non-western women are explored through semi-structured interviews and a focus group. Midwives experience provision of care to non-western women as difficult and demanding and simultaneously as fascinating and rewarding. Various difficulties were described by the midwives interviewed who emphasised that these are more pronounced among the first generation: communication problems, suboptimal health literacy, socioeconomic problems, lack of knowledge of the maternity care system, pressure from the family and a strong preference for physicians. Despite these difficulties, midwives aimed for optimal care by being alert and proactive, taking these women by the hand and making use of alternative resources (Table 2).

In chapter 6, maternity care assistants' experiences with non-western women are explored through semi-structured interviews. The maternity care assistants interviewed perceived caring for non-western women as interesting and challenging, but sometimes difficult too. The difficulties reported were: lacking the necessities for a newborn baby, communication problems, limited knowledge of the Dutch maternity care system, the important role of the family in the postnatal period and the efforts needed to build a relationship with the client and her family. In order to guarantee the health and safety of mother and baby, maternity care assistants have adopted flexible and creative approaches with compromise solutions where necessary. Furthermore, they have also adopted several other strategies aimed at establishing a relationship with non-western women and their families, to improve these women's knowledge of the maternity care system and to give health education (Table 2).

Table 2. Summary of the difficulties encountered and the approaches employed by midwives and maternity care assistants across the two sub-studies

Difficulties		Approach	
		Midwives	Maternity care assistants
Midwives and maternity care assistants	Communication problems	Alternative methods of communication Being proactive	Being creative
	Lack of/limited knowledge of the Dutch maternity care system	Being alert Taking them by the hand (guiding them through the system)	Imparting information
	The important role of the family	Taking them by the hand (guiding them through the system)	Involving the family
Midwives	Suboptimal health literacy	Being alert and proactive	
	Strong preference for physicians	Taking them by the hand (guiding them through the system)	
Maternity care assistants	Harmful or dangerous postnatal practices		Being flexible Finding compromise solutions
	Lacking the necessities for a newborn baby due to financial constraints		Being creative

Discussion

Methodological reflections

In the previous chapters of this thesis, the methodological strengths and limitations of each substudy were discussed. In this section, the methodological strengths and limitations of the research presented in this thesis are discussed once more, but now in its entirety.

Factors explaining non-western women's inadequate prenatal care utilisation

One of the strengths of our research is the combination of different research methods – systematic literature review, semi-structured interviews and quantitative data analysis. By combining these three research methods, it was possible to gain profound insight into non-western women's inadequate prenatal care utilisation. The qualitative findings complement well to the quantitative findings, by means of several 'new' reasons for non-western women's inadequate prenatal care utilisation. Furthermore, the qualitative findings have also provided more in-depth insight into the factors 'unplanned pregnancy' and 'socioeconomic factors' found in the quantitative analysis.

Another strength of our research is that the Kotelchuck index [1] used to measure women's prenatal care utilisation, was adjusted as much as possible to the guidelines of the Dutch Organisation of Midwives (KNOV) [2]. Because this research was focused on primary midwifery care, the adjusted index provided the opportunity to indeed measure prenatal care utilisation according to the applicable guidelines.

In this research, 'prenatal care utilisation' was refined in the consecutive substudies, based on findings of the previous substudy or the Dutch context. The systematic literature review started with a very broad definition of prenatal care utilisation which included medical care and prenatal classes. Based on the Dutch context, this definition was refined to only medical care (gestational age at entry and number of visits) in the quantitative substudy. Eventually, the definition was further refined to only gestational age at entry of medical care, based on the quantitative findings which revealed that inadequate use is mostly characterised by late entry.

This study only focused on use of prenatal care and not the content of prenatal care. In this thesis it is argued that use of prenatal care according to midwifery guidelines gives the opportunity to address pregnancy complications, concurrent illnesses and health problems. However, it should be noted that besides use according to guidelines, proper content of prenatal care and adherence to health educational advices are essential to address pregnancy complications, concurrent illnesses and health problems. A study conducted by Choté *et al.* has concluded that there are few ethnic differences in the content of prenatal care, and suggested that ethnic differences in pregnancy outcomes should be sought in aspects such as timely referral to secondary care [3]. However, that study only covered Rotterdam, one major city of the Netherlands. Ethnic differences in adherence to health educational advices have been demonstrated among chronic disease patients who received diet and exercise advice, and thus could also exist in the field of pregnancy and childbirth [4].

Furthermore, in this study it was not possible to distinguish between various non-western ethnic groups in the Netherlands in the quantitative and qualitative analyses, as this would have resulted in too small subgroups. For the same reason, a further distinction within the Surinamese groups between Creole and Hindustani women, who were previously found to differ in prenatal care utilisation [5,6], was also not possible. In the qualitative substudy it was tried to overcome this limitation by focusing only on a mixture of women from Turkish, Moroccan, Surinamese and Antillean origin - the four major non-western groups with a long migration history to the Netherlands.

Because our study was only one of the many substudies from the DELIVER study [7], we were limited in the number of questions that could be included in the questionnaires. If we had designed our own cohort study, we would have been able to gather more specific information on possible explanatory factors of prenatal care utilisation through the questionnaires, and explore these in our quantitative analysis.

Another limitation of our study is that the data only concerned women and maternity care professionals who were willing to participate. This may have biased our findings. For example: The overrepresentation of highly educated women (47.5%) in our quantitative analysis may have led to an

underestimation of the number of inadequate users and the extent to which socioeconomic factors explain inadequate prenatal care utilisation.

The experiences with non-western women in maternity care

To our knowledge, the substudies on midwives and maternity care assistants' experiences with non-western clients are the first to explore this topic in the Netherlands. The qualitative approach can be considered a strength, as it gives the possibility of getting a comprehensive view on this relatively unexplored topic. Another strength of these substudies is the focus on not only the difficulties encountered but also the approach towards these difficulties.

A limitation of this research on the experiences with non-western clients is that the two substudies only explored the experiences of the care professionals. This may give a one-sided view, as the experiences of non-western clients themselves would have given insight in this topic from their perspective, which might differ from those of the care professionals.

General discussion

Factors explaining non-western women's inadequate prenatal care utilisation

This study aimed to explore the reasons behind non-western women's inadequate prenatal care utilisation by conducting a systematic literature review, quantitative data analyses and semi-structured in depth interviews with non-western women. The findings of these three approaches have given several insights into the factors and reasons behind non-western women's inadequate prenatal care utilisation. A first insight concerns the variety of factors/ reasons in the already existing literature on non-western women's prenatal care utilisation. A comparison of our review findings with the findings of a review on determinants of late/inadequate prenatal care utilisation in general by Feijen-de Jong *et al.* demonstrates that there are some corresponding factors: low maternal age, high parity, low educational level, late recognition of pregnancy, unemployment and medium-average family incomes [8]. Therefore, it can be reasoned that some of the factors found to impede prenatal care utilisation in our review (derived from the quantitative studies included) are generic factors that not only apply to

non-western women or specific non-western groups. In addition to these factors, the quantitative studies included in this review have also revealed some impeding factors/reasons which were not reported in the quantitative review by Feijen-de Jong *et al.*. Some are very specific or at least more prominent among non-western women or groups (e.g. migration-related and cultural characteristics).

Another main insight concerns the similarities and differences in explanatory factors between first and second-generation non-western women. The fact that sociocultural factors applied to both generations, while demographic and pregnancy factors and socioeconomic factors only applied to the first generation seems to indicate two things: a) for second generation non-western women making inadequate use of prenatal care, not being acculturated seems to be the main explanation b) for first generation non-western women making inadequate use of prenatal care, more factors than only 'not being acculturated' are the explanation. This variety of explanatory factors reveals the complexity of inadequate prenatal care utilisation among first generation women. There are different factors which provide the major explanation for first generation women's inadequate prenatal care utilisation, and maybe even jointly in individual cases.

The last insight into non-western women's prenatal care utilisation concerns the semi-structured interviews with non-western women. A detailed look at these reasons for late entry shows that some of those in the category 'not yet ready to start' have some similarities with the explanatory factors of our quantitative analysis. The subthemes 'considering an abortion' and 'fear of pregnancy being disapproved by the religious family' are in line with the quantitatively found explanatory factor 'unplanned pregnancy', and the subtheme 'serious economic problems outweighing the importance of early prenatal care' is in line with the explanatory factor 'socioeconomic problems'. The additional insights provided by the qualitative findings demonstrate the added value of qualitative research. Furthermore, our qualitative study revealed some 'new' reasons for late prenatal care entry which were not revealed by our quantitative study, namely still menstruating despite symptoms of nausea and vomiting, considering oneself too old to get pregnant, illegal status, recent migration while pregnant with insurance being arranged, no access to pregnancy tests during vacation and perceiving pregnancy as a natural

process which does not need early attention. These reasons have also not been reported in previously conducted Dutch studies [5,6,9,10].

It can be concluded from these three studies described in chapter 2-4 that:

a) some factors explaining non-western women's inadequate prenatal care utilisation are generic explanatory factors for inadequate prenatal care utilisation irrespective of ethnic origin, while some are more ethnic/culture specific;

b) acculturation explains a major part of first-generation non-western women's inadequate prenatal care utilisation while for the second generation there are also socioeconomic and demographic/pregnancy factors involved;

c) late recognition of pregnancy symptoms, poor access to prenatal care (due to illegal status, running medical insurance process and foreign holidays) and considering pregnancy as a natural process are 'newly explored' reasons for late prenatal care entry by non-western women in the Netherlands.

Comparison of our quantitative research findings with those of previously conducted quantitative Dutch studies on this topic reveals some similarities as well as differences. With regard to similarities, Choté *et al.* demonstrated that after simultaneous adjustment for age, gravidity and parity, Turkish women no longer made significantly more inadequate use of prenatal care than native Dutch women [6]. Alderliesten *et al.* also reported a higher prevalence of teenage pregnancies among non-western women originating from non-Dutch speaking countries who entered prenatal care late [10]. In our quantitative analysis, these factors – described as demographic, genetic and pregnancy factors – played a major role in explaining first generation non-western women's inadequate prenatal care utilisation. In another study of Choté *et al.*, simultaneous adjustment for educational level and having a paid job, reduced non-western women's late prenatal care entry, although it was still significantly later compared to native Dutch women [5]. A higher prevalence of lower maternal education was also reported among non-western women originating from non-Dutch speaking countries who entered prenatal care late by Alderliesten *et al.* [10]. In our quantitative analysis, these factors – described as socioeconomic characteristics – played a major role in explaining first generation non-western women's inadequate prenatal care utilisation. Although our quantitative study and previously conducted studies both point into the direction of demographic, genetic and pregnancy factors and socioeconomic characteristics, the

extent to which they do so differs. This may be explained by our separate analysis for the first and second generation, a distinction which was not made in most of the previously conducted Dutch studies.

Alderliesten *et al.* also reported a higher prevalence of poor language proficiency in non-western women originating from non-Dutch speaking countries who entered prenatal care late [10]. In our quantitative analysis, the language spoken at home was used as a proxy of Dutch language proficiency, and found to be part of the main group of explanatory factors for non-western women's inadequate prenatal care utilisation, irrespective of generation.

With regard to differences, the important role of health behaviour factors in explaining differences between first and second generation non-western women in Choté *et al.*'s most recent publication [9] is in contrast to the minor role of health behaviour factors in our quantitative analysis. However, Choté *et al.* compared the first generation against the second, while in our analysis both generation were compared against the native Dutch.

Our qualitative findings do not confirm to findings of a previously conducted qualitative Dutch study among Somali women which revealed that these women's experiences with maternity care in their country of origin played an important role in how they perceived prenatal care in the Netherlands [11]. We hypothesised that a different experience with maternity care in the Netherlands compared to the country of origin might negatively impact prenatal care utilisation. However, the women interviewed in our study did not raise this as a reason for late prenatal care entry. It could be that this issue plays a more important role in explaining an insufficient number of prenatal visits, after women have entered and got acquainted with the new prenatal care system.

A comparison of our qualitative research findings with those of our systematic review reveals several newly explored reasons for late entry: 'considering an abortion', 'fear of the pregnancy being disapproved by the religious family', 'attempting to reduce the total number of prenatal visits by entering late' and 'no access to pregnancy tests during vacation in country of origin'. It may be that 'considering an abortion' and 'fear of the pregnancy being disapproved by the religious family' are somewhat covered by the factor 'unplanned pregnancy' in quantitative research. Other newly explored reasons for late entry compared to our systematic

review are 'illegal status' and 'late discovery of pregnancy'. However, these reasons have been reported before in previous research which did not meet the inclusion criteria of our review [12-14]. Our research also revealed that 'late pregnancy discovery' not only involves late recognition of pregnancy symptoms but also 'still menstruating despite symptoms of nausea and vomiting' and 'considering oneself too old to get pregnant'.

Comparison of our quantitative research findings with our systematic review revealed 'having no partner or a first generation non-Dutch partner' as new barrier. This factor was included in our quantitative analysis after our systematic literature review revealed 'having a partner who speaks the host country's language' as a facilitating factor for prenatal care utilisation in qualitative research. Even though we had no access to data on partners' Dutch language proficiency, we tried to explore this further by including partners' ethnic origin – with the response categories native Dutch, first generation non-Dutch, second generation non-Dutch, no partner – in our quantitative analysis.

In our systematic review and previous research on inadequate prenatal care utilisation in general, young age was reported as one of the determinants [10, 15-20]. However, our research revealed both young age (≤ 18), and high age (≥ 35) as barriers to prenatal care utilisation. The categorical instead of continuous nature of the explanatory variable 'age' included in our quantitative analysis may have revealed this finding, which is in line with the qualitative finding 'considering oneself too old to get pregnant'.

One of the main reasons for conducting this research was the lack of a complete statistical explanation for non-western women's inadequate prenatal care utilisation in previous quantitative studies conducted in the Netherlands. The extent to which this study filled this existing gap in knowledge concerns several aspects. Firstly, calculating the extent to which factors contributed to explaining the variation in inadequate use – 66% for the second generation and completely for the first generation – has filled the gap in knowledge to a certain extent and given more insight into the degree to which these factors play a role. Secondly, the difference in explanatory factors found between the first and second generation also contributed to filling the gap in knowledge. Thirdly, the newly described factors/reasons found in our research also contributed to filling the gap in knowledge. In the quantitative substudy, this was the ethnic origin of the

partner, part of the block of sociocultural characteristics which explained the major part of non-western women's inadequate prenatal care utilisation. In the qualitative substudy these were: considering an abortion, fear of disclosing the pregnancy to a religious family who might disapprove and attempting to reduce the total number of prenatal visits by entering late, even though the extent to which they do has not been quantified yet. Lastly, the qualitative substudy also contributed to some extent to filling the gap by giving more insight into the mechanism through which some factors such as age and socioeconomic status exert their effect. What we were not able to cover was distinguishing between explanatory factors for non-western women from Dutch speaking and non-Dutch speaking countries, as these were shown to differ in a previously conducted study by Alderliesten *et al.* [10].

In this thesis, the term 'inadequate prenatal care utilisation' was used to describe relatively less and/or late prenatal care utilisation'. In quantitative research on the utilisation of prenatal care, 'inadequate' is a commonly used term. However, its normative connotation cannot be overlooked, especially since this research also included a qualitative substudy. The use of the guidelines of the Royal Dutch organisation of midwives to define inadequate shows that the standards were set according to those of the healthcare system and not to those of non-western women. Non-western women may give a different meaning to inadequate prenatal care utilisation and may perceive prenatal care utilisation described as inadequate by healthcare professionals and researchers as adequate or sufficient to their needs.

The experiences with non-western women in maternity care

This research also aimed to explore the experiences of maternity care professionals with non-western clients by interviewing midwives and maternity care assistants. The two substudies revealed that both groups of professionals experience difficulties in the provision of care to non-western women. Some difficulties such as communication problems, knowledge of the Dutch maternity care system and the important role of the family were reported by both groups of professionals. Suboptimal health literacy and strong preference for physicians were only reported by midwives, while harmful or dangerous postnatal practices and lacking the necessities for a newborn baby due to financial constraints were only reported by maternity

care assistants. The difficulties reported by the maternity care professionals in these two studies are in line with findings from other western countries where maternity care professionals also reported problems related to communication [21-24], women's limited knowledge of the healthcare system [25], family involvement [25] and preference for physicians [24].

These two substudies also revealed that both groups of professionals have adopted various measures to address these difficulties. Midwives adopted among others an alert and proactive approach and maternity care assistants a flexible and creative approach. These approaches demonstrate that provision of care to non-western clients may require skills, which may be less often used when caring only for native Dutch clients. These approaches also demonstrate and confirm that even though the content of care is predefined, it needs to be tailored towards individual needs to provide effective care.

Both midwives and maternity care assistants reported communication problems which were more pronounced among the first generation. However, only maternity care assistants thought they were able to manage these well with non-verbal communication. This difference may be explained by the more practical nature of maternity care assistants' tasks compared to midwives who have to provide their clients with more technical information. Therefore, the discontinuation of reimbursement for interpretation services in the Netherlands may lead to less use of these services, and thus complicate midwives' efforts to achieve optimal care and clients' willingness or ability to take an active role.

These two substudies on the experiences of maternity care professionals with non-western clients may give the impression that non-western women's perceptions were not explored in our research. However, our research also explored the experiences of thirty six non-western women but did not include these as a dissertation chapter due to time constraints. Publication of these findings in the near future will give further insight into the experiences of maternity care professionals and non-western women with one another.

Implications

Factors explaining non-western women's inadequate prenatal care utilisation

The quantitative substudy revealed that compared to native Dutch women, first and second-generation non-western women correspond and differ in factors explaining their inadequate prenatal care utilisation. Comparing these two generations with each other without taking native Dutch women as the reference category would have been an interesting addition to our analysis. However, the sample size was not sufficient to test whether first and second-generation non-western women differ statistically from each other in this regard. Future research comparing the first and second generation against each other is therefore recommended. This will allow for more insight into the generational differences in non-western women's prenatal care utilisation. Besides more research on generational differences, further research on the prenatal care utilisation of at least each of the four major non-western groups in the Netherlands is necessary. Both recommended studies should be carried out at national level, as these topics have already been explored at local level (Rotterdam and Amsterdam) in previous Dutch studies.

Another implication for future research concerns the content of prenatal care. This research focused solely on prenatal care utilisation (the gestational age at entry and the number of prenatal visits), and did not take the content of prenatal care into account. However, utilisation of prenatal care according to the midwifery guidelines does not necessarily mean that women have received prenatal care of adequate content. Therefore, the adequacy of the content of prenatal care should also be included in future studies on prenatal care utilisation. A tool assessing these two prenatal care aspects has been developed and applied in Belgium [26,27].

Future research should also explore the extent to which the new explanatory factors found in our qualitative substudy can statistically explain non-western women's inadequate prenatal care utilisation – especially for the second generation for which we were not able to find a full statistical explanation.

Development of strategies aimed at improving non-western women's prenatal care utilisation, in particular entry, is challenging as women have not entered the prenatal care system yet. Therefore, strategies should

mainly be focused on the stage before prenatal care entry, even before pregnancy. The late entry due to late recognition of pregnancy symptoms, one of the reasons for late prenatal care entry in the qualitative substudy, implies that women need information on pregnancy signs and symptoms to accomplish timely pregnancy recognition. The difficulties in accessing prenatal care, another reason for late prenatal care entry in the qualitative substudy, imply that provision of information on the organisation of and the entitlement to prenatal care is necessary. Not being ready to start prenatal care, the final reason for late prenatal care entry in the qualitative substudy, is more difficult to address as it reflects personal beliefs and circumstances. However, educating these women on the benefits of early prenatal care entry may perhaps outweigh this barrier. However, reaching these women may be difficult. This can be attempted by assembling this information and making it available at community and cultural organisations and websites of general practitioners, midwifery practices and health websites for immigrants. The findings of the quantitative substudy imply that this information should especially be targeted to non-western women who do not speak Dutch at home, have no partner or a first-generation non-Dutch partner irrespective of generation. With regard to first-generation women, information should also target those aged ≤ 19 or ≥ 36 , with unplanned pregnancies, poor obstetric histories, a low educational level, below average net household income and no supplementary insurance.

The experiences with non-western women in maternity care

As to our knowledge, this study is the first to explore Dutch maternity care professionals' experiences with non-western clients. The two substudies only focused on the perceptions of midwives and maternity care professionals and did not explore the perceptions of non-western clients. Therefore, qualitative research on non-western women's perceptions of prenatal and postnatal care is also needed. This will provide more comprehensive insight into the interaction between maternity care professionals and non-western clients; in particular by converging the perspectives from midwives, maternity care assistants and non-western clients in a triangulation study.

The insights gained from this study point into the direction that training for midwives and maternity care assistants needs to be adapted. The

experiences of midwives and maternity care assistants revealed that they both have developed their own way of dealing with difficulties encountered in the provision of care. These approaches, i.e. 'best practices', should be compiled and included in retraining programmes for midwives and maternity care assistants. As midwifery and maternity care assistance students will be facing the same challenges as the current professionals, these compiled difficulties and approaches should also be included in their education programmes. With these knowledge and skills, midwives and maternity care professionals will be able to further tailor their care towards the individual needs of their clients.

Another recommendation is that midwives and maternity care assistants are supported by regulations of the government and healthcare insurers in their efforts to guarantee the quality of care. The discontinuation of reimbursement for interpretation services needs to be reconsidered as communication problems and suboptimal health literacy were found to challenge or complicate the provision of care to some non-western women. Especially in case of providing practical information, using alternative methods of communication, for instance picture books, can be a good strategy. But for midwives, who have to provide more technical information to their clients compared to maternity care assistants, telephone interpretation may sometimes be indispensable.

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Samenvatting (Summary in Dutch)

Doel

Dit onderzoek had als doel inzicht te verkrijgen in de factoren en redenen die het inadequaat prenataal zorggebruik van niet-westerse vrouwen verklaren, en de ervaringen van verloskundigen en kraamverzorgenden met niet-westerse vrouwen. De volgende onderzoeksvragen werden beantwoord:

Factoren die het inadequaat prenataal zorggebruik van niet-westerse vrouwen verklaren

- Van welke factoren is bekend dat zij het prenataal zorggebruik van niet-westerse vrouwen in geïndustrialiseerde westerse landen beïnvloeden?
- Hoe maken eerste en tweede generatie niet-westerse vrouwen in Nederland gebruik van de prenatale zorg ten opzichte van autochtone Nederlandse vrouwen?
- Waarom maken sommige niet-westerse vrouwen in Nederland minder adequaat gebruik van de prenatale zorg ten opzichte van andere niet-westerse vrouwen?

De ervaringen met niet-westerse vrouwen in de zorg rondom zwangerschap en geboorte

- Op welke wijze verschilt de zorgverlening aan niet-westerse vrouwen ten opzichte van autochtone Nederlandse vrouwen volgens verloskundigen en kraamverzorgenden, en hoe pakken zij die verschillen aan?

Hoofdbevindingen

Factoren die het inadequaat prenataal zorggebruik van niet-westerse vrouwen verklaren

In hoofdstuk 2 onthulde de systematische review van wetenschappelijke literatuur tussen 1995 en 2012 naar factoren die van invloed zijn op het prenataal zorggebruik door niet-westerse vrouwen in geïndustrialiseerde landen met universeel toegankelijke gezondheidszorg een verscheidenheid van factoren, die gecategoriseerd werden volgens een uitgebreide versie van Andersen's model van zorggebruik. Deze factoren werden geïdentificeerd als

faciliterend of belemmerend en besloegen alle acht categorieën van het conceptueel raamwerk (Tabel 1, hoofdstuk 7).

Faciliterende factoren voortkomend uit de gereviewde literatuur waren:

- migratie gerelateerde factoren (erkenning van prenatale zorg als een belangrijk onderwerp in de lokale gemeenschap)
- culturele factoren (etnisch matchen van zorgverlener en zwangere vrouw; geloof in het belang van prenatale zorg voor het welzijn van baby's en zwangere vrouwen)
- positie van vrouwen (monitoren van de sociaal economische status)
- sociaal netwerk (echtgenoot die de officiële taal van het land spreekt)
- expertise (volwassen ervaren verloskundigen die de moedertaal van de vrouwen beheersen; respect en interesse in zwangere migranten vrouwen tonen; vrouwen een gevoel van veiligheid geven)
- persoonlijke bejegening en communicatie (gebruik van de moedertaal van de vrouwen; het stellen van specifieke vragen en demonstratie en uitleg op maat; audiovisueel materiaal; zwangerschapslessen hernoemen tot zwangerschapssessies)

Belemmerende factoren werden in meerdere categorieën beschreven:

- demografische, genetische en zwangerschapsgerelateerde factoren (multipariteit; jonger dan 20 jaar; ongeplande zwangerschappen)
- migratie gerelateerde factoren (gebrek aan kennis of informatie over het westers gezondheidszorg systeem; laat in de zwangerschap in het nieuw land arriveren)
- culturele factoren (naleven van culturele en religieuze gewoonten; slechte taalbeheersing; gebrek aan assertiviteit; afhankelijkheid aan de echtgenoot; zwangerschap als een normale toestand beschouwen, prenatale zorg meer als een last dan een voordeel beschouwen; zwangerschapslessen als niet noodzakelijk beschouwen)
- positie van vrouwen (financiële problemen; werkloosheid, sociale ongelijkheid, laag of middelmatig opleidingsniveau, tijdgebrek, gebrek aan kinderopvang)
- sociaal netwerk (beperkte ondersteuning van familie, advies van familie of vrienden verkrijgen of opvolgen; geïsoleerde gemeenschap)

- toegankelijkheid (ongeschikte timing van prenatale afspraken en onverenigbare openingstijden van prenatale zorgverleners; transport en mobiliteitsproblemen; indirecte discriminatie)
- expertise (gebrek aan kennis over culturele gebruiken)
- persoonlijke bejegening en communicatie (slechte communicatie; het gevoel hebben slecht te zijn behandeld door een zorgverlener)

De meest frequent gerapporteerde faciliterende factor was het verstrekken van informatie en zorg in de moedertaal van de vrouwen. De meest frequent gerapporteerde belemmerende factoren waren: gebrek aan kennis over het westers gezondheidszorg systeem en slechte taalbeheersing (Tabel 1, hoofdstuk 7).

In hoofdstuk 3 werd het prenataal zorggebruik van niet-westerse vrouwen onderzocht door middel van kwantitatieve analyse van data verzameld in een nationale cohort van zwangere vrouwen uit 20 verloskundige praktijken. De zwangerschapsduur bij aanvang en het totaal aantal prenatale bezoeken werd geaggregeerd tot een index. Deze analyse toonde aan dat de ongecorrigeerde odds voor inadequaar prenataal zorggebruik van de eerste en tweede generatie niet-westerse vrouwen 3.26 en 1.96 keer groter waren dan voor autochtone Nederlandse vrouwen. Het inadequaar prenataal zorggebruik door niet-westerse vrouwen werd voornamelijk gekenmerkt door late aanvang. Factoren die de hogere odds voor inadequaar prenataal zorggebruik van eerste generatie niet-westerse vrouwen volledige verklaarden in deze analyse waren in volgorde van belang:

- sociaal culturele factoren, namelijk etniciteit van de partner, taal die thuis gesproken wordt (Tabel 1, hoofdstuk 7)
- socio-economische factoren, namelijk opleidingsniveau van de moeder, netto huishoudinkomen, aanvullende verzekering (Tabel 1, hoofdstuk 7)
- demografische en zwangerschapsfactoren, namelijk leeftijd van de moeder, pariteit, zwangerschapsintentie, ectopische zwangerschap/mola-zwangerschap/abortus in de obstetrische voorgeschiedenis (Tabel 1, hoofdstuk 7)

Voor de tweede generatie niet-westerse vrouwen konden alleen socio-economische factoren twee derde deel van hun hogere odds voor inadequaat prenataal zorggebruik in vergelijking tot autochtone Nederlandse vrouwen verklaren.

In hoofdstuk 4 werd de visie van niet-westerse vrouwen op het prenataal zorggebruik verder geëxploreerd door middel van semigestructureerde interviews met niet-westerse vrouwen die tijdig en laat aangevangen waren met de prenatale zorg. De interviews waren specifiek gefocust op late aanvang, omdat dit het grootste deel uitmaakte van het inadequaat prenataal zorggebruik door niet-westerse vrouwen in de statistische analyse die werd uitgevoerd in hoofdstuk 3. Zowel de tijdige als late aanvangers rapporteerden dat zij de prenatale zorg als een belangrijke manier voor het verzekeren van hun eigen gezondheid en die van hun baby's beschouwden. Ondanks dit belang dat aan prenatale zorg gehecht wordt, startten sommige niet-westerse vrouwen laat omdat ze zich er niet van bewust waren dat ze zwanger waren, geen toegang hadden tot de prenatale zorg of niet gereed waren om te starten met prenatale zorg qua emoties, percepties en omstandigheden (Tabel 1, hoofdstuk 7).

De ervaringen met niet-westerse vrouwen in de zorg rondom zwangerschap en geboorte

In hoofdstuk 5 worden de ervaringen van verloskundigen met niet-westerse vrouwen door middel van semigestructureerde interviews en een focusgroep geëxploreerd. Verloskundigen ervaren zorgverlening aan niet-westerse vrouwen als moeilijk en veeleisend en tegelijkertijd ook als fascinerend en lonend. Er werden verscheidene problemen beschreven door de geïnterviewde verloskundigen die benadrukten dat deze meer tot uiting komen bij de eerste generatie: communicatie problemen, suboptimale gezondheidsvaardigheden, socio-economische problemen, gebrek aan kennis over het zorgsysteem rondom zwangerschap en geboorte, pressie van de familie en een sterke voorkeur voor artsen.

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In hoofdstuk 6 worden de ervaringen van kraamverzorgenden met niet-westerse vrouwen door middel van semigestructureerde interviews geëxploreerd. De geïnterviewde kraamverzorgenden beschouwden zorgverlening aan niet-westerse vrouwen als interessant en uitdagend, maar soms ook als moeilijk. De problemen die gerapporteerd werden zijn: ontbreken van de benodigdheden voor een pasgeboren baby, communicatieproblemen, beperkte kennis van het Nederlands zorgsysteem rondom zwangerschap en geboorte, de belangrijke rol van de familie in de postnatale periode en de benodigde inspanning voor het opbouwen van een relatie met de cliënt en haar familie. Om de gezondheid en veiligheid van moeder en kind te bewaken, hebben kraamverzorgenden een flexibele en creatieve benadering met compromis oplossingen waar nodig. Verder hebben zij ook nog enkele andere strategieën met als doel het bewerkstelligen van een relatie met de niet-westerse vrouwen en hun families, het verbeteren van de kennis over het zorgsysteem rondom zwangerschap en geboorte en het geven van voorlichting (Tabel 2, hoofdstuk 7).

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Agatha Winifred Boerleider

Curriculum Vitae

Agatha Winifred Boerleider was born on May 30th 1975 in Paramaribo, Suriname. She studied medicine at Anton de Kom University in Paramaribo, and graduated as a general practitioner in 2004. After working as a general practitioner and civil servant at the Ministry of Health Suriname, she decided to pursue further studies in the field of Public Health. In 2009 she obtained a Master's degree in Public Health (specialisation epidemiology) at Maastricht University. A few months later, in 2010, she started her PhD project at the Netherlands Institute for Health Services Research (NIVEL) in Utrecht, which resulted in this thesis. Since August 2014 she is appointed as a lecturer/researcher at Saxion University of Applied Sciences in Enschede.

