

# Barriers community members face in accessing prenatal care services in Salvador, Brazil

*A qualitative study carried out in São Marcos (Baixa Fria) neighbourhood*

**Vrije Universiteit Amsterdam**

MSc. Health Sciences  
International Public Health

July, 2017

Name: Lianne Bosveld  
Student number: 2580850

VU supervisor: Nadine Blignaut-van Westrhenen  
Faculty of Earth and Life Sciences  
De Boelelaan 1081, 1081 HV Amsterdam  
email: n.blignaut@vu.nl

On-site supervisor: Madelon Eelderink  
Address: Oosterkade 18bis, 3582 AT Utrecht  
email: madelon@7senses.es

Placement organization: 7Senses

Number of words: 9970  
Numbers of ECs: 27



## **Abstract**

### **Background**

Prenatal care is a strong predictor of positive pregnancy outcomes, and has a substantial impact on maternal and child mortality. Research indicates that women of lower socioeconomic status have received less adequate or no prenatal care. Women living in poor areas such as Baixa Fria in Salvador can be considered as high-risk population for not attending prenatal care. The objective of this research was to improve maternal health in relation to prenatal care in Salvador by generating knowledge about existing barriers in access to prenatal health care of the local community. In order to get insight into these barriers, this research focussed on the perspectives of the local community of Baixa Fria.

### **Methods**

A qualitative study conducted in Baixa Fria neighbourhood among female community members between 19 and 43 years old. Data was collected through 12 semi-structured interviews and three focus groups with community members, one interview with an obstetric doctor and several informal conversations at the health post and local municipality during a period of three months. Data have been analysed according to the thematic content analysis based on the four themes of the conceptual framework: approachability, ability to perceive, acceptability and ability to seek.

### **Results**

Community members indicated several barriers for not attending or not fully attending prenatal care. The two major barriers are: difficulties in booking the first appointment and difficulties in obtaining a SUS card. Community members have no difficulties in identifying prenatal services. However, since the health post does not distribute information regarding prenatal care, a lack of transparency regarding the available treatments has been identified. The majority of the participants consider prenatal care as important.

### **Conclusion**

Despite facing the same barriers, some women manage to receive prenatal care and others do not. A relation between unplanned pregnancy and not attending prenatal care versus happiness about the pregnancy and the perseverance to continue trying to get an appointment has been observed. Further research should focus on how health care services can improve transparency regarding prenatal care services, specifically on distributing information regarding booking the first appointment.

## Table of contents

<b>Introduction</b> .....	<b>4</b>
Contextual background .....	6
Conceptual framework .....	10
<b>Methods</b> .....	<b>13</b>
Research design .....	13
Research area .....	13
Research population and sampling.....	13
Data collection.....	14
Data analysis.....	14
Ethical considerations.....	15
Quality .....	15
<b>Results</b> .....	<b>16</b>
Approachability .....	17
Ability to perceive.....	18
Acceptability .....	20
Ability to seek .....	22
<b>Discussion</b> .....	<b>24</b>
Strengths and limitations.....	26
Conclusion and suggestion for further research.....	26
<b>References</b> .....	<b>28</b>
<b>Appendices</b> .....	<b>31</b>

## Introduction

Prenatal care is a strong predictor of positive pregnancy outcomes, and has a substantial impact on maternal and child mortality (Bassani, 2009). Inadequate prenatal care is associated with an increased risk of preterm delivery. Women who received prenatal care have consistently shown better outcomes than those who did not receive prenatal care (Krueger, 2000). Initiation of prenatal care during the first trimester of pregnancy provides opportunity for timely diagnosis and reducing complications of numerous health problems for both mother and child. These health benefits are enhanced among socially disadvantaged, high-risk populations that usually experience difficulty in obtaining adequate prenatal care (Bassani, 2009). Previous studies demonstrate that social and demographic factors are related to adequate prenatal care (Bassani, 2009; Delvaux, 2001; Goldani, 2004). Research indicates that women of lower socioeconomic status were found to have received less adequate or no prenatal care (Bassani, 2009; Goldani, 2004). Women who have received no prenatal care or inadequate prenatal care are usually younger and unmarried, have lower education and have had more births (Bassani, 2009; Goldani, 2004). Women living in poor areas such as the São Marcos neighbourhood in Salvador de Bahia can be considered as a high-risk population for not attending prenatal care (Corburn, 2016).

Since the early 20<sup>th</sup> century, various national health policies with the aim to improve women's health have been implemented in Brazil. For instance, in 2000 the Ministry of Health created the Program of Humanization in Prenatal and Birth (PHPN) in order to improve the quality of prenatal care and, consequently, decrease infant morbidity and mortality (Oliveira, 2016). In 2011, former President Dilma Rousseff created the Rede Cegonha (Stork Network) program that aims to assure rights to proper care for adult, young and adolescent women, concerning family planning, prenatal care, delivery and birth. The Stork Network was created to reduce neonatal and child mortality and foster maternal health (Ministério de Saúde, 2011). Currently, 5488 municipalities (98.5%) implemented the program in order to improve the quality and access to prenatal care, the quality and humanization of birth, and access to quality care from prenatal care until a child is two years old. (Oliveira, 2016).

The results of a study, performed in 2014 in Brazil on prenatal care, shows that the coverage of prenatal care is almost universal with high attendance in all regions of the country and among women with different demographic and social characteristics. However, the appropriateness of such care is still low: 75.8% of women began prenatal care before first trimester and only 73.1% achieved the minimum number of visits before completing the pregnancy (Viellas, 2014). In Brazil, adequate prenatal care is defined as having a minimum of six visits before completing the pregnancy, initiated during the first trimester (Goldani, 2004). In the state of Bahia, 51% of the pregnant women attended prenatal care more than seven times and 84% of the pregnant women met the minimum of six visits. In contrast, still 7% of the pregnant women in Bahia did not visit prenatal care (Datusus, 2014).

Several barriers for not attending or late initiation of prenatal care have been identified, such as, difficulties in diagnosis the pregnancy, access barriers and personal problems (Viellas, 2014). Research participants reported the following categories for non-attendance to prenatal care: "*not knowing that she was pregnant; personal*

*problems (not wanting pregnancy, not knowing that prenatal care is important for health, financial hardship, hardship related to work/school, and lack of support to attend the service) and access barriers (difficulty with booking appointments, problems with health service and health professionals, and transportation difficulties)”* (Viellas, 2014). Furthermore, it has been found that indigenous and black women have less access to prenatal care as well as women with less education, with a higher number of pregnancies, and residents of the North and Northeast region (Viellas, 2014). Leal et al. (2005) reported that inequalities were verified in access to both adequate prenatal care and delivery care. The authors indicated that less than one fifth of low schooled black women attended adequate prenatal care and, even among those with high schooling, not even half benefited from prenatal care (Leal, 2005). Furthermore, black and mulatto women reported to be less satisfied than white women regarding prenatal, labour and newborn care (Leal, 2005).

Women living in poor areas such as the São Marcos neighbourhood in Salvador de Bahia can be considered as high-risk population for not attending prenatal care (Corburn, 2016). Although maternal health is a basic right in Brazil, it remains unknown how the local community in São Marcos, specifically Baixa Fria, perceive information about existing services. It is expected that factors such as, health literacy, knowledge about health, and beliefs related to health and sickness will play an important role in the ability to perceive appropriate health care. Previous studies showed that women of lower socioeconomic status have received less adequate or no prenatal care (Bassani, 2009; Goldani, 2004; Leal, 2005). These are predominantly quantitative studies, however, qualitative data on pregnant women’s view on prenatal care services is scarce. Therefore, the objective of this research was to improve maternal health in relation to prenatal care in Salvador by generating knowledge about existing barriers relating to health care access of the local community. In order to get insight into these barriers, this research focussed on the perspectives of the local community of Baixa Fria. The research objective will be met through the following central research question: *What are the barriers to health care access the local community in Baixa Fria face in relation to prenatal care?*

## **Contextual background**

### **National context: Brazil**

Brazil is the largest country in South and consist of 26 states with each its own capital, and with capital Brasilia as federal district (CIA, 2017). There are five geographical regions (north, northeast, centre-west, southeast, and south) with differing demographic, economic, social, cultural, and health conditions, and widespread internal inequalities. For example, the southeast region covers only 11% of Brazil's territory, but accounts for 43% of the population and 56% of gross domestic product. The north region, which contains most of the Amazon rainforest, has the country's lowest population density (3.9 people per km<sup>2</sup>) and is the second poorest region, after the northeast region (Paim, 2011).

From 1500 until 1822, Brazil was colonized by Portugal therefore the official language is Portuguese (CIA, 2017). Brazil is traditionally known as an immigrant country; between the first Portuguese settlement in the 16th century and the Second World War, more than four million people migrated to the country, most of them Europeans. This resulted in Brazil having the largest population of Italians, Portuguese, Spaniards, Germans and Japanese outside their own countries. Another indicator of the multiculturalism in Brazil can be seen in the percentages of ethnic origin: white 47.7%, mulatto (mixed white and black) 43.1%, black 7.6%, Asian 1.1%, indigenous 0.4% (CIA, 2017; Focus migration).

The current population of Brazil is 211.386.454 as of August 1<sup>st</sup>, 2017, based on the latest United Nations estimates. Brazil is number five on the list of countries by population (Worldometers, 2017). The religion is predominantly various forms of Christianity. Brazil has the largest number of Catholics in the world: around 65% of the population is Catholic. However, in the last ten years Protestantism (22% of the population), particularly Pentecostalism and Evangelicalism, has spread in Brazil, while the proportion of Catholics has dropped significantly (CIA, 2017).

### **Local context: Northeast region and Salvador**

Salvador, capital of the north eastern state Bahia, was Brazil's first capital city and is currently the third largest city in Brazil with 2,902,927 inhabitants (CIA, 2017). About 80% of the population of the state Bahia is black, and some neighbourhoods in Salvador have even higher percentages of black population. Salvador is the Brazilian city with the highest proportion of slum residents; the 2010 Census reported that 33% of Salvador's 2.64 million residents lived in slums (Unger, 2015). The research area is the urban slum São Marcos, specifically Baixa Fria, located in the periphery of Salvador with a population of around 200,000 inhabitants and population density of > 215,000 inhabitants per km<sup>2</sup> (Kikuti et al., 2015). The methods section will provide more insight into the research area.

### **Economy**

Brazil's economy is the largest of Latin America and the ninth-largest of the world. Brazil is classified as an upper middle income country with a rapidly expanding middle class (CIA, 2017). Since Brazil has experienced a vast social progress over the past 13 years, more than 30 million people (a sixth of the population) has moved

out of poverty into the lower middle class (Paim, 2011). Moreover, Brazil's traditionally high level of income inequality has declined for the last 15 years (CIA, 2017). The progress came from both an economic growth and from progressive social policies implemented by a sequence of left-wing governments that, for example, raised the minimum wage and introduced the 'Bolsa Família' conditional cash transfer program. In 2008, the program distributed about US\$7.2 billion among 10.5 million families (Paim, 2011). In São Marcos, the majority of the population lives in absolute poverty. On average, 71.9% of the families living within the study area have a monthly income lower or equal to the Brazilian minimum wage (R\$ 510.00; equivalent to US\$289.77, in 2010) (Kikuti, 2015).

### **The Brazilian Health System**

The Brazilian Constitution has five chapters dedicated to health. It states that: *"access to health care in the country should be public, free, universal and equitable to all Brazilian citizens, rich or poor."* After the end of the dictatorship in 1988, The Unified Health System (Sistema Único de Saúde - SUS) was established which is based on the principle of health as a citizen's right and the state's duty (Macinko, 2015; Paim, 2011). According to the World Health Organization (WHO), it is one of the most generous and socially inclusive health programmes in the world (WHO, 2013). All public health services and most common medications are generally accessible and free of charge for all citizens (Macinko, 2015). Two decades after establishing the SUS more than 75% of the population rely exclusively on it for their health care coverage. Comparing The National Household Sample Survey (PNAD)<sup>1</sup> conducted in 1981 with the survey conducted in 2008, a 174% increase in health care service use was observed (Paim, 2011).

Around 70% of Brazilian residents use public hospitals, while the other 30% use private hospital visits, which they either pay for themselves or which are covered by private medical insurance. Most of the private hospitals in Brazil have excellent medical facilities. In Salvador there are many hospitals and private clinics, of which some are the best in Brazil. In São Marcos the ambulatory and urgent care clinic is run by the nearby private hospital São Rafael and several public health posts (see Figure 1 and 2).

### **Prenatal care in Brazil**

Regarding maternal health, prenatal care is provided for the entire population at community level as part of the Family Health Strategy (FHS). The FHS is the most important national health policy to provide primary health care in the public health sector. Every FHS team consist of a physician, a nurse, a nurse assistant, and four to six community health agents. Community health agents are required to actively search for pregnant woman and refer them to obtain prenatal care. FHS has played an important role in the prevention of diseases and the promotion of health awareness since it constantly monitors families through systematic monthly household visits. Moreover, health promotion and disease prevention activities such as encouraging child

---

<sup>1</sup> The National Household Sample Survey - PNAD investigates, every year, and on an ongoing basis, general characteristics of the population, concerning education, labor, income and housing and others. That is done at a variable frequency, according to type of information needed by the country, such as characteristics of migration, fertility, nuptiality, health and food security, among other topics. The access to these statistics has constituted, through the 44 years of existence of this survey, an important tool for the formulation, validation and evaluation of policies aimed at the socio-economical development and improvement of life conditions in Brazil (IBGE, 2011).

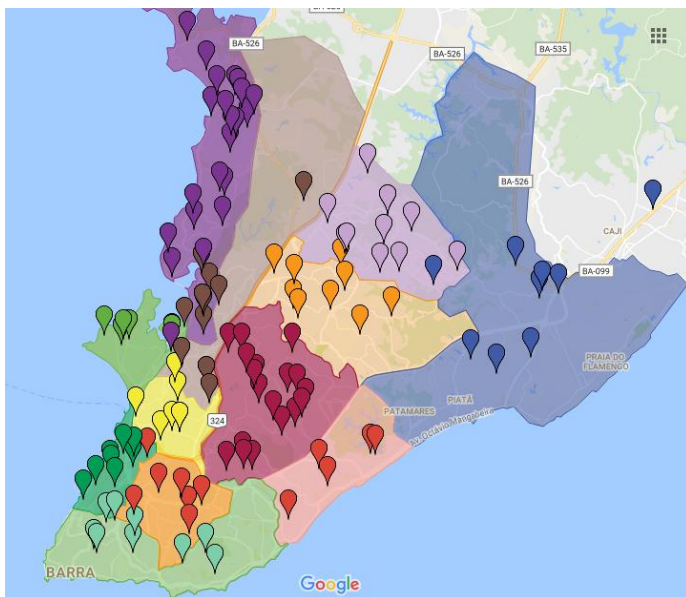
immunization and prenatal care are stimulated (Andrade, 2016). Family health teams are organized geographically, covering populations of up to a 1000 households each, with no overlap or gap between areas (Macinko, 2015). Community health agents play a fundamental role as they act as a bridge between the population and health units. The FHS has expanded substantially: in 1998, there were approximately 2000 teams including 60,000 community health agents providing services to 7 million people (4% of the population). In 2014, there were 39,000 teams with more than 265,000 community health agents, plus 30,000 oral health teams, together serving 120 million people (62% of the population) (Macinko, 2015).

### **Rede Cegonha (Stork Network)**

Rede Cegonha (Stork Network), created in 2011 by former President Dilma Rousseff, is a network aiming to guarantee quality care to all pregnant women through SUS. The Stork Network was created to reduce neonatal and child mortality and foster maternal health (Ministério de Saúde, 2011). The network promotes the implementation of a new model of care for women's and child's health with a focus on childbirth, and growth and development of the child from zero to twenty-four months. Rede Cegonha consist out of four components:

1. Prenatal care;
2. Delivery;
3. Maternity leave and integral attention to the child's health;
4. Logistic system (sanitary transport and regulation) (Portal de Saúde, 2012).

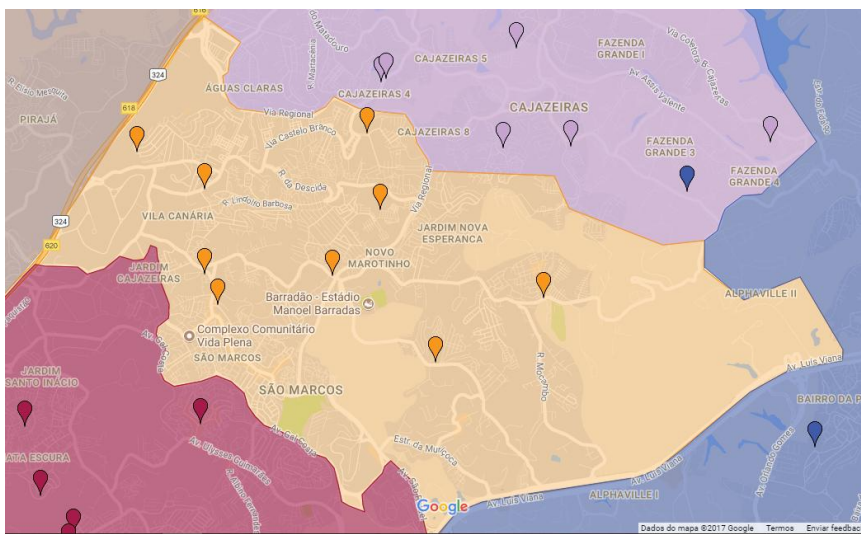
As can be seen in Figure 1, SUS/Rede Cegonha divided Salvador into fifteen health districts. Every district includes several 'Unidades Básicas de Saúde e Maternidades para gestantes' which means 'basic health and maternity units for the pregnant'. Every coloured balloon on the map represents a basic health and maternity unit.



**Figure 1: The 15 health districts in Salvador**  
*source: Secretaria Municipal da Saúde - Prefeitura de Salvador*



Figure 2 shows the orange coloured District 12 'Pau da Lima' which attends women living in São Marcos and includes nine health and maternity units where women are able to receive prenatal care. There are two places that are accessible for the women of São Marcos to give birth: maternidade Albert Sabin and Mansão do Caminho. For women with a high-risk pregnancy there are two options to give birth: maternidade Albert Sabin and maternidade de referência prof. José Maria Magalhães Neto. With the aim of attending the inhabitants of Salvador as efficient as possible, Rede Cegonha indicates it is only possible to visit the health and maternity units in the health district of residence. When looking on the map (Figure 2) one can see a health unit in the adjacent district is in fact closer for the inhabitants of São Marcos than most health units of 'Pau da Lima' district. In order to better understand the context of where this research took place, the following paragraphs will provide information about Brazil and Salvador.



**Figure 2: District 12 'Pau da Lima'**  
*source: Secretaria Municipal da Saúde - Prefeitura de Salvador*

# Conceptual framework

## Health care access

Access is central to the performance of health care systems around the world. People in poor countries tend to have less access to health services than those in developed countries, and within countries, the poor have less access to health services (Peters, 2008). Although there is no consensus in literature about the definition of access, a frequently used definition is: “access is related to the timely use of services according to need” (Peters, 2008; Levesque, 2013). In contrast, other researchers distinguish between the supply and opportunity for the use of services, and the actual using of health services as including realized need (Peters, 2008). Based on the various proposed dimensions in literature, Levesque et al. (2013) used the following definition of access: “the possibility to identify healthcare needs, to seek healthcare services, to reach the healthcare resources, to obtain or use health care services, and to actually be offered services appropriate to the needs for care” (Levesque, 2013). Levesque et al. (2013) conceptualised the following five dimensions of accessibility of services: ‘Approachability’, ‘Acceptability’, ‘Availability and accommodation’, ‘Affordability’ and ‘Appropriateness’. As can be seen in Figure 3, five corresponding abilities of people interact with the dimensions of accessibility to generate access.

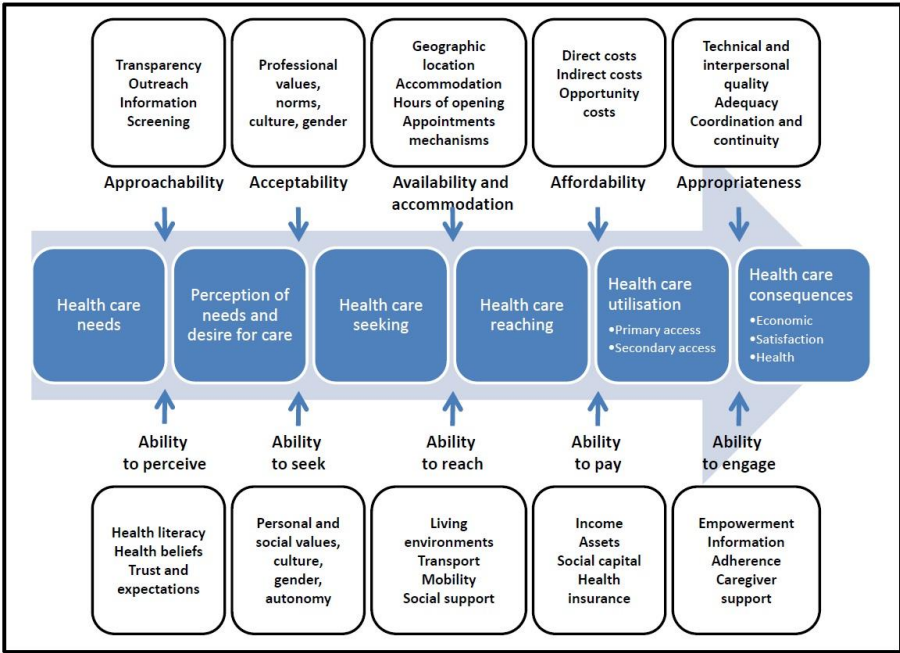


Figure 3: Framework of access to health source: Levesque et al. (2013). Patient-centred access to health care: conceptualising access at the interface of health systems and populations.

Regarding the objective of this study and to where the research took place the focus of the interviews was on the approachability and acceptability of health care services (see Figure 4). This includes the two corresponding abilities of the health seeker to generate access, namely: the ability to perceive health care and the ability to seek health care. The focus of the main research question was on the access barriers, specifically from the

perspectives of the women, in relation to prenatal care. Therefore, it is important to get insight into the perspectives women have on the approachability and acceptability of health services, but also the get insight into their abilities to perceive and seek prenatal care. Moreover, since public health care is free of charge in Brazil, the dimension 'affordability' and the corresponding 'ability to pay' were not relevant for this research.

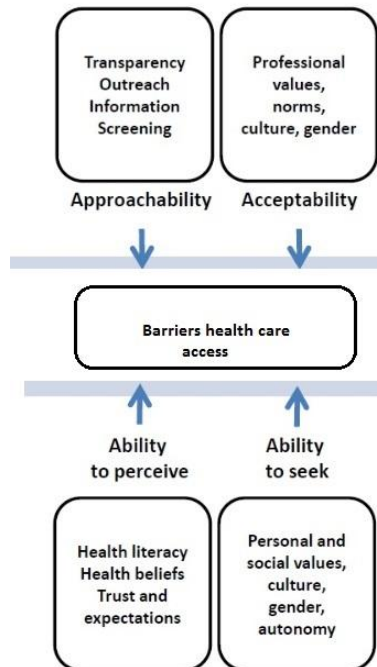


Figure 4: Conceptual model to identify barriers in prenatal care access in Baixa Fria

Levesque et al. (2013) describe the dimension 'approachability' as: *"the fact that people facing health needs can actually identify that some form of services exists, can be reached, and have an impact on the health of the individual"*. Different elements can make a service more or less approachable, such as transparency and to what extend information regarding available treatments is available to the public (Levesque, 2013). The corresponding ability to perceive is defined as *"the way in which an individual is able to perceive need for care"*. This is determined by factors such as health literacy, knowledge about health and beliefs related to health and sickness (Levesque, 2013).

Levesque et al. (2013) define 'acceptability' as: *"cultural and social factors determining the possibility for people to accept the aspects of the service (e.g. the sex or social group of providers, the beliefs associated to systems of medicine) and the judged appropriateness for the persons to seek care"*. Whitehead (1992) used the example of unequal access when people are turned away from or are unable to use health services because of their lack of income, race, sex, age, religion, or other factors not directly related to the need for care. It may be that some services are inequitable in the way they are organized, making them unacceptable for some of the community members they are intended to serve. The corresponding 'ability to seek health care' is defined as: *"personal autonomy and capacity to choose to seek care, knowledge about health care options and individual rights that would determine expressing the intention to obtain health care"* (Levesque, 2013).

## Research questions

The main research question of this study is:

*What are the barriers to health care access the local community in Baixa Fria face in relation to prenatal care?*

In order to answer the research question the following four sub-questions has been formulated:

Sub-question 1:

*What are the approachability barriers to identify and reach prenatal health care services for inhabitants of Baixa Fria?*

Sub-question 2:

*What are the barriers in the ability to perceive prenatal health care services for community members of Baixa Fria?*

Sub-question 3:

*How do cultural and social factors play a role for the population of Baixa Fria in accessing prenatal health care?*

Sub-question 4:

*What are the barriers in the ability to seek prenatal health care services for the inhabitants of Baixa Fria?*

## **Methods**

### **Research design**

This research is based on qualitative methods including a fieldwork period in the period from March 6<sup>th</sup> to May 20<sup>th</sup>, 2017 in Salvador, Brazil. The research took place in the São Marcos neighbourhood, specifically in Baixa Fria, an urban slum in the periphery of Salvador. This study took place in collaboration with the Dutch organization 7Senses, a local community researcher and a local translator. This research has an exploratory study design in order to determine barriers the local community members of Baixa Fria face in relation to access to prenatal care. Exploratory research intends to explore the research questions and does not intend to offer conclusive solutions to existing problems. This design is appropriate since there is not much research done on the perspectives of women living in poor urban areas related to prenatal care access.

### **Research area**

This research took place in São Marcos, a community based in the periphery of Salvador. All interviews with community members were conducted in 'Baixa Fria', a small area within São Marcos neighbourhood. From the 1960's people from the interior of Bahia started to construct simple houses against the hills of Baixa Fria valley. Until today the municipality does not recognize Baixa Fria as official urban area. This is the reason inhabitants have very limited, and often difficult, access to public services. It is not easy for foreigners to get access to the community since inhabitants are very closed. Besides, the community is dealing with a drug trafficking problem which negatively affects the safety in the area. The houses in Baixa Fria are basic, small and mostly self-constructed. There is no paved road and at the lowest point of the valley an open sewage is located. The community is only accessible by using the stairs, which are connected with the main street of São Marcos. Furthermore, there is an unofficial religious division within the community of Baixa Fria: a Catholic and a Pentecostal part.

### **Research population and sampling**

The research population consists of the inhabitants of Baixa Fria. Research participants were recruited together with the local community researcher and the local translator because they have access to the research area and they speak the local language. All participants from the community were female and between 19 and 43 years old. Participants can be categorized according to whether they had attended prenatal care or not, and whether they had used public or private care. Besides interviews with the local community members, an interview has been conducted with a gynaecologists/obstetric doctor of the local health post. Also informal conversations were carried out with the administrative manager of the health post and with a staff member of the local municipality.

A purposive sampling strategy was used in order to select interviewees who were likely to generate appropriate and useful data, and including a sufficient number of participants to answer the research question. The first contacts have been established through the local researcher and the local translator. This was the starting point of a snowball strategy, by which one participant leads to another. Women were generally willing

to participate in the research and introduced another potential participant. In order to present a variety of views concerning the research topic, I tried to include women of different ages, women who did have prenatal care, and those who did not.

### **Data collection**

To investigate the barriers the local community members of Baixa Fria face in relation to the access to prenatal care, both interviews and focus groups were carried out.

#### *Interviews*

Semi-structured interviews were carried out by using an interview guide (see appendix 1). The interview guide contained a list of topics regarding pregnancy, maternal health, prenatal care and experienced barriers in obtaining prenatal care. Every interview followed the same procedure starting with a brief introduction about the aim of the research followed by asking demographic data such as: age, marital status, number of pregnancies and level of education. With the aim to comfort the participants, questions were asked related to pregnancy and/or motherhood, particularly about their personal experiences. Subsequently, specific questions were asked regarding obtaining prenatal care and, when relevant, about the experienced barriers. The research population could not speak the English, therefore it was necessary to make use of an interpreter. All interviews took place in people's homes to ensure a comfortable and private location.

#### *Focus groups*

Since focus groups are useful to investigate the general opinion of a particular group of people, and not personal opinions, it is a preferred method of research with regard to the topic and the methodology. Also, it makes it possible to investigate group dynamics and shows intergroup relations which could bring interesting data related to access of health care. The focus groups have been conducted in partnership with the team members of the 7Senses Maternal Health Challenge. The first focus group was held in the beginning of the research to explore the priority topics and problems of the women in relation to maternal health. The second focus group was organized after six weeks in the research when there were specific relevant topics that could be discussed and researched. The following topics were discussed: importance of prenatal care and barriers/reasons to not make use of prenatal care. Participants of the focus groups were pregnant women, mothers with (a) young child(ren) and mothers-to-be. The last focus group discussion was organized before the end of the research in order to reflect and ask for comments on the research findings.

### **Data analysis**

Research data have been analyzed according to the thematic content analysis (Green & Thorogood, 2014). The first step was to familiarize myself with the collected data. In order to get a feel for the data, I made brief descriptive summaries of the conducted interviews. Subsequently, the data retrieved from the interviews was sorted, coded and constantly compared both within and between cases. Themes arose from both inductive and deductive approaches. Data have been inductively grouped into analytical themes conceived as meaningful and important, while using the respondents' definitions and wordings, and data have been deductively examined

according to the four concepts of the conceptual framework, which are used to frame the interpretive analysis of themes. The collected data has been categorised and coded according to these themes.

### **Ethical considerations**

Ethical approval for this research has been obtained through the Institute of Collective Health of the Federal Bahia University in Salvador. Permission to conduct the study was also granted by both the local community leader and the pastor of the church prior to the start of the study. In order to ensure the confidentiality of the research participants, informed consent was requested and recorded. Furthermore, written consent was obtained from all participants prior to the start of the interviews (see appendix 2).

The participant recruitment has been done by the selected local researcher and translator, as gatekeepers of the research. In line with principles lined out by Green & Thorogood (2014), the local researcher and translator were assigned to strive to ensure that participation was truly voluntary, and that the voices of particular individuals or groups are not being silenced by dependence on the gatekeepers for contacts. Before the start of the interview, all participants were provided with an informational letter containing the aim of the study, information about confidentiality and the participants' right to withdraw from the study at any time. This letter, which was also verbally explained to all participants, provided the phone number of the local researcher in case any questions arose after finishing the interview.

### **Quality**

According to Frambach (2013), *"good research is characterized by evidence that is trustworthy, applicable to multiple practical settings, consistent and neutral"*. Different quality criteria have been taken into account in this research. First, the principle 'credibility', that shows the extent to which the study's findings are trustworthy and believable to others, have been enhanced by using multiple data sources as well as using methodological triangulation. The 'transferability' is to what extent the findings can be transferred or applied in different settings have been enhanced by describing the findings and their context in detail by using both the transcribed interviews, and field notes of the focus groups and visits at the health post. The 'dependability' is the extent to which the findings are consistent in relation to the context in which they were generated. This has been enhanced by using both an iterative data collection method as well as an iterative data analysis method. Also data has been collected until data saturation was achieved. Lastly, the 'confirmability' is the extent to which the findings are based on the study's participants and settings instead of researchers' bias. This has been enhanced by discussing the research process and research findings with the local researcher and translator, as well as with the team members of the Maternal Health Challenge.

## Results

In total, 12 community members were interviewed and three focus groups have been held about the access to prenatal care in São Marcos, Salvador. The focus of this research was specifically on the experiences, opinions and barriers women encountered in accessing prenatal care. One gynaecologist/obstetric doctor has been interviewed and various informal conversations at the health post and the local municipality have been used. Furthermore, field notes were used in order to process the emerged interpretations and observations during the visits at the health post.

Of the 12 research participants, all were female. One woman was pregnant at the moment of the interview and all other participants have at least one child. The participants' ages varied between 18 and 43 years old. Three participants did not have prenatal care and three participants have used private health care. Table 1 shows more detailed demographic information about the research participants.

Participant	Age	No. of children	Prenatal yes/no	Public/private	Partner	Bolsa Familia	Job yes/no
P1	unknown	2 and pregnant	No	x	unknown	No	Yes
P2	36	10	Yes	Public	No, 4 ex partners	Yes	No
P3	32	7	Yes	Public	No	Yes	Yes*
P4	41	3	Yes	Private	Yes	No	Yes
P5	18	1	No	x	Yes	Yes	No
P6	25	2 and pregnant	Yes	Public	Yes	Yes	Yes*
P7	43	7	Yes	Public	Widow	unknown	No
P8	34	2	Yes	Private	No	Yes	No
P9	30	5	Yes	Public	No	Yes	No
P10	19	0 and pregnant	Yes	Private	Yes	Yes	No
P11	19	1	No	x	Yes	Yes	No
P12	32	1 and 1 miscarriage	Yes	Public	No	No	Yes

Table 1: demographics research participants

\* : Unofficial job

In order to answer the main research question, all conducted interviews have been analysed according to the thematic content analysis. Based on the conceptual model, the following overarching themes were identified: approachability of services, ability to perceive, acceptability of health services and capacity to seek care. The first theme 'approachability of services' concerns the way in which women in the community identify whether and where they have to go for prenatal care, and how they perceive information about the available services. Data from the informal conversations at the health post as well as the diarised field notes have been used to substantiate the way in which the health post communicates their services to the community. The second theme 'ability to perceive' contains the community members' perspectives on beliefs related to health, and in particular beliefs related to maternal health. Within this theme different perspectives on maternal health and prenatal care among community members are presented. The third theme 'acceptability of health services' provides insights in the cultural and social factors determining the possibility for community members to accept the health service. The last theme 'capacity to seek care' concerns the community members' ability to seek care which includes subthemes such as, knowledge about health care options, perseverance, but also about understanding of the local health system. In the following paragraphs the findings on the themes will be presented one by one.



## **Approachability**

*What are the approachability barriers to identify and reach prenatal health care services for inhabitants of Baixa Fria?*

Approachability relates to the fact that people facing health needs can actually identify that some form of services exists, can be reached, and have an impact on the health of the individual. Different elements can make a service more or less approachable, such as transparency and to what extent information regarding available treatments is available to the public (Levesque, 2013).

This study found that all interviewed community members of Baixa Fria have a clear idea of which prenatal health services exist in and around São Marcos. As can be seen in Figure 2, there are nine prenatal health service options for women living in Baixa Fria. The two closest options 'Health Post Pau da Lima' as well as the public-private institution 'Mansão do Caminho' are generally known among all participants and have been mentioned in the majority of the conducted interviews. Furthermore, the health post Sete de Abril was mentioned by some participants. Aside from these three health units, no other public health units have been mentioned by any of the participants. Three participants made use of private health services, of which one participant travelled every month three hours by bus to receive prenatal care in the countryside. The majority of the participants mentioned they received information about where to go for prenatal care from their family (e.g. sister, mother), but also from neighbours or other community members.

Although participants only indicated three public health units in the conducted interviews, there have been no difficulties observed in the recognition of the existence of health services among the community members. However, a majority of the participants indicated a lack of attendance of health professionals which has impact on the health of the individual. Because of this, participants mentioned they did not (always) succeed in booking prenatal care. The following quotation illustrates this:

*"I went to the Post [Pau da Lima] and to Mansão do Caminho, but I could not get [prenatal]. Now I will give birth without having prenatal done. I am already almost 8 months pregnant." [R1]*

Furthermore, a gap has been noticed in the dissemination of information regarding prenatal care in São Marcos. As explained in chapter 2, Rede Cegonha is aiming to guarantee quality care to all pregnant women through SUS. After the introduction in 2011, a national campaign was launched in order to inform all patients of the included health units about the new strategy. During my visits at the health post Pau da Lima I did not notice any visible information about Rede Cegonha neither about prenatal care services. Also in the community (e.g. in the local bar, the church) there was not any observable information regarding Rede Cegonha or prenatal care. As a result of the lack of transparency, nobody in the community, except one participant - although she did not knew what the strategy entailed-, had heard about Rede Cegonha. As mentioned before, community members perceive knowledge about where to go for prenatal care from their family or other community members. All community members indicated there is no information available or distributed in the community by the health post or any other official body regarding prenatal care or any other health service.

One participant said there is no information distributed in the community but she is going 'to search' for information at the health post:

*"The public network does not come here to explain what the procedure should be. You always know from someone who has already been, and that is it. The information never arrives [...] they never come here." [R10]*

In addition, while visiting the health post Pau da Lima, I got notion of the lack of available information regarding prenatal care. Besides the lack of visible information at the health post, I also observed staff members at the information desk are not willing to give explanation about prenatal services to community members. Moreover, something that I noticed is that community members are easily accepting rejection at the health post; they would never inform, for example, why they are turned away. In contrast, the interviewed obstetric doctor/gynaecologist indicated that the health post is indeed distributing information regarding prenatal care and other available treatments. This contradiction could be explained by the fact that the doctor has never visited the community. Thus, she appeared to rely on the standard procedure whereby the Family Health Teams usually distribute information regarding health services in the community.

In this study it was found that, despite community members only mentioned three of the nine available health care options, this was not observed as barrier in identifying prenatal services. Community members receive information regarding where to go for prenatal care from their family or other community members. A lack of transparency regarding the available treatments has been noticed given that the health post does not distribute information concerning prenatal care or other available treatments.

### **Ability to perceive**

*What are barriers in the ability to perceive prenatal health care services for community members of Baixa Fria?*

Complementary to the approachability of health services is the ability to perceive. As Levesque (2013) argued, the ability to perceive need for care among populations is crucial and determined by factors such as health literacy, health beliefs, knowledge about health, but also by trust and expectations. The following paragraphs give insight into the different barriers the local community of Baixa Fria is facing in perceiving prenatal care services.

As mentioned before, for a resident to have access to the services of the public health system (SUS) a so-called 'SUS card' is needed. While conducting research in Baixa Fria it became apparent that more insight in the process of obtaining a SUS card was crucial to understand the difficulties experienced in accessing prenatal care. Simply because without a SUS card, access to (public) prenatal care is not granted. Before starting the fieldwork period, literature research on this topic has been carried out. However, while conducting interviews in the community, it turned out that the process of obtaining a SUS card in São Marcos is more complex than initially was assumed. The majority of participants mentioned the difficulty of obtaining a SUS card. Therefore, the following paragraph will give a deeper insight in the comprehensive issue of obtaining a SUS card in São Marcos.

Besides the usual procedure of obtaining a SUS card (deliver CPF<sup>2</sup>, RG<sup>3</sup>, and a birth certificate and receive the SUS card at the same day) citizens of Salvador have to deliver a proof of residence. It emerged in the interviews that there is ambiguity among community members on how to request a proof of residence. Also, none of the participants was familiar with the reason why they have to deliver a proof of residence. In order to acquire more information about how to request a proof of residence and the reason why, I visited the local municipality. A local municipality worker explained that in Brazil there is no national law existing which requests to deliver a proof of residence to obtain a SUS card. However, since in Salvador relatively more people were treated in the public health services than the number of inhabitants, a local municipal law was introduced. This law states that inhabitants of Salvador have to deliver a proof of residence in order to obtain a SUS card. Since Baixa Fria is not legally recognized by the municipality as official urban area, it is perceived as very complicated by inhabitants of Baixa Fria to obtain a proof of residence. Community members assume that only official documents are legitimate. However, the local municipality worker explained which documents (e.g. Bolsa Família or TV cable documents) are considered valid as proof of residence. He stated that all 230 families living in Baixa Fria are registered in the Bolsa Família Program so, according to him, they all can obtain a proof of residence without much difficulties.

#### *Health beliefs vs. the importance of prenatal care*

The ability to perceive need for care among populations is determined by factors such as health beliefs and specifically perspectives on the importance of prenatal care. During the focus groups, all participants have been asked what they consider to be good maternal health. For the majority of the participants attending prenatal care and eating good/healthy food were considered the most important factors for a healthy pregnancy. One participant mentioned the importance of being at 'peace with yourself' and another participants stated that 'tranquillity' is very important. Tranquillity (tranquilidade in Portuguese) is a frequently used expression in Brazil to exemplify a mental state of serenity and calmness. These participants imply that it is important to reduce the level of stress during pregnancy. All, except three, participants attended prenatal care during their pregnancy. Some participants mentioned the relation between not (fully) attending prenatal care and the onset of diseases or death. One participant stated that prenatal care is important because it gives an opportunity to discover disabilities in an early stage of pregnancy. Additionally, she gave the example of her husband who had a child with another woman. The woman got *rubeola* during her pregnancy and because of not attending prenatal care they did not discover or prevent the child was deaf. Another participant put forward an example of her granddaughter who did not do the 'correct' prenatal care. As a result, she had a bacterium after delivery and had to stay 13 days in the hospital. The following quotation points out beliefs community members have regarding the follow-up of prenatal care:

*"My oldest daughter died shortly after birth. It was my fault too, because I did not complete the prenatal, [...] I think it's your responsibility to complete [prenatal care]." [R7]*

---

<sup>2</sup> Cadastro de Pessoas Físicas (Individual Taxpayer Registry)

<sup>3</sup> Registro Geral (General Registry), a national identity document

Besides the 'correct' follow-up of prenatal care, various other factors regarding good maternal health have been mentioned by the community members. The majority of the participants considered a healthy diet and the intake of vitamins during pregnancy as important factors. According to one participant a healthy diet consist out of chicken and rice, while another participant mentioned fruit, vegetables and milk as important aspects of a healthy diet. One participant mentioned the importance of receiving information concerning healthy behaviour from her doctor:

*"If he [doctor] wouldn't provide that information on what to eat and what to watch out for, then it would be difficult to know what to do." [R3]*

Furthermore, the three oldest participants who did receive prenatal care demonstrated a strong opinion towards the younger generation of women in the community. They consider the younger (pregnant) girls as lazy and having a lack of interest in their own and in their babies health.

*"That they don't continue [prenatal care] is the lack of interest, they don't want to take care of their own health." [R4]*

Regarding health beliefs among community members, a typical and often used expression in relation to pregnancy, which is worth mentioning, is:

*"[...] it's better to be pregnant than having a disease. You understand? Because a disease can't be cured, and a pregnancy pass in 9 months".*

Despite facing similar barriers, some women manage to receive prenatal care and others do not. Eventually, a fact is that nine out of twelve participants succeeded in receiving prenatal care. As such, the majority of the participants do consider prenatal care as important. By asking participants what they consider as good maternal health, the majority indicated the attendance of prenatal care, as well as a healthy diet and reducing the level of stress.

### **Acceptability**

*How do cultural and social factors play a role for the community in access to prenatal care?*

Acceptability is defined as the degree of fit between the mutual expectations of the provider and patient, and an individual's or community's attitude towards the healthcare system. This study revealed that the community members of Baixa Fria have an outspoken and often negative opinion towards the healthcare system. Some opinions are based on political decisions: for example, one participant believed that the mayor spends a lot of money on things that are not necessary. She stated that the municipality had spent four million Reias (more than one million Euro) on carnival but at the same time children cannot get their vaccinations because there is no money available for needles. Overall, most opinions appeared to be derived from a joint attitude of negativity and pessimism, as well as a feeling of being neglected by other levels of society:

*"[...] the health here is a mess [...] They reformed the health post, it became worse than it already was. Health here is only for who has money. I could not even do prenatal because there was no spot." [R1]*

Moreover, the majority of the participants indicated difficulties in booking a prenatal appointment, which results in a negative association towards the local health units. A notion of 'it is just difficult' was strongly present in the majority of the interviews. Community members indicated that they 'just know' that is difficult to book an appointment; they either heard this from their family or from other community members. It has to be stressed that these difficulties are only present when booking the first appointment. Once a woman attended the first prenatal check, the following appointments will be scheduled for the entire pregnancy. The majority of the participants indicated structural capacity problems at the health post such as: not enough doctors, no available spots and long waiting lines.

*"[...] to make an appointment with the paediatrician in Pau da Lima is difficult, it is bad." [R4]*

Some participants mentioned the phenomenon 'jeitinho' which literally means 'little way' and comes from the expression 'dar um jeito', literally 'give a way'. It is frequently used in Brazil as a way to explain that networking or having contacts in organizations such as the health post give you the possibility to accomplish things you normally would not so easily get. One participant, for example, explained how she arranged prenatal care for her children through her contact at the health post.

*"I did do prenatal care for all my kids [...] I have a contact at the health post in Pau da Lima and with my 'jeitinho' I always managed to get prenatal care for all of my children". [R3]*

Contrary to the negative attitude towards the health post in its entirety, no negative comments were mentioned about the treatment by health personnel. Moreover, discrimination towards community members only came forward in one of the conducted interviews and was in fact a positive perspective. This participant argued she did not believe discrimination based on where they live exist (Baixa Fria is known as the poorest area of São Marcos) because health workers do not know where they live, neither they know how poor Baixa Fria is. She mentioned some community members did accomplish to receive prenatal care and others did not, therefore, you cannot say that discrimination exists. Another participant articulated the treatment by health personnel as follows:

*"I had nothing to complain, they treat you well". [R2]*

Additionally, some participants mentioned the treatment of obstetric doctors during delivery towards women who did not attend prenatal care. This research focussed specifically on prenatal care but it is worth mentioning that, according to some participants, obstetric doctors have a judgement about women who did not attend prenatal care prior to delivery.

*"They don't like it [not doing prenatal] no. When you don't do the prenatal they complain." [R2]*

The main barrier in the acceptability of prenatal care services can be found in the difficulties community members have in booking their first prenatal appointment. This, along with the structural capacity problems at the health post, results in a joint attitude of negativism towards the health care system.

### **Ability to seek**

*What are the barriers in the ability to seek prenatal health care services for the inhabitants of Baixa Fria?*

The ability to seek health care relates to the concepts of personal autonomy and capacity to choose to seek care, knowledge about health care options and individual rights that would determine expressing the intention to obtain health care. As mentioned before, three participants did not receive prenatal care during their pregnancy. These participants indicated different reasons for not attending prenatal care. One participant did not have a SUS card, which made it impossible to obtain (public) prenatal care. Her mother-in-law had had tried many times to obtain a SUS card for her, which succeeded through her 'jeitinho' at the municipality, but only during the last stage of her pregnancy. Unfortunately it was not in time anymore to book and receive prenatal care before delivery. Asking another participant why she did not attend prenatal care, she simply responded: *"I don't know, I do not even know."* It is worth noting that these two participants who did not attend prenatal care, both had an unplanned pregnancy. They both mentioned it was a surprise and that they did not want or planned to be pregnant at that moment. Also, the gynaecologist/obstetric doctor acknowledged the problem of unplanned pregnancies. She has seen many young pregnant girls at the health post who kept their pregnancy hidden as long as possible and, consequently, were too late to attend prenatal care. In her opinion, they do not assume the risk of not attending prenatal care during pregnancy and do not take the responsibility to seek care.

Although many different barriers for obtaining prenatal care have been mentioned earlier, a difference in perseverance in arranging prenatal care amongst different community members has been noticed. For example, one participant who did not receive prenatal care stated the following:

*"I discovered it [pregnancy] at 5 months. When I went there, they told me to come back later. I returned two more times, and then I gave up. I will not continue to leave at 5.00 am in the morning, walk a lot to arrive there and can not get it." [R1]*

Whereas other participants admit the difficulties in booking an appointment for prenatal care, the majority had the perseverance to continue trying until they got an appointment. Overall, participants who were happy with their pregnancy showed a certain determination in order to receive prenatal care:

*"I had difficulty in booking [an appointment], but I continued going until I was able to book it." [R2]*

From this study, a relation is shown between unplanned pregnancy and not attending prenatal care versus happiness about the pregnancy and the perseverance to continue trying to get an appointment. Another finding is the discrepancy in knowledge among community members about booking a first prenatal appointment. As stated before, the main difficulty exists in scheduling the first appointment. It is only possible

to book the first appointment during the last day of the month, however, these days are not set and vary each month. Only a few participants had an idea about when one is allowed to book a first prenatal check, while other participants had no idea there are only specific days at which you can book the first prenatal appointment.

The interviewed gynaecologist/obstetric doctor admitted there are difficulties existing in booking the first prenatal appointment. However, she stated the main problem is the mentality of the population. She said the biggest part of the population is very passive and it seems they do not realize they have to take care of their own health. Furthermore, she states that they expect 'someone else' (e.g. nurses, doctors, health workers) to take care of their health, thus, they do not take responsibility or initiative to seek health care.

*"So, I think we [public health care services] have a lot of deficiencies, but I think the biggest problem is the mentality of biggest part of the population. They are very passive."*

Overall, this study revealed that most community members do not know when they are able to book the first prenatal appointment. This can be considered as a main barrier in obtaining prenatal care. However, a difference in perseverance among community members in booking prenatal care have been noticed which determines the chance of succeeding to obtain prenatal care.

## Discussion

The objective of this research was to improve the maternal health of women living in the poor urban community São Marcos in Salvador, Brazil. In order to get insight into the barriers women face in relation to maternal health care access, this research focused on the perspectives of the local community of São Marcos. The focus of this research was in particular on the access to prenatal care. It was expected that health literacy, knowledge about health, and beliefs related to health and sickness would play an important role for women in the ability to perceive appropriate maternal health care.

The results of this study showed several barriers for women for not attending prenatal care or to have difficulties attending prenatal care. Structural barriers community members mentioned were: the lack of resources at the health post, - which results in long waiting lines or no attendance at all, not knowing when and how to make an appointment and the absence of a health post in São Marcos. Viellas et al. (2014) describe similar access barriers for non-attendance to prenatal care, namely: the difficulty for booking appointments, problems with health service and health professionals, and transportation difficulties. Trad et al. (2012) reported that in their study long waiting lines, both at the health unit itself as for (booking) appointments, were the main cause for dissatisfaction towards public health care. This is in line with the results of the present study, which showed that the community members of Baixa Fria have an outspoken and often negative opinion towards the healthcare system.

A major finding of this study revealed that the majority of the community members experienced difficulties booking the first prenatal appointment. Community members indicated that, although they do not have difficulties in identifying prenatal care options, they do have difficulties in perceiving information regarding prenatal care. A lack of transparency regarding the available treatments has been noticed given that the health post does not distribute information concerning prenatal care or other available treatments. Although the study of Victora et al. (2011) focussed on maternity rather than on prenatal care, they described a similar problem that relates to the lack of available information. They indicated that the most common reason why women were turned away is because they sought care in low-risk clinics while they needed high-risk care and opposite. They argued that this is a result of the poor integration between prenatal services and maternity services in Brazil (Victora, 2011).

The majority of participants in the present study mentioned the difficulty of obtaining a SUS card. To my knowledge, this is the first study to investigate the comprehensive issue of obtaining a SUS card in São Marcos, specifically Baixa Fria. Even though the Brazilian constitution states that: *“access to health care in the country should be public, free, universal and equitable to all Brazilian citizens, rich or poor”*, this is not entirely the case in Baixa Fria neighbourhood. Since Baixa Fria is not considered as official urban area of Salvador, community members have difficulties to prove their residency, which complicates requesting a SUS card. This study showed that not all community members know how to request a proof of residence. Also, none of the participants was familiar with the reason why they have to deliver a proof of residence.



Furthermore, this study uncovered the absence of the Family Health Teams (FHT) in the community. FHT largely contribute to the distribution of information regarding health care options in communities and are, for example, required to actively search for pregnant woman and refer them to obtain prenatal care (Macinko, 2015). Given that Baixa Fria is not considered official municipal area, FHT are not present in the community and a lack of available information has been noticed.

Another explanation for women not perceiving appropriate prenatal health care could be that women with unwanted pregnancies, and women without a partner have lower prenatal care coverage and late booking of care (Bassani, 2009). These findings are consistent with the study of Viellas et al. (2014) which reports reasons for non-attendance to prenatal care such as: not knowing that she was pregnant, not wanting the pregnancy, and not knowing that prenatal care is important for health. Three out of the twelve interviewed community members mentioned they did not attend prenatal care because of an unwanted pregnancy. This is consistent with the study of Bassani et al. (2009) which reports that women having an unplanned pregnancy are significantly more likely to have had inadequate prenatal care than women who had planned their pregnancy (Bassani, 2009). The results of the study of Delgado-Rodríguez et al. (1997) suggest that unplanned pregnancy is a significant factor for the inadequate use of prenatal care. Furthermore, York et al. (1999) found that the lack of desire for pregnancy and drug use were the two most important personal factors associated with poor prenatal support service use in the US.

In contrast to most reports in the literature, the findings from the present study revealed that discrimination towards (black) women in accessing prenatal care is not considered an issue among community members. This finding was quite unexpected and might suggest that community members do not want to talk about this topic. In Brazil, racial inequalities and its consequences on health have recently been introduced to the political agenda and therefore specific literature on the subject is scarce. Until ten years ago official health information systems did not administer racial data and therefore assessment is rarely done (Leal, 2005). However, Leal et al. (2005) report that concerning health services nationwide in Brazil, inequalities are found in both access to adequate prenatal care and delivery care. They indicate that less than one fifth of low schooled black women attended adequate prenatal care and, even among those with high schooling, not even half of them benefited from prenatal care (Leal, 2005). Victora et al. (2011) indicate that, although public health care is free, black women entered prenatal care later which results in less prenatal visits than white women. They suggest that cultural or educational factors play a role in delaying to visit prenatal care, or else different economic barriers such as transportation costs or time lost from work (Victora et al. 2011). A research conducted in a similar community in Salvador report that social discrimination is more associated with being poor than with skin colour (Trad et al., 2012). This is in line with the study of Bassani et al. (2009) which indicates a strong and significant relation between income and inadequate prenatal care: the lower the income, the higher the probability of inadequate prenatal care. Additionally, Trad et al. (2012) state that, although the population of Salvador is predominantly black, an overlap between race and social class can be seen which results in so-called 'first class' and 'second class' citizens (Trad, 2012). This is in line with the results of the present study which reported community members have a feeling of being neglected by other levels of society.

### **Strengths and limitations**

The major strength of this study is that, in contrast to most other studies on this topic, semi-structured interviews have been conducted. Using interviews as a data collection method gives a deeper insight into the problem than only using quantitative data. It is attempted to get the study sample as varied as possible to include as many perspectives as possible. This includes women who received prenatal care, women who did not receive prenatal care, as well as a both public and private prenatal care users.

An important limitation of this research can be found in the language barrier. Although the researcher had taken Portuguese classes to be able to understand the main content of the interviews and to be able to carry out a simple conversation, this was not sufficient to conduct interviews individually. The interviews were conducted by means of a local translator and in spite of correct translations, a lot of information in nuances of tone and use of words might be lost. It could be that either the translator did not note this to be significant to the research, or by asking about it, it would disrupt the flow of the interview. In addition, several (parts of) interviews were conducted in Portuguese, then transcribed into Portuguese and afterwards translated into English. During the transcription, information could have been lost or missed. However, transcription into Portuguese was done by the local researcher whereas translation into English was done by the local translator, while listening to the original Portuguese recordings. This allowed to verify the translation and interpretation.

Another limitation of this research can be found in the difficult and often unsafe access to the research area. The research period comprised both Easter and mothers Day during which prisoners in Brazil are allowed to visit their family at home and which undoubtedly had influence on the safety in the community. As a result, the researcher had restricted options to visit the community during the research period.

Furthermore, the research population of this study was made up of a relatively small sample of community members using the public health care facilities of São Marcos neighbourhood. Because research has been solely conducted in this particular area, with very specific local barriers, and with a small group of participants, the results of this research could be limiting generalizability to similar communities elsewhere in Brazil. However, this does not generally impact the findings on the objective of the research which was to improve maternal health by generating knowledge into the barriers women in Baixa Fria face in relation to prenatal health care access.

### **Conclusions and suggestion for further research**

The objective of this research was to contribute to an improvement of maternal health by generating knowledge about existing barriers women living in Baixa Fria face in relation to prenatal health care access. The majority of the participants consider prenatal care as important. However, even though public prenatal care is free of charge and health care services are available for all community members, some women still do not succeed in obtaining prenatal care. The two main identified barriers for obtaining prenatal care are: having difficulties with booking the first appointment and having difficulties in obtaining a SUS card. Closely linked to this are the lack of transparency from the health post regarding available treatments, the lack of information

distributing in the community and the lack of knowledge among community members concerning health care options and rights. Furthermore, a relation between unplanned pregnancy and not attending prenatal care versus happiness about the pregnancy and the perseverance to continue trying to get an appointment has been observed. The findings of this research suggest that different factors play a role in not attending or not fully attending prenatal care for women living in Baixa Fria. Further research should focus on how health care services can improve transparency regarding prenatal care services, specifically on distributing information regarding booking the first appointment. With respect to the difficulties in obtaining a SUS card, interventions should focus on increasing knowledge about health rights among this particular community living in Baixa Fria. Finally, women should be encouraged to start prenatal care early in pregnancy so that they can benefit fully from it. The establishment of a Family Health Team in Baixa Fria could play an important role in this.

## References

- Andrade, M.V., de Souza Noronha, K.V.M., Barbosa, A.C.Q., Souza, M.N., Calazans, J.A., de Carvalho, L. R., ... & Silva, N.C. (2017). Family health strategy and equity in prenatal care: a population based cross-sectional study in Minas Gerais, Brazil. *International journal for equity in health*, 16(1), 24.
- Bassani, D.G., Surkan, P.J., & Olinto, M.T.A. (2009). Inadequate use of prenatal services among Brazilian women: the role of maternal characteristics. *Int Perspect Sex Reprod Health*; 35:15-20
- Bolt, A., & Bruins, W. (2012). *Effective Scientific Writing: An advanced learner's guide to better English*. VU University Press
- Corburn, J., & Riley, L. (2016). *Slum Health: From the Cell to the Street*. Oakland, California: University of California Press.
- Datasus. (2014). Informações de Saúde. Sistema de Informações sobre Nascidos Vivos – SINASC. Retrieved from: <http://tabnet.datasus.gov.br/cgi/tabcgi.exe?sinasc/cnv/nvuf.def>
- Delgado-Rodríguez, M., Gómez-Olmedo, M., Bueno-Cavanillas, A., & Gálvez-Vargas, R. (1997). Unplanned Pregnancy as a Major Determinant in Inadequate Use of Prenatal Care. *Preventive Medicine*, 26 (6), 834
- Delvaux, T., Buekens, P., Godin, I., & Boutsen, M. (2001). Barriers to prenatal care in Europe. *Am J Prev Med*;21:52–59.
- Frambach, J.M., van der Vleuten, C.P., & Durning, S.J. (2013). AM Last Page: Quality Criteria in Qualitative and Quantitative Research. *Academic Medicine*, 88(4), 552.
- Green, J., & Thorogood, N. (2014). *Qualitative methods for health research*. Third edition. ed. Los Angeles . SAGE.
- Goldani, M.Z., Barbieri, M.A., Silva, A.A.M., & Bettioli, H. (2004). Trends in Prenatal Care Use and Low Birthweight in Southeast Brazil. *American Journal of Public Health*, 94(8), 1366–1371.
- Instituto Brasileiro de Geografia e Estatística (IBGE). (2011). National Household Sample Survey. Retrieved from: <http://ibge.gov.br/english/estatistica/populacao/trabalhoerendimento/pnad2011/default.shtm>
- Kikuti, M., Cunha, G.M., Paploski, I.A.D., Kasper, A.M., Silva, M.M.O., Tavares, A.S., ... Ribeiro, G.S. (2015). Spatial Distribution of Dengue in a Brazilian Urban Slum Setting: Role of Socioeconomic Gradient in Disease Risk. *PLoS Neglected Tropical Diseases*, 9(7), e0003937. <http://doi.org/10.1371/journal.pntd.0003937>
- Krueger, P.M., & Scholl, T.O. (2000). Adequacy of prenatal care and pregnancy outcome. *J Am Osteopath Assoc*, 100:485–92.

Leal, M.dC., da Gama, S.G.N., da Cunha, C.B. (2005). Racial, sociodemographic, and prenatal and childbirth care inequalities in Brazil, 1999-2001. *Rev Saude Publica*, 39(1): 100–7.

Levesque, J-F., Harris, M.F., & Russell, G. (2013). Patient-centred access to health care: conceptualising access at the interface of health systems and populations. *International Journal for Equity in Health*, 12:18.

Macinko, J., Harris, M.J. & Phil, D. (2015). Brazil's Family Health Strategy — Delivering Community-Based Primary Care in a Universal Health System. *N Engl J Med* 372:2177-2181. DOI: 10.1056/NEJMp1501140

Ministério de Saúde. (2011). Institui, no âmbito do Sistema Único de Saúde - SUS - a Rede Cegonha. PORTARIA Nº 1.459, DE 24 DE JUNHO DE 2011. Retrieved from:

[http://bvsmms.saude.gov.br/bvs/saudelegis/gm/2011/prt1459\\_24\\_06\\_2011.html](http://bvsmms.saude.gov.br/bvs/saudelegis/gm/2011/prt1459_24_06_2011.html)

Oliveira, F., Leal, G., Wolff, L., Rabelo, M., & Poliquesi, C. (2016). Reflections on the nurse's role in the Rede Cegonha (Stork Network). *Journal of Nursing UFPE on line*, Recife(PE). Retrieved from:

[http://www.revista.ufpe.br/revistaenfermagem/index.php/revista/article/view/7424/pdf\\_9751](http://www.revista.ufpe.br/revistaenfermagem/index.php/revista/article/view/7424/pdf_9751)

Paim, J., Travassos, C., Almeida, C., Bahia, L., & Macinko, J. (2011). The Brazilian health system: history, advances, and challenges. *The Lancet*, 377(9779), 1778-1797.

Peters, D.H., Garg, A., Bloom, G., Walker, D.G., Brieger, W.R., & Rahman, M.H. (2007). Poverty and access to health care in developing countries. *Ann N Y Acad Sci.*, 1136: 161-171.

Portal de Saúde. (2012). DAB Rede Cegonha. Retrieved from:

[http://dab.saude.gov.br/portaldab/ape\\_redecegonha.php](http://dab.saude.gov.br/portaldab/ape_redecegonha.php)

Secretaria Municipal da Saúde - Prefeitura de Salvador (2016). Mapa da Saúde. Retrieved from:

<http://www.saude.salvador.ba.gov.br/>

Trad, L.A.B., Castellanos, M.E.P., & Guimarães, M.C.S. (2012). Accessibility to primary health care by black families in a poor neighborhood of Salvador, northeastern Brazil. *Rev de Saúde Pública*; 46(6): 1007–1013.

Unger, A., Felzemburgh, R. D. M., Snyder, R. E., Ribeiro, G. S., Mohr, S., Costa, V. B. A., ... Pau da Lima Urban Health Team. (2015). Hypertension in a Brazilian Urban Slum Population. *Journal of Urban Health : Bulletin of the New York Academy of Medicine*, 92(3), 446–459.

Victoria, C.G, Matijasevich, A., Silveira, M.F., Santos, I.S., Barros, A.J.D., & Barros, F.C. (2010). Socio-economic and ethnic group inequities in antenatal care quality in the public and private sector in Brazil. *Health Policy and Planning*, 25(4), 253–261. <http://doi.org/10.1093/heapol/czp065>

Victoria, C.G., Aquino, E.M., do Carmo Leal, M., Monteiro, C.A., Barros, F.C., & Szwarzwald, C.L. (2011). Maternal and child health in Brazil: progress and challenges. *The Lancet*, 377(9780), 1863-1876.

Viellas, E.F., Domingues, R.M S.M., Dias, M A.B., Gama, S.G.N.D., Theme Filha, M.M., Costa, J.V.D., ... & Leal, M.D.C. (2014). Prenatal care in Brazil. *Cadernos de Saúde Pública*, 30, S85-S100.

Whitehead, M. (1992). The concepts and principles of equity and health. *Int J Health Serv*, 22: 429-445.

World Health Organization (WHO). (2013). Funding, flexible management needed for Brazil's health worker gaps. *Bulletin of the World Health Organization*, 91:806-807. doi: <http://dx.doi.org/10.2471/BLT.13.031113>

Worldbank. (2013). The hallmark of the Brazilian National Health System (SUS). Retrieved from: <http://www.worldbank.org/en/news/opinion/2013/12/20/brazil-sus-unified-public-healthcare-system-new-study>

Worldometers. World population Brazil. Retrieved from: <http://www.worldometers.info/world-population/brazil-population/>

York, R., Grant, C., Tulman, L., Rothman, R.H., Chalk, L., & Perlman, D. (1999). The impact of personal problems on accessing prenatal care in low-income, urban African-American women. *J Perinatol*, 19(1):53-60.

## Appendix 1 – Interview Guide

- **Introdução : quem somos nos + porque a gente quer fazer entrevista + o que é projeto.**

- **Informações extras : criar um perfil**

1. Quantos anos você tem?
2. Quanto tempo você mora aqui? (Mora sozinha o tem muita família por perto?)
3. Você esta vivendo sozinha? Tem marido/é casada?
4. Como você ganha o pão de cada dia?
5. Quanto você ganha/tem para gastar por mês?
6. Você recebe alguma ajuda financeira (como bolsa família?)
7. Qual foi nível de educação que você teve? Quantidade de anos?
8. Você tem religião?

- **Perguntas gerais sobre a vida de mãe: objetivo para as mulheres sentir confortáveis.**

1. Quantos filhos você tem? / Esta a sua primeira gravidez?
2. Esta tudo correndo bem (com gravidez o com seu filho)?
3. Eu como não sou mãe é como nunca estive grávida é gostaria de conhecer um pouco melhor você adorava se você me explicasse um pouco mais sobre o seu dia a dia como mãe/ grávida?

- **Perguntas relacionadas com saúde materna: o que ajuda ter boa saúde materna.**

1. O que você considera ser uma boa saúde materna? A sua definição ?
2. O que são as coisas mais importantes para você ter uma boa saúde materna?
3. Você pode partilhar a suas experiências com serviços pré-natais?  
-O que ajuda para ter acesso o serviços públicos de prenatal? O que são os fatores de sucesso?  
-O que você achou? O que você gostou/não gostou?

Mesmo que você pode ter conseguido o pre natal houve algo que lhe deu problemas durante o processo? Mesmo antes de conseguir

Nos falamos com algumas mulheres que sobre o que é preciso para marcar o pre natal. Algumas falaram sobre o cartão do SUS que as vezes complica para conseguir o pre natal?

Você acha também? Como é sua experiência com aquilo (que coisas precisa) que você precisa para marcar pre natal ?

As mulheres aqui nos falaram sobre a situação de marcar pre natal que é em dias específicos.

-Como e que você rebe noticias sobre situação/marcação atual acerca do pré-natal?

-O que você achou do tratamento dos médicos no serviço pre natal? (tratamento para marcar o pre natal?)

4. Porque você acha que é preciso ter pre natal/ importante o pre natal? (trigger: maternity)
5. Quais são os postos que foram frequentados por você?
6. Você foi sozinha? Junto? Com quem?

-Se você precisa de ajuda que tipo de ajuda você precisa?

6. Você usou alguma forma publica o privada de serviços pré-natais? Quais? Aonde?
7. Quantas vezes você foi?

Porque não continuo a ir?

Quais foram as barreiras para não ir? Quantas vezes tentou/experimentou para ir?  
(outras responsabilidades)

-Você acha que a capacidade de todos os postos é igual para todos? Tem fila em todos? Como você recebe informação se tem vaga? De quem recebe essa informação?

-Você tem conhecimento de algum posto que pode ter vagas?

Pode dar a sua opinião como o acesso aos serviços pré-natais funcionam aqui na comunidade para as outras mulheres?

Como e que algumas das mulheres conseguiram marcar pré-natal?

-O que lhe dá orgulho/você goste nesta comunidade?

-Nesta comunidade para quem você vira quando se passa algo aqui na comunidade?

-Quem pode ser representante de mulheres aqui na comunidade?

- **Perguntas refletivas sobre grupo focal:**

1. Você esteve presente no grupo focal o que você achou desta forma de gente se organizar é falar sobre o assunto?

2. Havia algo que você não tenha gostado o mesmo uma dica para nos melhorarmos estes grupos focais?

### **Side questions**

5. Você acha que a sua vida mudou muito sendo mãe/grávida? De que forma mudou?

6. Como mãe há uma atividade ou algo que você goste muito de fazer com os seus filhos? Há algo que lhe dá orgulho em fazer com eles ou por eles?

**(caso grávida)** = Como futura mãe há uma atividade ou algo que você está ansiosa por fazer com os seus filhos/filha. Algo que você acha que lhe vai dar muito orgulho como mãe?

7. O que você gosta de fazer como mãe?

**(caso grávida)** O que você acha que vai gostar de fazer como mãe?

8. O que você considera a ser mais difícil como mãe?

**(caso grávida)** O que você acha que vai achar difícil como mãe?



## Appendix 2 – Informed Consent

Prezada Senhora,

O objetivo do estudo é descobrir as barreiras de uma boa saúde materna, em parceria com a comunidade local. A finalidade deste trabalho é contribuir para melhorar a saúde das (futuras) mães. Por exemplo: recomendações para prevenir a infecção das mulheres, e garantir o seu acesso aos cuidados da saúde.

Solicitamos a sua colaboração para entrevista e seu tempo médio de duração, como também sua autorização para apresentar os resultados deste estudo para publicar por 7Senses. Por ocasião para apresentar os resultados, seu nome será mantido em sigilo absoluto. Esclarecemos que sua participação no estudo é voluntária e, portanto, a senhora não é obrigada a fornecer as informações e/ou colaborar com as atividades solicitadas pelo Pesquisadora. Caso decida não participar do estudo, ou resolver a qualquer momento desistir do mesmo, não sofrerá nenhum dano. Os pesquisadores estarão a sua disposição para qualquer esclarecimento que considere necessário em qualquer etapa da pesquisa.

\_\_\_\_\_ Assinatura da pesquisadora

Considerando, que fui informada dos objetivos e da relevância do estudo proposto, de como será minha participação, declaro o meu consentimento em participar da pesquisa, como também concordo que os dados obtidos na investigação sejam utilizados por 7Senses.

Salvador, \_\_\_ de \_\_\_ de \_\_\_\_

\_\_\_\_\_ Assinatura do participante ou responsável legal.

**Sobre este projeto:**

- As pesquisadoras querem buscar maneira de melhorar saúde materna de mães, grávidas e futuras mães na comunidade Baixa Fria.
- Para melhorar alguma coisa a gente precisa do seu (e outros na comunidade) conhecimento sobre o assunto com ajuda de entrevistas, rodas de conversa e workshops.
- A prioridade das pesquisadoras é trabalhar conjunto com você e outros da comunidade e escutar a sua opinião e conhecimento sobre o assunto.
- Rouming (supervisora), Mariana, Gimenne, Lisanne e Demi são pesquisadoras da Holanda.
- Susana e Jezebel são as pesquisadoras locais dos Bairros São Marcos e Pau da Lima.
- Este projeto é em nome de organização 7Senses, a Universidade de Amsterdã e a Universidade Federal da Bahia (UFBA)

**Sobre a sua participação no projeto:**

- Você **não** recebe algum dinheiro por a sua participação
- Se você não quiser participar:
  - Não precisa de dar razão porque
  - Você não vai ser tratada de uma forma diferente se você não quiser participar

Você pode retirar a sua participação a qualquer momento

Tudo que você falar para nos vai ser guardado entre nos e apresentado de uma forma anônima para a comunidade.

Se você não gostou do tratamento de alguma das nossas colegas, se tiver perguntas o mesmo algo para fazer pode ligar/mandar zap a supervisora: -

- Zap: +55 71 -
- Telefone: -
- Em pessoa/ a sua presença na comunidade é: Sábado ou talvez Quarta-feira/Quinta-feira

ZAP colega brasileira: Susana

- +55 71 -