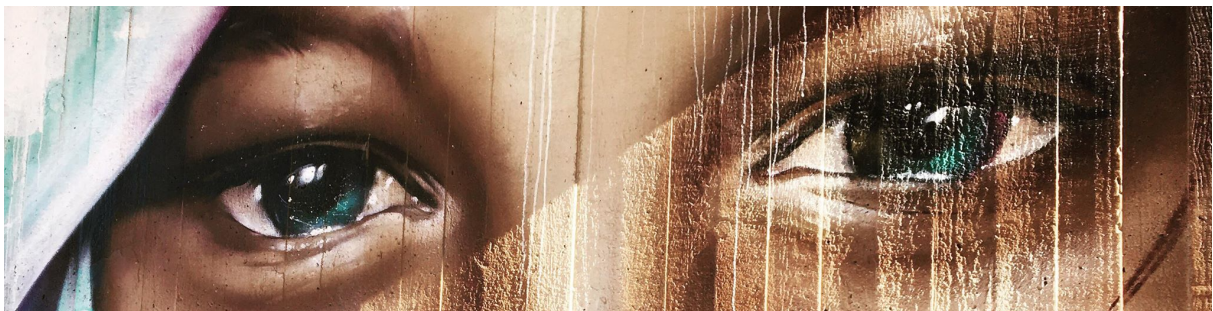**DEPARTMENT OF APPLIED IT**

UNIVERSITY OF GOTHENBURG

COMMUNICATION CHALLENGES AND USE OF TECHNOLOGY BETWEEN IMMIGRANT MOTHERS AND NURSES IN CHILD HEALTH CENTERS IN SWEDEN
(Nurses and Doulas' perspectives)

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Communication Challenges and Use of Technology between Immigrant Mothers and Nurses in Child Health Centers in Sweden (Nurses and Doulas' perspectives)

Abstract

The aim of this project is to describe and to analyze the perceived communication challenges and cultural differences (from nurses and doulas' points of view) in meetings between Swedish nurses and immigrant mothers in Swedish Child Health Centers (CHC) from dense immigrant areas. A special focus is put on the use of technology for managing their communication.

The study is based on the results of semi-structured interviews with 5 CHC nurses and 4 Community Based Doulas who work with immigrant mothers on a daily basis. Interviews are transcribed and analyzed using Thematic Content Analysis.

The results show that the nurses and doulas perceive encountering communication challenges related to the mother´s language competence, problems of understanding and interpretation issues when mothers visit CHCs.

Furthermore, nurses and doulas perceive cultural differences related primarily to the mother's role in the family, food and nutrition habits and the importance of child bonding. The context where nurses and doulas meet, together with the amount of time they spend with mothers also affect their communication.

In addition, nurses report using their computers to search for images and videos on the internet. Nurses and doulas report that mothers use their mobiles to show images, videos and translation apps for supporting their conversations.

The novelty of this study resides not only in giving a double perspective from two very different professional profiles related to health-care maternity (CHC's nurses and doulas); but also in exploring their use of technological tools to facilitate their communication with immigrant women.

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"The best reason for exposing oneself to foreign ways is to generate a sense of vitality and awareness - an interest in life which can come only when one lives through the shock of contrast and difference"
Edward T. Hall. The Silent Language

Acknowledgements

Contents

1 Introduction

The scope of this study is to analyze which communication challenges associated with language problems and cultural differences occur between Swedish nurses and immigrant families in Child Health Centers in Sweden. The study is based on nurses and doulas' perspectives: how they perceive the communication between nurses and immigrant mothers, how they solve the communication problems and which technology they use to do it.

According to Betancourt, Green, Carrillo, and Park (2005), cultural competence in health-care is important due to patients will present their health issues differently regarding their cultural background. Expressing their symptoms in a unexpected way from physician's point of view, having beliefs that might influence their health caring and lacking of language skills could affect their communication.

Good communication between patient and health staff often leads to better health outcomes and patient satisfaction. Focusing on the patient and on cultural competences contributes to decrease ethnic or racial health-care inequalities improving health-care quality. (Betancourt et al., 2005).

1.1 Immigrant families in Swedish Health Care

According to Wallby and Hjern (2011) most immigrant families with small children in Sweden are newcomers with low salaries who live in disadvantaged areas. Low income or poor socio-economic conditions in families living in Sweden are related to worse child´s health in terms of mortality, morbidity and as a determinant of physical and mental ill-health in his future. The authors explain that these families are unaware of the Health programs in Sweden due to the lack of language competence together with labour-market discrimination and vulnerable economy. Furthermore, they are at a bigger risk of health and mental problems than the Swedish population. Authors suggest that low-income immigrant families might need more support from the Health Care Services than high-income families and Swedish ones (Wallby & Hjern, 2011).

Berlin, Johansson, and Törnkvist (2006) agree that low-income rates among immigrant and Swedish families are also reflected in differences in long-term and short-term health issues. A low economic status increases physical and mental morbidity as well as frequent visits to Health Services (Berlin et al., 2006). A focus in promoting health capabilities in these families is determinant to avoid illnesses. (Wallby & Hjern, 2011). As instance, children that belong to low-income families are at more risk of poisoning, fall or burn injuries. Scald injuries specially, are more common in children from non-Western families (Hjern, Ringbäck-Weitoft, & Andersson, 2001). Regarding refugee families, there is a correlation between the length of traumatic experiences and the intensity of post-traumatic stress suffered afterwards. The mother's mental issues can work as an indicator of her child´s low adaptation to a new country (Almqvist & Broberg, 1999).

1.2 Purpose: Research problem and questions

The main goal of this study is to find out which communication issues nurses and doulas notice when immigrant mothers meet nurses at Barnavårdscentralen (Child Health Centers) in Sweden. Cultural differences that might complicate their communication are in focus.

The second goal is to find in which ways nurses and mothers solve their communication issues during their encounters. An special focus will be put on the use of technological tools to facilitate their communication.

The research questions are:

RQ.1 Which communication challenges and cultural differences do nurses and doulas perceive when immigrant mothers visit nurses in CHC in Sweden and how do they solve them?

RQ.2 What technology do mothers and nurses use to facilitate their communication and how do they use it?

This research will try to demonstrate that there are needs for supporting nurses and mothers' communication during their encounters in Child Health Centers so they feel more satisfied with the outcome of the visits.

2 Background

2.1 Immigrant mothers and Health Care in Sweden - Immigrant Perspective

Mothers from non-Western societies often feel isolated in Western countries with different health and social systems (Barclay & Kent, 1998). Lack of supporting social networks such as relatives or friends causes immigrant mothers more prone to have psychological distress (Ward, 2004). In addition, language problems, social isolation and cultural differences between health staff and mothers make it difficult to avoid symptoms of depression or to solve them easily (Ahmed, Stewart, Teng, Wahoush, & Gagnon, 2008).

According to the Swedish Association of Local Authorities and Regions, the universal access to Health Care in Sweden is a priority, but immigrants are less prone to contact Health Centers than Swedish-born persons (as cited by Råssjö, Byrskog, Samir, and Klingberg-Allvin (2013)). Immigrant women encounter loneliness and isolation missing their relatives to help them (Essén et al., 2000; Berggren, Bergström, & Edberg, 2006) and due to language barriers and fear of examination, their visits to Health Care Centers are rare (Darj & Lindmark, cited in Ny, Plantin, Karlsson, and Dykes (2007)). In addition, cultural differences and language barriers affect the service at the Health Care Center. Effective communication between patient and health staff is important for having an appropriate treatment and a satisfied patient (Degni, Suominen, Essén, El Ansari, & Vehviläinen-Julkunen, 2012).

2.2 Communication problems between nurses and immigrants - Nurses' perspective

Nurses in Sweden also experience problems related to communication when attending their patients from different countries. Not speaking the language causes lack of information, lack of understanding and misunderstandings (Jirwe, Gerrish, & Emami, 2010).

Cultural differences also affect their communication and having knowledge of these differences improves the communication between the nurse and the patient (Jirwe et al., 2010; Berlin et al., 2006). As instance, the idea of "family" is different depending on culture. for instance, muslim families are often large and patriarchal so they stay together accompanying the patient. They also want to be treated by health care providers of same gender than their own: muslim women want to be treated by female nurses or doctors and men by male ones (Lundberg, Bäckström, & Widén, 2005). Different cultures also see motherhood from different points of views. For example, the future life of the fetus is in God's will for Somali women, who do not take into account health advice from midwives (Essén et al., 2000). These are just some examples of how different cultures can behave in the same situation.

In addition, nurses in Child Health-Care Centers (Barnavårdscentralen) have problems when communicating with immigrant mothers and parents. They feel insecure because they do not have enough cultural knowledge or are concerned about how the parents will perceive them (Johansson, Golsäter, & Hedberg, 2016).

2.3   Community Based Doulas in Sweden

Coming from the ancient Greek and meaning "slave" or "slavish work", the word "doula" was proposed by anthropologist D. Raphael in 1969 to define the figure who supports a new mother (Raphael, 1969). The doula was a figure in the 19th century who assisted a newly mother and helped her cooking, holding the baby or taking care of the other children at home for a short period of time. It could be a friend, a neighbour or a relative (Raphael, 1969).

The assistance of a doula, providing physical and emotional support, during birth has multiple benefits for mothers: decreases labour time, medical interventions and analgesics (Breedlove, 2005).

Foreign-born women (especially women from Sub-Saharan Africa, Iran, Asia, and Latin America) have higher risks of having difficulties during their labour in Sweden than Swedish women. Some reasons are cultural differences and communication problems, lack of confidence and insecurity among them (Akhavan & Edge, 2012). That is the reason why the Birth House Association in Göteborg, formed by parents, midwives and doulas, launched a programme called "Doulor & Kultur Tolkar" ("Doulas & Cultural Interpreters" or "Community Based Doulas") in 2008 to facilitate better Health Care to immigrant women through the assistance of foreign doulas.

The aim of the programme was to study the results of having doulas assisting the births and the birth outcomes of immigrant mothers. The idea of the project was to improve the delivery of the women while offering them the support of a doula with the same cultural and language background. After 10 years, the project has extended to 2 more cities in Sweden and more doulas have been trained to help immigrant women (*Doula & Kulturtolk. Historia*, n.d.).

Doulas are foreign women who assist to a 2 months training offered by the association. To be a Community Based Doula, the women must have their own child, speak Swedish, be available at any time, understand the mother's culture and speak her language (Akhavan & Edge, 2012).

The doulas' work involves 5 meetings with an immigrant woman: 2 while the woman is pregnant, another encounter during the delivery (when it's possible) and 2 more encounters after. They assist, free of charge, the immigrant mother in different ways: offering emotional support, security, helping her with the communication with the health staff; but without giving medical advice (*Doula & Kulturtolk. Historia*, n.d.). According to Akhavan & Edge doulas "act as a "cultural bridge" between mothers and midwives" (Akhavan & Edge, 2012).

This project will focus on the doulas' observations to get a broader vision of the communication challenges between mothers and nurses, since part of their work is to act as an intermediary between the health staff (nurses and midwives) and newly arrived immigrant mothers (*Doula & Kulturtolk. Historia*, n.d.).

2.4 Child Health-Care Centers in Sweden (Barnavårdscentraler)

Child Health-Care Centers (CHC) offer free preventive health care to the 99% children in Sweden. The CHC has 2 main goals: primary prevention aimed to inform and to vaccinate the children and a secondary prevention with regular medical check-ups (Berlin, 2010). There are more than 2000 centers nationally and are leaded by a pediatric-nurse or a district-nurse (physicians work as consultants and see the child among 3-5 times during his pre-scholar age). They check child development, vaccines, nutrition issues and some of them offer psychological support for the families. Most ot them, admit children until the age of 18 years (Wettergren, Blennow, Hjern, Söder, & Ludvigsson, 2016). The visits to the Center usually take from 15 minutes to half an hour and can vary between 10 and 20 visits until the child is 3 years old (Österberg, n.d.). In every visit the nurse checks the health of the child (growing, communication, physical and mental development, etc) and the parents health (sleeping issues, breastfeeding, social and family issues, equal parenthood or single parenthood as instance) (Antonia, 2018).

Mothers and nurses meet at Child Health-Care Centers (Barnavårdscentralen) after the first week the baby is born and a minimum of 10 more visits during the first 3 years of the child (Österberg, n.d.). It is their first contact with health services after the delivery if they do not have health issues (women will have a postpartum check with a midwife after 4 months) (Linnros, 2017).

Non-speaking Swedish patients can ask for interpreter help during their visits to Health Centers (Falkenstein-Hagander, 2017). Some parents prefer to have an interpreter while others do not because they feel it would interfere their communication with health staff, an idea that also some nurses support (Rydström & Englund, 2015; Johansson et al., 2016).

According to Berlin et al. (2006) 20% of population in Sweden has a foreign origin (foreign-born and first-generation immigrants). In Stockholm, about a third of children attending CHC have foreign origin. They point out that: "achieving a high level of cultural competence must be regarded as an important goal for the Primary Child Health Center's nurses, working in clinical situations with children of foreign origin at the PCHC centres" (Berlin et al., 2006).

3 Previous Research

Few studies in English are available about communication challenges and cultural differences in communication between immigrant families and nurses in the Child Health Care Centers in Sweden. According to these studies, language could be a barrier during their encounters, but cultural differences are also included in their conversations.

Berlin et al. (2006) studied the problems that nurses from CHC encounter during their interactions with immigrant mothers and fathers together with their children. The majority of nurses experienced lack of satisfaction and difficulties regarding their work in CHC when working with foreign families. Lack of information and heavy workloads were the main causes of this lack of satisfaction. Authors considered that this could affect the nurse own health in a long-run.

Having cultural awareness, as described by Burchum (as cited in Berlin et al. (2006)) as "consciousness of culture and the ways in which culture shapes values and beliefs" creates feelings of difficulties and frustration in nurses with more professional background than nurses with less experience with immigrant children. Nurses become more concerned about how these differences may affect their interaction with foreign families.

Johansson, Golsäter and Hedber's research was based in two-focus group of nurses who gave health dialogues to non-Swedish-speaking parents. The nurses considered that lacking cultural knowledge could influence the parents' response to health dialogue. They were concerned about possible misinterpretations during their meetings but also recognized they gained knowledge about the families' lifestyles, improving future meetings and getting them to adapt for future health dialogues. The authors indicate that nurses need cultural awareness to make the most of their health dialogues and avoid insecurities and uncertainty when talking to non-Swedish speaking parents (Johansson et al., 2016).

(Reitmanova & Gustafson, 2008) study maternity health-care from an immigrant perspective. They focus on Muslim women living in Canada. The authors coincide that having a previous training in cultural and religious values would improve the interaction health-staff and patient. However they stress that many studies are only focus in the personal relation between patient and health staff while the approach should be more wide including institutional barriers that affect this relation. In their findings, mothers suffer language barriers decreasing their access to health information, there are health's lack of cultural and religious knowledge from the health staff as well as lack of social support for these mothers.

The research of Degni et al. (2012) reflects some communication problems that are common in intercultural interactions. Although is only based in communication issues between Somali women and health staff in Finnish hospitals, the research shows that having professional interpreters who mediate the conversation between nurses/midwifes/physicians and Somali women has a positive impact on the outcome on the visit. However the study show that the health staff felt frustrated when inter-

acting with Somali women for different reasons: gender differences, interpretation issues or differences in cultural and religious values. The authors also support the idea that nurses and women understood more about Somali culture when they built a personal relationships with these women. In their conclusions, the authors suggest that nurses and physicians should be trained in how to interact with patients from different cultural and religious backgrounds. They also add that dedicating more time to immigrant families, being more compassionate and having trained medical interpreters would improved the communication between immigrant patients and health-staff (Degni et al., 2012).

Focusing only in interpretation issues, Masland, Lou, and Snowden (2010) explore the benefits of using phone and video-conferencing interpreters in health-care visits in USA. They argue that the costs of patients with lack of English skills are higher due to misdiagnosis, increased testings and hospital admissions and low patient conformity. In addition, language barriers make the patients having less prevention care and medical visits. Due to the lack of economical resources for having an interpreter; phone and video-conferencing interpretation offer an economical solution, improving the quality of the health service for those who have language barriers. These technologies facilitate increased privacy (due to the interpreter is not physically in the room) and the patient is more prone to disclose information. They argue that the health-staff and patient satisfaction in relation with the quality of the service are mixed, however they do not give details about the reasons of it. (Masland et al., 2010).

The work of Høye and Severinsson (2008) studies nurses' perceptions working in Intensive Care, when encountering immigrant families from Non-Western countries in Norwegian hospitals. Nurses experienced communication issues due to the families lacked of language skills. They felt uncertain about whether the families could understood or not what they were saying. Nurses admitted that their encounters made them realize not having knowledge of their patients' different cultural and religious values. Besides, nurses felt stress when large number of family members were visiting their patients in the hospital (as instance the families were not respecting visiting schedules or the limited amount of visitors per patient). In addition, as in Degni et al. (2012)'s research, nurses experienced issues related with their professional and gender identity.

In summary, all the articles based on the communicative interactions between nurses and immigrant patients coincide that a training based on cultural and religious values of the different patients would improve patient's and nurse's communication and satisfaction together with the final outcome of the health-care service. However, as Reitmanova and Gustafson (2008) conclude in their research, is it important to take into account that not only cultural and religious issues, but also the family's migration status, gender, socio-economic status, education, employment and their social networks are interrelated playing a big role in the mothers and family's health.

4 Background Theories

To provide a better understanding of the results in this study, the theories and terms used in this research are presented below. Due to the different aspects of this study (Communication challenges, Cultural differences and Use of Technology) there is the need to select different Communication Theories to relate them to its 2 main questions.

4.1 Culture and Intercultural Communication

Culture is associated with a number of characteristics related to a specific group of people who share same values, norms, thoughts and beliefs. Allwood analyzes patterns of thoughts, behaviours, artifacts and imprints in nature that can be related to one culture or another, affirming that all kind of human activities involve at least patterns of thoughts and behaviours. Lustig & Koester definition is very similar to Allwood's when they affirm that "culture is a learned set of shared interpretations about beliefs, values, norms, and social practices, which affect the behaviors of a relatively large group of people". However these two authors emphasize that culture is learned through the interaction with other people (Lustig & Koester, 2010).

Trompenaars'vision of culture order values, norms, thoughts, beliefs, etc in different layers, depending on their visibility. His model of culture is composed by 3 different layers interdependent of each other. The outer one has culture's explicit characteristics, like language, food, houses, etc. (or Allwood's human imprints in nature); the middle layer is composed of the culture's norms and values and the inner layer is implicit, is composed by the individual's basic assumptions about his life (Trompenaars & Hampden-Turner, 1998).

Allwood (1985) definition of Intercultural Communication is "sharing information on different levels of awareness and control between people with different backgrounds". The definition given by Lustig & Koester in 2010, coincides with Allwood's definition when they argue that involves interaction among persons from different cultures. In addition, they stress that there has to be a wide difference of interpretation in the way individuals communicate, meaning that the more different are the individuals who communicate, the more intercultural is the situation when they communicate (Lustig & Koester, 2010).

Having similar cultural patterns help individuals to decrease uncertainty in their communication because they share common interpretations. These shared values facilitate also their communication because it is already established how they should behave when interacting with others (Lustig & Koester, 2010). However, different communication behaviours can occur when people from different background cultures communicate.

Differences in body-language, sound and writing, vocabulary and grammar conveying the message can cause differences in the way of interpreting it by individuals with different cultural background. As instance the listener can be influenced by the

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speaker, he can understand or perceive what is said or can have different emotional reactions (and consequently behaviours) regarding of what he perceives (Allwood, 1985).

4.1.1 Communication Challenges in Intercultural Communication

According to Allwood (1985), when people from different cultures communicate *lacks of understanding, misunderstandings*, emotional reactions and and different behaviours/actions can occur. As Lustig and Koester (2010) point out "the sense of security, comfort and predictability that characterizes communication with culturally similar people is lost" (Lustig & Koester, 2010, p. 148). As instance, individuals can *stereotype* themselves or people from other cultures to confirm their own cultural identity. Stereotyping simplify the process of organizing received information: individuals who have already connected certain patterns to certain categories of persons, assume that the next person they interacting with is going to be the same. Stereotyping oneself or the other have also negative consequences; it leads into *prejudices* by setting negative values on other persons (Lustig & Koester, 2010).

In addition, Allwood (1985) explains that there could be consequences of this intercultural communication too: *interruptions in the communication, the use of a third party (an interpreter), segregation or assimilation regarding the other's culture, pluralism and integration.* The understanding of culture differences is achieved by educating the parties implied in the communication. He insists that not only by learning the differences and commonalities in cultural background and communication patterns, but also being flexible towards this communication differences help to avoid the problems of intercultural communication (Allwood, 1985). Nurses and doulas backgrounds are completely different. Understanding that their cultural identity differs, help us to embrace the idea that by joining their opinions, we get a wider vision of the mothers and nurses communication challenges and which are the common and differences between them.

4.1.2 Language Challenges in Intercultural Communication

Language shapes our vision about the world; is reflected on the individual´s cultural patterns. There is a dynamic relationship between culture, language and thought. As instance, a language with a wide vocabulary regarding a certain issue, shows what is important for people who speak it (Inukitut language have from 7 to 50 words to denominate different types of snow). Language also groups the individuals: if one person speaks the same language as you do, you will probably think that that person shares your cultural background (Lustig & Koester, 2010, Chapter 7).

Due to this reason, we are prone to code the world in a certain way depending on our language, therefore we shape our reality, which differs from a person who speaks other language. When a person´s language categories differ from another's, there will be troubles in their communication. Issues in *interpretation* are very important because we need to find not only an equivalence in vocabulary, grammar or syntax,

but also there has to be an experiential and conceptual equivalence to represent the source language (Lustig & Koester, 2010, Chapter 7).

When the individual understands what is being said, creates emotions and emotional attitudes, attitudes that Allwood relate to the individual's needs and goals. Understanding the message facilitates reproducing afterwards the information that the listener has stored (Allwood & Abelar, 1984). In one hand, the process of *Understanding* occurs when the listener is able to process the information he gets into a meaningful context. Therefore he already needs to have stored information to understand: "understanding requires pre-understanding" (Allwood, 1985). In the other hand, the process of *Misunderstanding* occurs when the individual connects wrongly the information he gets with the stored one, resulting in a incorrect meaning. If there is a misunderstanding, the individual risks not being able to send the correct information. In addition, when this process of connecting information does not happens, *lack of information* occurs because the individual has not stored relevant information or he lacks this connection strategy (Allwood & Abelar, 1984).

4.2   Trompenaars's Cultural Dimensions Model

Trompenaars and Hampden-Turner proposed the model of 7 cultural dimensions in their book "Riding the waves of culture", based on investigating the influence of culture in management during 15 years interviewing employees and managers from 30 different companies from 50 different countries (Trompenaars & Hampden-Turner, 1998). Trompenaars dimensions are useful in this study because they give an explanation of how we, humans, behave in certain situations depending on our relation with what or who is surrounding us. Their dimensions can be used from to analyze the nurses and doulas' positions in relation with the immigrant mothers, how being from the same culture facilitates the communication or on the contrary, being from different cultures can affect the nurse-mother dialogue. The 7 dimensions have similarities with Hoefstede´s 6 cultural dimensions, however Hoefstede´s ones have to be analyzed comparing the indexes of one country to another (*National Culture*, n.d.). This is not possible to do in this study; since there are many nationalities of the mothers and not all of them are referred specifically by doulas and nurses.

The authors consider culture as a "way in which a group of people solves problems and reconciles dilemmas". According to them, humans face 3 main challenges: their relationship with their environment/nature, with time and with other humans. The way that they solve or manage these problems differentiates the cultures they belong to. The 7 cultural dimensions proposed by Trompenaars and Hampden- Turner are based in these 3 categories: those dimensions related with people's relationships are *Universalism vs. Particularism, Individualism vs Communitarianism, Neutral vs. Emotional, Specific vs. Diffuse and Achievement vs. Ascription. Sequential vs. Synchronic* would be the sixth dimension related with the passing of time and the seventh *Internal vs. External* contemplates the human relationship with the environment.

1. *Universalism vs Particularism* refers to how individuals judge other's be-

haviour. Particularistic individuals value more an individual relationship than universalistic ones, who value standard rules and norms agreed by the culture independently of the individual. The latter "value abstract societal expectations" (Smith, Dugan, & Trompenaars, 1996).

2. *Individualism vs. Communitarianism*, according to Parson and Shils (as cited in Trompenaars and Hampden-Turner (1998)) refers to a "prime orientation to the self or to common goals and objectives".

3. *Neutral vs. Emotional* refers to the levels in which people express and accept to express their emotions openly. Neutral cultures hold them while emotional ones openly express them.

4. *Specific vs. Diffuse* refers to cultures in which people limits their private life (specific culture) or private and public life do not have a clear border.

5. Achievement vs. Ascription refers to cultures in which the status of an individual is given by society or is achieved by how he perform in society.

6. *Sequential vs. Synchronic* refers to how people see the passing of time, if it is sequential or different events can happen at the same time. Some cultures would give more importance to past facts and others would be more focused in future events.

7. *Internal vs. External* control refers to how people see their own life: as controlled by themselves or depending of external factors (Trompenaars & Hampden-Turner, 1998).

4.3 Acculturation Strategies

John W. Berry (1997) proposes a process in which individuals or groups from a certain culture who come to a new culture, confront their own culture identity with the new one. In this study the acculturation strategies are useful because they explain what kind of strategy nurses and doulas expect from mothers and which are the ones that these newly arrived women choose when coming to Sweden. In this process of acculturation the individual, voluntarily, has to deal with two main issues: *Cultural Maintenance* (how to keep his cultural identity while confronting the new one and which characteristics of his identity he tries to keep) and *Contact and Participation* (up to what point he wants to be involved in the other culture). To do this, the individual has 4 strategies depending on his positive or negative interaction with these two main issues:

1. *Assimilation* occurs when the person does not want to keep his cultural identity and wants to make contact and participate in the new culture. It can occur that a dominant group would force the individual to assimilate himself the new culture, but according to Berry, this would lead to Marginalization (see strategy 4 below).

2. *Separation* occurs when the person wants to keep his cultural identity and is not interested in getting involved in the new culture. If the individual or the non-dominant cultural group is forced by the dominant group *Segregation* might.

3. *Integration* occurs when the person is interested in both cases: keep his indi-

vidual cultural characteristics and at the same time keep contact with the new culture. When considering cultural groups, Integration occurs when there is a Mutual Accomodation between the dominant group and the non-dominant one. The first one meets the needs of the latter by adapting national institutions and the latter freely accommodate to the values of the first.

4. *Marginalization* happens when the individual is not interested in keeping his cultural identity, or in contacting the new one. According to Berry, marginalization does not usually happen because the individual or the cultural group wants to, but because they are under pressure from the dominant group that forces them to assimilate, combined with segregating them (Berry, 1997).

4.4 Communication Accommodation Theory (CAT) and Interpretability strategy

CAT proposes that individuals try to accommodate, that is, to decrease communication differences when communicating with other people (Giles & Baker, 2008). The CAT theory serves for the purpose of explaining part of the nurses' communication strategies to deal when talking to immigrant mothers. This process of accommodation is done through *Convergence*. There are many different ways to converge to the other speaker: changing the speech style, dialect, speech pattern, the vocabulary, etc. CAT sets that converge can occur *downwards*, when the speech is adapted to a more colloquial one or *upwards*, when the person changes his speech to transform it to a more prestigious one. Both directions can occur during the same conversation. In addition, CAT sets that there are different levels of social power between the speakers.

CAT also presupposes that one accommodates from a subjective perspective, that is, the speaker adapts his speech to the level he thinks will coincide with the interlocutor's. This could cause miscommunication even if the purpose is the opposite. However CAT also contemplates that non accommodation can occur up to the limit when the speaker is enable to speak the other's language. Other example of non accommodation is when the speaker wants to reinforce his power position by not changing his speech or even under accommodating it by not attending the other speaker. In this case there would be *upward or downward divergences* (Giles & Baker, 2008).

Apart from the *Convergence Strategy*, the speaker might use other strategies too, like *Interpretability or the Interpretive Competence*: the skill to understand which previous knowledge has the other person in relation with the topic that is being discussed (Giles & Baker, 2008). The interpretability strategy tries "to find common ground with the listener in terms of the behavior used, including nonverbal behavior; the types of words used; the topics discussed; and the level of adherence to the social rules of the other person." (Jones, Gallois, Callan, & Barker, 1999).

4.5   Media Synchronicity Theory

Media Synchronicity Theory is based on the Media Richness Communication Theory by Daft and Lengel who propose the concept of *information richness* to reduce equivocality in group communication (Daft & Lengel, 1986). Information richness is defined as "the ability of information to change understanding within a time interval". Daft & Lengel classify face-to-face conversation as the media with the highest information richness and impersonal written documents with the lowest information richness (Daft & Lengel, 1986). However the Media Synchronicity Theory gives a step further setting that face-to-face communication does not need to have the highest richness and it's the situation that sets which media is better: the needs of the people who are communicating, the task they are performing and their social context (Dennis & Valacich, 1999).

Media Synchronicity Theory expects a group of individuals working at the same time, in the same context and with the same goal. During the group's communication process *Conveyance* occurs when the information is shared among the group for delivering its meaning afterwards; but not all the participants need to agree on its meaning nor receive it at the same time. *Convergence* occurs after, when the meaning of the information is shared and agreed among the individuals of the group. The capabilities of the media influence the result of these 2 communication processes. Dennis and Valacich sets 5 media capabilities to support them: *immediacy of feedback*, the ability of a medium to improve the understanding of the message; *symbol variety*, which is the the variety of ways in which the information is transmitted; *parallelism*, different information or messages transmitted at the same time; *rehearsability*, the capability of the sender to transmit an accurate message and finally, *reprocessability*; the capability of the receiver to recover the message (Dennis & Valacich, 1999).

5 Methodology

For this study, the researcher contacted the manager of the city´s "Doula & Kultur-tolk" organization who gave permission to look for volunteering Community Based Doulas who would participate in the study. Due to the main work of doulas being supporting immigrant women and helping them to communicate with the health system, the researcher considered that their vision, coming from the same culture of the women, could widen the answers of the nurses, giving extra information or contrasting the nurses' opinions. In addition, the researcher contacted a nurse from a Child Health Center (CHC) from a dense-immigrant area of one of the biggest cities in Sweden. The nurse helped to find other colleagues from the same center who volunteered to take part in this research.

Nurses and doulas were interviewed in their workplaces. The choice of interviewing method was due to its practicality and the limited time for this project. The project´s aim was to gather an overview of communication challenges in order that more focused research could be done based on the results of this study. As Treadwell (2013) sets, an ethnographic method could be applied to verify the results of the interviews in the future (Treadwell, 2013).

The questions aimed to get information regarding communication challenges between Swedish nurses and mainly immigrant mothers due to fathers do not visit often Child Health Care Centers in Sweden (Wells & Sarkadi, 2012). In 2008 only 20% of the national visits to the Child Health Centers were done by the fathers (Bergström, Wells, Söderblom, Ceder, & Erika., 2016).

During the visits to the Child Health Center, nurses use an interpreter when needed. Usually the interpreter is physically present in the room except for certain languages for which the interpreters are less readily available. In that case, the interpreter is on the phone.

The percentage of foreign families visiting the Child Health Center was between 95% and 98% and mostly mothers with their children. Families were from Syria, Afghanistan, Iran, Somalia, Palestine and Iraq. This research was not aimed for concrete statistics of the countries of origin, but what nurses and doulas said would coincide in part with the data of Statistics of Sweden (Statistiska Centralbyrån) that explains that during the last 10 years the majority of immigrants have arrived to Sweden from Afghanistan, Iraq, Somalia and Eritrea (*Statistiska Centralbyrån. Från massutvandring till rekordinvandring*, n.d.).

5.1 Participants

For detailed overview of all the participants see Appendix A.

5.1.1 Nurses

Five Swedish nurses from one CHC in one major city Sweden volunteered to take part in this research. The nurses were from 34 to 65 years old and had been working in the same CHC between 2 to 10 years. Only one of the nurses admitted to have some courses/workshops related to intercultural issues. The CHC is located in a highly immigrant-dense suburban area in one of the largest cities in Sweden. Some nurses worked before in others areas with less immigrant population.

5.1.2 Doulas

Four immigrant doulas from the "Doula & Kulturtolk" association supporting immigrant mothers in one suburban area of that city volunteered also to take part in this research. All doulas (from 35 to 60 years old) had different nationalities (two Somali, one Iranian and one Iraqi), education and spoke different languages apart from Swedish. They have been living in Sweden at least 11 years and have been supporting immigrant women between 2 years and 10 years.

5.2 Data Collection

Individual interviews were conducted in Swedish in the participants' working places. The nurses were interviewed in the examination room. Two doulas were interviewed in a private room of the organization and the other 2 preferred to be interviewed together in the doulas' private kitchen of the organization.

The interviews were audio-recorded, being the total interview time 417 minutes. The first part of the interview which concerns the background questions was not transcribed, but the answers are presented on Appendix A. The second and third part of the interviews were transcribed verbatim in Swedish. The parts cited in this thesis were translated into English.

5.3 Interviews

Five semi-structured interviews with nurses and four with doulas were conducted in an inverted funnel sequence. Two slightly different types of interviews were done to nurses and doulas, mainly because their duties and work were different (see Appendix B). Interview time lasted between 45 to 60 minutes. A brief overview of the interview structure is presented below.

The interviews were divided in three sections: the first part contained short questions about the participants' background: age, education, language skills and professional experience. The second part aimed to respond to the second question of the research: what technology nurses use and how they use it to communicate with immigrant mothers during their meetings at CHC. The third part of the interview tried to answer the first research questions: which communication challenges related with language and intercultural issues nurses and mothers experience at these meetings.

To help the participants to remember communication and intercultural issues with the mothers, the researcher cited some themes as examples they could talk about. These themes were extracted from the Riskhandboken (National Book of Child's Health Care Guidelines provided by the National Board for Health and Welfare of Sweden). The Riskhandobken proposes a health framework for the child's health care (*Vad är Riskhandboken in barnhälsovård?*, n.d.). The main discussed themes were: family, food and nutrition, sleep, communication with the child and safety (See Appendix B for more detailed information).

Contrast or prompt questions were done to gather more information about some issues: "You talk about breastfeeding issues, could you give an example?; Why do you think so?; why do you think it happens that way?; who?" etc.

5.4   Data Transcription

The interviews were analyzed using Qualitative Content Analysis and flexible coding (Treadwell, 2013). First, the interviews were listened once to get a wide vision of the content of the data. Next, the interviews were transcribed in Swedish and the most relevant parts of the interviews were selected to have a list of main meaning units (Graneheim & Lundman, 2004). All the transcriptions were checked by another researcher for verification. Besides, two other individuals unconnected to the field, checked one interview transcription each other.

Using a table of Google Sheets, the researcher organized the meaning units in rows. Then, focusing only in these units, the researcher added a column named "Categories" to categorize the transcriptions of the meaning units. Some categories were sorted and grouped into bigger categories. Therefore, another column was created to sort Subcategories. Categories and subcategories were then ordered in 5 groups based on the questions of this study: communication challenges, cultural differences, use of technology, trust and general information about the participants work.

Some meaning units could belong to more than one category or theme (Table 1 below shows an example of abstracting the categories and subcategories). Besides, to gain understanding of this study, some transcriptions were selected and quoted as examples in this research.

Table 1

Example of analysis

Theme	Category	Subcategory	Code	Examples of meaning unit
Language challenges	Interpretation		Not having an interpreter	We also encourage them to talk Swedish. But if so, something can be missed: once we couldn't get an interpreter and the mother spoke hardly any Swedish so the visit wasn't good.
	Solutions to language challenges	Body-language Language Accommodation	Use of body-language	Mothers might be asked: "Pain in the belly?" (and the nurse touches her stomach." So did you use body language?") The nurse answered: "Yes, I try to do body-language".

5.5   Ethical issues

The District Nurse from the Child Health Center was informed about this research and gave written permission to interview part of the staff. The coordinator of the doula's organization was also informed about the project and gave written consent to interview the doulas working there. All participants were informed verbally and written about the aim of the study and the management of their data. All involved participants gave their written consent for freely volunteering to take part on it.

The information gathered through the interviews was audio-recorded and afterwards stored coded, so no one could relate it back to the participants. The researcher informed the participants that the project guarantees anonymity to avoid any possible track of an individual participant and that they had right to get the data and deleted it if they asked for it. Possibility for the participants to withdraw from the project at any point was mentioned. The participants' names and other material facts, such as place names, identification numbers, etc., have been altered to preserve their anonymity. Due to the small amount of participants and to respect their anonymity, the quoted phrases in this study are referred only to the participant's profession. In addition, the locations they mention in the citations are also skipped.

This study is conducted in collaboration with Minclusion Project (project approved by the Ethical Review Board, Gothenburg, Sweden, see Appendix D, aimed to develop mobile pedagogical applications to improve the inclusion of Arabic-speaking immigrants in Sweden. The project is a collaboration between Chalmers University and Gothenburg University. All participants signed the Minclusion Project consent form that explained this goals of the study and the management and access to the data (see Appendix C).

5.5.1   Data management and privacy

The personal data was replaced by a code. It is only study staff who have immediate access to the code list. Data is stored separately in a fireproof cabinet. Data will be saved for at least 10 years to allow controls. The data management is realized under

the Personal Data Act (1998: 204). According to the Personal Data Act (PuL). Participants have the right to apply for information about which personal data is being processed. They are entitled to request an excerpt of the data recorded of them, once a year and free of charge, to obtain information about themselves being destroyed and to be helped with any corrections.

6   Results

Based on the research questions and after the analysis of the gathered data, 32 categories (19 categories and 13 categories) came to light. They were grouped in four main themes that were related to the research questions: General information related to the background of the participants: their work experience and the mothers' background (Theme 1); Communication Challenges and Cultural Differences (Themes 3 and 4 respectively) related to the First Research Question: "Which communication challenges and cultural differences do nurses and doulas perceive when immigrant mothers visit nurses in CHC in Sweden and how do they solve them?" and Technological Use (Theme 4) related to the Second Research Question: "What technology do they use to facilitate their communication and how do they use it?" (See Table 2).

Table 2

List of main themes, categories and sub-categories

Themes / Research Questions	Category and sub-categories
1. General information	Background Use of interpreter
2. Communication Challenges (Research Question 1)	Interpretation Language competence • Integration/Isolation Misunderstanding/lack of understanding Solutions • accommodation • body-Language
3. Cultural Differences (Research Question 1)	Family • members • partner relation • gender differences Language Education • Integration/Isolation Food and Nutrition • breastfeeding/formula feeding • sugar • obesity/underweight Bonding with the child • reading and talking Context and Time • routines • private and Public • collectivistic / Individualistic • lack of time Building trust Traditions Sensitive issues
4. Technology use (Research Question 2)	Images / Videos / Google Translate / SMS / Chat

The answers to the research questions are provided in the next 3 sections below:

1. Communication Challenges (Theme 2) are related to the Research Question 1 (RQ1) and explains which communication issues Swedish nurses and immigrant doulas perceive when mothers and nurses meet (interpretation issues, misunderstandings and lack of understanding). The section adds which strategies nurses and mothers use to solve them (language accommodation and multimodal communication)

2. Cultural Differences (Theme 3) are also related to RQ1: It shows the cultural differences related to the role of the mother in the family, food and nutrition differences and the differences of importance for " child bonding". Furthermore, certain issues are hard to talk about for the nurses while doulas, coming from the same culture of the mother, report finding no difficulties talking to their mothers. The place where participants meet with their mother and the time they dedicate to them influence their communication too.

3. Technology Use (Theme 4) answers the Research Question 2, analyzing which technological tools nurses and mothers use to facilitate their communication. Nurses use their computer to search for images and videos on the internet and mothers use their mobiles to show images, videos and translation apps.

6.1 Communication Challenges

According to the respondents, there are often challenges in communication between nurses and mothers due to the language differences. Usually nurses use an interpreter when talking to immigrant mothers, but having an interpreter can cause uncertainty among nurses. When the mothers speak Swedish or English lacks of understanding or misunderstandings occur. Nurses and mothers, regardless of whether they speak the same language, deal with these language challenges using two main strategies: language accommodation and multimodal communication (body language, drawing or writing or the use of technological tools).

6.1.1 Interpretation issues, misunderstanding and lack of understanding

The nurses in general think that they communicate quite well with the mothers. The majority of the mothers speak Swedish when talking to nurses. However, during the visit, when there's something concrete that they do not understand, the mother might call a relative, a friend or even a doula who becomes a chance interpreter.

> Doula: "Sometimes we get a call from the Child Health Center when they don't have an interpreter and we translate for them"

In other cases, it is often the older child of the family who does the talking in the room because they speak better Swedish than the mother.

Even when using an interpreter, some nurses feel that they do not get the whole meaning of their conversations. Relying on an interpreter implies having confidence

in this person's work and some nurses feel insecure about this.

> *"... and it's also difficult when using an interpreter. I can't know what he is saying, I don't know how what I say sounds when the interpreter is translating. Besides it's also different with different interpreters.. Usually they are good, but sometimes you feel a bit uncertain about what they say.."*

Another reason of this uncertainty is the physical absence of the interpreter in the room when they interpreter over the phone. The interpreter is unable to see what the children, nurse and mother are doing in the room.

> *"There is an interpreter most of the times. But with a phone interpreter it doesn't work so well. Especially when the child is older; there are so many things to do: to talk a little with her, to sit and draw with her here...The interpreter misses a part....the young sister screaming at the back... That's when it doesn't work..."*

An alternative way to solve the lack of Swedish is using English as a common language. Some mothers speak English, but this can make nurses feel uncertain about their own language skills and makes them prefer an interpreter.

> *"Sometimes mothers say:' I don't want an interpreter. In English'. I feel no, I have difficulties explaining myself in English. I need an interpreter for my own sake. And it goes with an interpreter, of course."*

Even if nurses and mothers speak Swedish, there are also some interpretation issues. Nurses might feel unsure about the outcome of the conversation or find it difficult to explain certain words.

> *" I usually ask: is the child 'friskt'(healthy)? And they don't understand the word 'friskt'. It can take a bit of time to understand what I mean, that the child is not sick."*

> *"In the middle of the visit I often feel that we understand each other... but then I say: 'Next time, we bring an interpreter'. I don't know, I believe they understand me but then maybe they don't follow me.."*

Mothers with a low level of Swedish also limit the nurse's understanding, who need more detailed information to comprehend exactly what the mothers want to say.

> *"I had a mother that talked a bit of Swedish, but understood it quite well. The child was sick and she was trying to tell that they had been in the hospital or something. But I didn't understand her at all. After a while I phoned the father and then I got a completely different version."*

When they can not explain themselves, nurses and mothers look for other alternatives to facilitate the conversation (See more in the next section "Language Strategies" below). Doulas confirm the nurses' answers: they find misunderstandings or lack of understandings between nurses and mothers.

> *"There are problems with language, but mothers solve it with an interpreter or sometimes if they are clever they use the phone to get a translation from it. And sometimes the nurses too, they have patience with them..."*

In addition, doulas sometimes feel that they need to explain better or correct the information that the mother has been given. In these cases it's difficult to know if the mother misunderstood the nurse/midwife or the interpreter or if it was just wrong information.

> *Doula: "I meet women who get wrong information from Health Care or from Maternity Care... I once met a woman whose midwife told her that after giving birth women stay only 6 hours in the hospital. I said: 'listen to me, you can stay more than that. You can stay nights if it's needed.' They want you to stay there only 6 hours but.."*
> *Researcher: "Can you explain that?"*
> *Doula: "She got that information even from her midwife!" Some mothers get the information from their interpreters: 'If the baby weighs less than 5 kilos then you stay..."*

6.1.2 Language strategies: accommodation and multimodal communication.

One common strategy used by nurses is to simplify their language so the mothers can understand them better. They accommodate their mother-tongue language to be understood. To do this, they use shorter utterances, avoid terminology and the words which might be perceived as complex by the mothers or try to speak slowly and pronounce clearly.

> *"Working here makes you talk in short phrases. You don't use complicated phrases, you point something, you show something, make some signs... I feel it works. And I hope that parents feel it too."*

Besides nurses and mothers use other modes to express themselves, from body-language, writing or drawing to digital images, google translate or some videos (See section Use of technology below). For instance, nurses use a small book that all families have, where they write notes, appointments, vaccines, child measures, etc. Nurses show some parts of the book to the mothers or highlight some parts so they can check it after the visit. They can also write something in papernotes, like the name of a medicine.

> *"It might be that I draw something or even I write down the lotion they have to get so they can go the the Pharmacy with the note."*

Some nurses use pre-printed schemes with different images and subtitles translated to different languages. These images come from an online image-bank offered by DART (Communication and Datasource Center for people with disabilities and communication difficulties from Sahlgrenska Hospital) (*DART startsidan. Dataresurscenter*

för personer med funktionsnedsättning, n.d.). This is a relatively new support so not all the nurses know or use this online image-bank.

6.2 Cultural Differences between nurses and mothers

According to nurses and doulas mothers have a more traditional role than Swedish ones, immigrant women take care of the children and the home. For nurses it is a challenge to talk to mothers about going out to study, work or socialize because they see it as a way of changing their cultural values. However, nurses and doulas agree that women who have been living for a while in Sweden, are more prone to share domestic tasks and they go to work or study.

A doula and a nurse explain that recently mothers have to stay at home in certain cultures because they need to focus in the baby and themselves. Relatives or friends take care of her and the house. In Sweden, due to the lack of support, some immigrant mothers are forced to go outside and run errands, something completely opposite to their traditions.

With regard to food habits, there are two main differences: the schedules for eating do not coincide with the Swedish ones and adults eat at different times than the children. Furthermore obesity in children is seen as a problem by Swedish nurses but some mothers, for example Somali women, see it as a cultural habit. Having a fat child is not considered a problem, on the contrary, the mother feels judged by other mothers if the child is thin. Eating sugar or giving sugar to children is not considered bad by Somali people, while in Sweden it is.

Promoting breastfeeding is one of the tasks of the Swedish nurses while Somali mothers think that formula is always necessary. They combine breastfeed longer time than Swedish mothers, but they combine it with formula.

Additionally, with regard to bonding promotion, reading and talking to babies from a young age is taken for granted among Swedish parents, while some immigrant mothers do not relate this to bonding with the child or their language development.

6.2.1 Immigrant families and the role of the mother

Nurses agree that it is usually the mother who is responsible for taking care of the home and the children, even if some of them also work outside the home. The partner is working while the majority of mothers stays at home with their children. Nurses meet women who are young, have many children and stay at home because they want to do so due to their cultural background.

> "I've seen so many women who don't go anywhere, in and out from the
> Child Health Center. A young woman who has given birth one child after
> another, 22 and 4 children. How is this possible? Here is when cultural

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issues matter. It is possible that some relative or the husband wants them to be there, I guess, at home. Meanwhile, we nurses try to get them out."

Some mothers have the support of other relatives so they socialize within their own cultural group, but not with the Swedes.

"Some mothers have contact with their relatives, have many relatives that are near and they socialize very much with them. I think this is a positive thing because at least they go out from home, meet other people and are not alone. However there are other mothers who feel very alone, who don't dare to go out.. That's when we try to encourage them and talk with them."

Other mothers without any kind of social support find themselves alone and isolated.

"It's difficult to go a step further, to meet others. Maybe they have their family, their relatives, their husbands and they are content with it. One lives in a little bubble."

As mentioned before, one task of the nurses is support these women and try to push them out to socialize and integrate. It can be a challenge for nurses because they consider they are trying to change the mother's and her family's values. The nurses's Swedish values contradict the women's values, but nurses feel that changing them is necessary.

Nurse talking about encouraging women to go out : - "It's done often, something that we don't do with Swedish parents, I think.... I try to make the mothers think. Although it is not appreciated in any way. It becomes a battle between the woman and her family, her husband. So it needs to be done carefully; to make her think about other values and customs"

Due to low levels of Swedish among certain mothers, their integration in Swedish society becomes difficult. According to nurses, some mothers stay at home for a long time taking care of their children while their partners work. Some of them will have one child after another, creating big families and with no time to study Swedish. Even if they have little Swedish knowledge before having the child, they remain at home after the birth. This increases the level of isolation among them. Nurses add that some of them are isolated not only because they do not speak Swedish but also because they live in the areas where Swedish is not used, therefore there is no need to learn it. However, nurses mention that depending on how long they have been living in Sweden immigrant mothers can change their vision and try to integrate through the language.

"We have another culture that guides us to get a job. Meanwhile many of our fathers, mothers, women, have another culture and other goals. To be home and give birth to many children... After a year or so, we get to know that person a little bit who doesn't want to stay shut in there... 'Go out and integrate into Swedish society, learn the language to

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get opportunities, get a job, do sports, blabla, so you learn about Swedish society and the language".

Nurses and doulas agree that the more time the mothers have been living in Sweden the easier it is to persuade who speak Swedish and try to integrate into society.

Doula:- "When the child has grown, some women think about going to study or work, but many of them decide to stay at home, back in time. Nowadays many want to work, these last years women have started to work."

In general, younger generations who have been raised in Sweden seem to adapt better to the society, get an education and a job. Also the father cooperates more in family tasks.

Doula talking about the future Somali father in the delivery room: "In Somalia the father is not usually in the hospital because all women give birth in the same room. So the parents stay outside or waiting at home. But here, young parents are more active than older ones and are more engaged, the older ones have old thoughts. . . "

Doulas also add that due to cultural differences the mothers stay more at home after the birth of a child. After the child's birth Somali mothers stay at home and other members of the family take care of her, feed her and do household chores, if they have a neighbour or a relative near to them, they will help them; but this is not often the case.

Doula: - "We have a tradition that says we need to take care of the new mother because she can't go out and walk outside. So one cooks for her, does the cleaning. . . In most cases the first 40 days after the birth, its a rule. If we see a mother who is out of home, we usually say that she doesn't have anyone to take care of her, we think 'poor her, she is compelled to do these things herself'. But here, who is going to come and help you the first 40 days? No one!"

6.2.2   Food and nutrition differences

In general all nurses find it difficult to explain good food habits to the families. They agree that families need to eat together at meal times so the children learn how to eat by themselves. Obesity and underweight are common problems among the immigrant children. Babies usually are underweight and children have more problems of obesity, sugar possible being the cause of this second issue.

Nurses mention that families have different ways to feed the children. A nurse adds that even the concept of breakfast is different, so not only the time for breakfast but the nutrients or ingredients that form it are different. They have different eating schedules, children eat late, are fed by the parents while they should learn to eat by themselves, do not eat in a proper place or do not eat together with adults. This

might cause bad eating habits or nutrition problems, like underweight, among small children. Doulas did not mention these specific issues.

> Nurse: -"It can be seen in different cultures, some of them. They don't have the same habit of eating together like we have here in Sweden. I think that is a big problem, the child doesn't learn how it's done, how others do... Parents feed first the child and then they eat afterwards or don't eat at all or in unstructured times. They give them something to eat while they are in the trolley. It becomes a bad routine."

> Nurse 2:- "It's a challenge to talk about it. If I talk about breakfast with a Swedish family we have the same idea of what is breakfast. But we haven't the same idea with a Middle Easter woman."

> Nurse 3:- They often eat before, soon in the evenings, before the parents do it. And the mothers, they eat a lot during the day so the child eats too. We have many children who are underweight that need extra control. It's very usual in this area."

However doulas and nurses agree when both groups talk about breastfeeding the babies. Even if they encourage mothers to do so the first months after the baby is born, many mothers combine breastfeeding with formula. Besides, nurses agree that immigrant mothers breastfeed babies longer than Swedish mothers.

> Researcher: -Why do you think it happens (formula feeding) in African countries?
> Nurse:- " I think they are poor countries and there, under some period of time, they are advised to buy formula. That's what I've been thinking myself. That it's advised to give them formula.... Some women think that the baby needs formula so he is not without any food the first hours before the milk is coming. And in other countries they just give formula, you have that thought, that breastmilk it's not enough and the baby needs also formula."

> Doula: "I notice that my mothers always want formula for their babies. I have a problem with it, I usually say. 'Just breastfeed', but they give them formula because they think the baby is not satisfied, that he is hungry all the time and needs formula.
> Researcher: - "Why do you think the baby needs it?"
> Doula: - "In my home country (Somalia) is popular to give formula... You make the effort, even if you are poor to get it. They say: 'breast milk isn't enough'. They don't listen to me, the just have that thought in mind."

Sugar intake among children is another issue nurses talk about with parents, that they should avoid giving sugar to their children. This might cause obesity among them. Doulas on the other hand, Somali ones specifically, agree that it is very common among Somali people to eat sweet food and sugar. One doula added that Somali women have fat children because they do not want to be seen as mothers who do not feed their children by other Somali women.

Nurse :- "Too much sugar, they consume too many sweet drinks. Maybe milk between the meals, so they are not hungry when it's time to eat."

Doula: - "We Somali people love sugar. Children can have juices and things like that. Because we think it´s not dangerous. We believe that when you sweat, the sugar comes out, it gets cleaned from the body. But nowadays we don't sweat, so it can be dangerous here in Sweden. They don't get it, they eat the same sugar here as in Somalia."

Doula 2: " Many women want their children to be fat. If the child is very little, some mothers think that you are not a good mother. I had a mother who had a little baby and a woman asked her why she didn't feed her child. You get those kind of comments, even if they are not unkind, like 'why your child is so little? Doesn't he get food?' So everybody avoids that by giving their children lots of food."

6.2.3 Bonding with the child

Nurses and doulas comment that mothers need to learn how to communicate with their babies and children to bond with them. That might be a problem of education among immigrant mothers who do not know how to communicate with their children when they are too small to talk. The concept of bonding and its importance is not understood by some immigrant mothers. A duty of the nurses is to show them how to do it.

Nurse: - I try to encourage them to have a nice contact with them, to talk to them at the beginning, that the child needs intimacy."

Nurse 2: " I don't want to say that parents are bad at this. But I can feel.. If I talk about bonding, I think I have to encourage more parents from other cultures than Swedish ones. It's not taken for granted that everybody understands that it's important, that it's important to look at your child, to look to each other.."

If the mother is staying at home during the first month after the birth and others are taking care of the baby, there are less opportunities to create a bond between the mother and the baby. The doulas agree that mothers do know not how to bond and that bonding with the child is important. For example, reading or talking to children is another way to improve the language development and the bond with the mother. Even if mothers are illiterate they can narrate stories to children by seeing the images in the books.

Doula: -" Swedish parents start to read when the children are small. We don't. We think that they do not understand, but it's a good exercise. I explain that it's good to read even when the child is in the belly. I heard somewhere that the babies can hear the parent's voice."

Nurse: - "We talk a lot about communicating with the child. Not all the mothers can read, but they can narrate. Take a book from the library

and talk about its images to your child. Always tell something or ask: 'Where do we go now?; Now we take the car' Talk to him when you do things."

6.2.4 Sensitive issues

Nurses experience challenges in communication with immigrant mothers. Certain issues, such as obesity or underweight are hard to talk about for the nurses while doulas report finding no difficulties talking to their mothers. Other challenges that affect the communication for both groups of participants are the different levels of trust created between them and the mothers. The place where their conversations take place is also important.

According to the nurses, it is sometimes hard to get the information they need from the parents and also to convey some information to them. Though they make an effort in transmitting certain information, certain issues are difficult to talk about. Problems related to obesity or physical/mental development in children are the most common ones.

> *"Many times we need almost to drag information out of the parents. They don't want to talk and it gets difficult to understand exactly what they mean."*

> *"When the children are fat, that is very sensitive!.... I have to work a little to try to..be better talking about it, because I think it's uncomfortable.*

> *"There are so many things that are difficult to talk about: when the child is overweight, parents being bad ... and it is really difficult to talk when the child has some developmental delays or difficulties.*

They work harder to communicate because according to them, when there is a problem they need to talk about, parents try to please nurses, minimize or negate the problem or make excuses.

> *"Sometimes it's like they try to say what I want to hear"*

> *"When children are fat it's: 'No, but we don't eat.., no'"*

> *"Many parents here say: 'No, I was also late with speech' ... or we are in the middle of the conversation talking about it (autism problems) and then the parents: 'But it's so hard to get to that clinic in the center, there are no parking places, so I didn't go'"*

In these cases, when nurses think that the mothers are avoiding some issues, they need to get more information from other sources. Nurses contact other authorities, like Primary School teachers, to check what is really happening to the child:

> *-Nurse: "So we contact the Primary School to see how it looks like.. because I feel so many times a bit unsure of how it really is. I can't trust what they say" ... "Maybe they get worried if they say negative things.*

I don't know. I believe that in certain cases they are afraid of Social Services".

6.2.5 Environment as enhancer of communication

The place where the conversation takes places makes the communication easier or affects how parents behave in front of nurses and doulas. Nurses usually work in their own rooms in the Child Health Centers except when a new baby is born. In this case, the nurses report visiting the families at their homes. The doulas can attend mothers in many different places apart from the Doula association: in hospitals, at the mother's apartment, in coffee-shops, etc. The place where they meet influences how mothers and participants communicate.

In all the cases, it seems that being out of the working place facilitates the communication between the families, especially when they meet for the first time. The nurses believe that visiting the families in their homes helps them to get a better insight in the family habits and how the children really behave.

> *"What I really think it would be better is if we could go to their homes more often. There we see how things are done at home, how they are. Sitting here (in the nurse room) while adults talk is something peculiar. We don't see how the parents communicate with their children"*

Doulas also think that meeting the mother for the first time outside the center makes them more prone to be confident.

> *"They know that I work here and they are mothers. I work here so they respect very much this place. However if we go outside they feel like we are a mother and a sister that help each other. After that, they come here (to the association). They already know me."*

6.2.6 Lack of time

Both nurses and doulas mention that they need more time to achieve good results and a better understanding of every family. Nurses agree that the more time they spend with the families the more the mothers trust them and the more information they get. More time with the families and mothers would improve the communication of workers and families. Nurse 1 comments:

> *"I would like to have more time with my families. Less children per nurse, that would be a good job. Some families need more time. The visits get longer due to our communication, to make it work. We have less children than in the center of the city, but we still need even less because it takes time... So many families need extra-time as well as the time allocated in our agenda."*

In both cases nurses and doulas ask for more time. But while Swedish nurses take for granted that this extra time means having less children because they have fixed

working hours, the doulas (lacking a concrete working schedule) do not create boundaries between their private life and working life. They see this as something that is linked to their profession:

> "My boss says that I should put time limits, but they trust in me. I feel like... this is my profession, my life. I am married, I have kids, mothers are with me all the time, in the mornings, at nights.. It's part of my life."

The doulas are obligated to only meet the women 5 times, and for them it is hard to keep this rule when the women keep contacting them by phone after their meetings. In this case, they feel under pressure, because they dedicate extra time to women, without being paid and on their free time. A doula comments:

> "I would like to have more hours.. I can't say to mothers 'No, I have finished my work, I can't continue'. It's horrible! It's not only me who says so but the rest of the doulas, they are not Swedish; they can't say 'No, I am sorry, this is enough, forget my mobile number' It doesn't work like that"

6.3 Use of Technology in communication between nurses and mothers

Using other tools to communicate help nurses and mothers during their conversations. Mothers use their mobiles while nurses use their computers to search for images and videos on the internet.

6.3.1 Nurses use of Technology

Nurses use internet from their computers, Google searching engine in particular, to look for images they want to show to mothers. For instance, products that they do not know like a specific medicine or food for example or even how a virus can look like in the skin of the baby.

> "I can do it sometimes from my computer. So they understand what is a prune. I look for images of jars.. Beans or broccoli.."

> "Maybe they don't understand a certain word so you show an image of it. It might be when we talk about food... Otherwise it can be also something they need to buy, a body cream, so you look for it in Google and show not only the name but how it looks like."

They show some videos located on the web regarding home safety or feeding habits. But a nurse tells that she needs to show the video while the parents are in the room, because otherwise they will not watch it if she sends them or write them the link.

> *"Sometimes I recommend they watch some films. . . I ask if they have watched them but they haven't."*

In general nurses feel that images and videos help them in their meetings and for that reason it could be an area to improve: to have more image/video support with captions in different languages.

> *"The image support can always be developed. It would be very good if we had a sort of mobile app. Now everybody uses it. We just have started to send messages, this year, via SMS to the parents through our mail."*

> *"Develop some kind of translator, an image translator. An app that I can translate with and get an image too. I realize I use many images, I like to work with them, show them while I talk."*

> *"I had a good film on Dinsakerhet.se (yoursafety.se) which is 4 minutes long because it shows burning wounds or a child climbing up the sofa. . . I feel it could be more done, regarding reading, or language, food issues. . . "*

6.3.2 Mothers use of Technology

According to the nurses, mothers use their mobile (apart from calling a relative to do the chance interpreter) for showing videos or photos to explain certain things. They show videos of how the children are behaving at home or photos of the baby skin or poop.

> *"Some parents show the poo or skin spots. 'She doesn't talk to me here or in Pre-school but look' So I take her mobile and they are talking and dancing and making. . . "*

According to nurses and doulas, some mothers use their mobiles as translating tools when they have difficulties with language. They will look for the word they want to translate in their mobiles or they will translate a written text directly by scanning it from Google. However one nurse commented that probably they use other apps that they do not know.

> *Nurse: -"I know some parents use Google Translate. They use it when they need to write down something on forms. I have had parents who speak good Swedish but when they need to write something they use Google Translate. They scan the texts and then you get the translation."*

According to the doulas, not all mothers have internet access on their mobiles or use the translation apps. It might be due to economical reasons (it's more expensive to pay for data as one doula commented), but it also might be that mothers do not know how to use all their mobile applications. Another doula comments that she shows some mothers how to use Google Translate on their mobiles. In cases with no data connection on their mobiles, mothers use their phones only for sending SMSs and calling.

7 Discussion

7.1 Communication Challenges and Strategies

Answering the first research question, doulas and nurses report that many mothers experience language problems. When the mothers speak Swedish or English, understanding problems occur. The mothers' lack of language competence causes misunderstandings between the nurses and mothers.

According to Allwood and Abelar (1984) *misunderstandings* occur when there is a lack of understanding in combination with a wrong interpretation. Nurses and mothers' misunderstandings are more related with word strategy; that is, they try to construct the meaning based only on parts of the phrases (Allwood & Abelar, 1984). On one hand, doulas report that they sometimes need to explain what nurses have told to mothers and on the other hand, nurses sometimes need to contact external help (school teachers, social assistance or even doulas) to get the whole picture about the children and/or the family situation. Therefore, coordination among nurses and doulas is essential for facilitating the mother-nurse communication relation.

The lack of language competence in mothers is shown when nurses mention that they need to explain certain words. According to Allwood and Abelar (1984) *lack of understanding* happens when the receiver does not know a certain type of information or when the receiver can not relate the information received with the information that she already has. Due to cultural differences or lack of language competence (or both) some words are not known by immigrant mothers, like certain types of food that might not exist in their countries of origin ("gröt"=porridge; "katrinplommon"= prunes) or simply the names of some medicines.

Both nurses and doulas report that nurses use an interpreter when talking to immigrant mothers. Having an interpreter can potentially prevent these language challenges but may lead to other problems. Interpretation can be done by an official interpreter offered by the CHC, but sometimes is a relative or friend who does the task, the oldest child or even doulas are called in to work as a chance interpreters. The nurses, in these cases, feel that the interpretation might not be reliable. Even when there is an official interpreter nurses do not feel confident because they do not know what the interpreter is saying and how he is expressing the nurse's explanations. The interpretation is even more difficult and causes more uncertainty when the interpreter is on the phone. This situation can be explained by to the concept of *parallelism*. Dennis and Valacich (1999) discuss that when there are many conversations at the same time, the medium is broad and it is more difficult to manage the conversation. In this case, there is *parallelism* because nurses are using 2 mediums at least at the same time: face to face conversation and phone conversation. Even when both mediums are used alternatively, the *convergence process* (the process in which all parts agree on the meaning of the information) might become slower, affecting communication. As some nurses point out, having people in the room who are not talking but are expressing in other ways (more *parallelism*) like the children moving around, prevents the interpreter from understanding the interaction.

As a result, there is a very low *rehearseability*, i.e. the nurse and the phone interpreter are not able to transmit an accurate message to different receivers. In addition, the *immediacy of feedback* as well as the *reprocessability* are also very low. It results in uncertainty in interactions, reported by the nurses.

To manage intercultural meetings, the nurses report using different strategies to facilitate communication, that is, they adapt their body-language and speech to be understood by mothers. They shorten their phrases, use less advanced vocabulary, speak slower and try to pronounce more clearly than when they talk to a native speaker. This is justified by the Communication Accommodation Theory (Giles & Baker, 2008), nurses *converge downwards* accommodating her style of speech to the mothers', using a more colloquial one. In addition, the nurses have to consider the existing knowledge of the mothers to share the right information with them. In these cases the nurses need to have an *interpretative competence*: they need to converge not only their speech, but also their body-language, the topics that they are discussing and their behaviour (Jones et al., 1999). However, since the method applied in this study is not based on observations of the real interactions of participants, the results could be different regarding their behaviour when meeting immigrant mothers.

7.2 Acculturation and Cultural Differences

Continuing with the results for the first research question, nurses and doulas agree that mothers have difficulties to integrate into the Swedish society because they do not speak Swedish. Lack of language skills causes isolation and problems of integration among the immigrant mothers. According to nurses and doulas, mothers do not have time to learn the language because they are the members of the family who stay at home and take care of the children. The nurses relate the mothers' role to cultural values, which favor women staying at home and being family caretakers. The doulas also add that the lack of language competence can be related to the education level of the mothers. Those who studied in their countries of origin are more prone to learn a new language (and to integrate as a consequence).

The results of this study show that among the immigrant mothers that the nurses meet there are two groups: those who want to study Swedish and work/study and consequently, integrate; and another group (a majority according to the interviewed nurses) who stay at home, in charge of by family obligations. While the first group would be willing to *integrate*, the second one would most probably choose more or less willingly the separation *strategy* (Berry, 1997) As many mothers stay isolated in the immigrant-dense area, often without any kind of social support, the nurses and even doulas are their essential contact with the Swedish society. Thus, to support integration, it is important to strengthen the link to CHC and ensure good communication between nurses and mothers.

Part of the nurses work is to encourage women to leave home and learn Swedish so they can *integrate* into Swedish society. But taking into account that they are accomplishing this in a Child Health Center located in a dense immigrant area,

Swedish culture would be the *non-dominant one*, making their task of integrating the mothers difficult. Not only because of the area where nurses are working, but also because they believe they are changing the mother´s cultural values.

However, to what extent is the mother willing to keep her cultural identity? If the mother chooses to be at home, is it because she wants to or because she is expected to do so by her own group? If the mothers want to be within their group and not to contact Swedish society then, it is clear that the majority have chosen the *separation strategy*. But according to Berry, if the dominant group is forcing the individual to keep their culture then *segregation* occurs (Berry, 1997).Therefore, mothers could be marginalized by their own group.

Less evident attempts to acculturate the mothers are shown when nurses talk about food habits and bonding. The differences in food habits are related with *synchronic vs. sequential* dimensions. Nurses argue that children eat late or have unstructured times (something that doulas, coming from the same culture as mothers, did not even take into account) Coming from a culture with a linear conception of time, the nurses feel that the parents are not respecting the times to eat. Since "meal-times" is a cultural component (the nurses consider it to be a Swedish tradition), it is very difficult to find a common ground between nurses and families. The word "late" has a different meaning for the Swedish nurses and the families, who often come from *synchronic cultures* where the schedules can be modified depending on the circumstances (Trompenaars & Hampden-Turner, 1998). The results show that nurses can not distinguish between arguments with a cultural component (late, unstructured, eating out of meal-times) and arguments without.

In addition, there are some cultural differences related to perceptions of obesity and sugar intake. According to the Somali doulas, Somali women do not see obesity or sugar intake as a problem. Having a thin baby implies that the mother is not taking care of her baby, so obesity is seen as a normal habit. Sugar intake is also seen as a normal habit among Somali people, while for nurses, obesity and sugar intake are problems that need to be solved as part of their work. These different points of view show how certain topics are difficult for the nurses to explain: obesity, underweight or problems with the physical/psychical development of the child.

Challenges in informing the mothers about importance of bonding is another topic that nurses and doulas have in common. Both groups of participants agree when they say that immigrant mothers do not give importance or do not know what bonding means. The nurses and doulas consider that immigrant mothers need to learn to create a bond with the child, while the Swedish mothers know already the importance of communicating with the baby for improving his development. According to Allwood and Abelar (1984), it is necessary to educate the parties implied in the communication by showing them cultural patterns and differences to increase their chances to achieve a joint understanding. This study shows that the mothers, doulas and nurses need to be informed about their cultural differences so the nurse-doula-mother's communication ensures that they understand each other perspectives on obesity, bonding, etc. It can potentially lead to better concordance and both mother´s and child's wellbeing.

Differences in time perceptions are also visible when doulas and mothers communicate. The doulas mention that mothers talk to them out of their work hours, which the former have problems to refuse as it might lead to developing lack of trust/distrust in relationships. Doulas and women talk no matter the hour because they come from synchronic cultures were there are not specific times for specific tasks (Trompenaars & Hampden-Turner, 1998). Nurses have a work-schedule and they respect it, admitting that they would need less families (meaning more time dedicated to just a family). On the contrary, doulas do not ask for less mothers, but for more hours because they are unable to cut the relation with the mothers after they have finished their work with them.

7.2.1 Context and time as enhancers of communication

As mentioned before, the nurses feel uncertain at some points when they talk to mothers. According to the doulas, mothers experience also moments of insecurity when they talk to nurses (because they will talk after with their doulas to confirm or get extra information in addition to what the nurses tell them). Examining the results, the differences of trust levels can vary depending of 2 factors: context and time.

Concerning place, if nurses meet mothers at their homes, trust is built faster than if they meet them at the Child Health Centers. The same thing occurs when the doulas meet their mothers outside their workplace. The *Specific vs Diffuse and Universalism vs Particularism* Trompenaars' dimension explains these results (Trompenaars & Hampden-Turner, 1998). Mothers, by having nurses at their home, share their private space allowing them to share other private parts of their life too. Mothers belonging to *Diffuse Cultures* do not set the limits between what is a professional relationship and a personal relationship while nurses, coming from a *Specific Culture* such Swedish tend to limit their relationship with mothers to a mere professional one. Sharing a private space like the family's, enables them to have a common ground where the nurses and mothers have a more personal relationship getting to know each other.

This is also supported when nurses affirm that they need to contact other sources, like pre-school teachers, to validate the information they receive because they do not have enough information or do not trust what the mother says. Coming from a *Specific Culture*, Swedish nurses need to contact other professional environments to get more input, because they have not built a good relationship with the mother (yet).

A good relationship is also necessary for persons from *Individualistic Cultures*, who place more importance on the relationship with a particular individual than social norms. Swedish people, characterized as coming from a *Universalistic Culture* contradict this value, prioritizing the social norm; meaning that people "adhere to standards which are universally agreed" (Trompenaars & Hampden-Turner, 1998). Therefore Swedish parents have less difficulties talking in front of nurses than immigrant mothers, because it is the social norm to do so. Some mothers need to first

reinforce their relationship with the nurse. As doulas have the same cultural values as the mothers, building of their relationship is taken for granted, considering the doula as someone very near to the mother, like her mother/sister, and thus having less difficulties to talk to them.

According to nurses, it is more difficult to build trust when they do not have enough time to get to know the families. As nurses have a scheduled and limited time, increasing an immigrant mother's confidence to talk might take longer than with a Swedish mother, as the latter is more prone to talk about herself or the children because she knows she is expected to do so *(Universalistic Culture)*. As Trompenaars & Humpden-Turner observe: "it is wise to take much longer than usual when visiting a particularist culture. Particularists get suspicious when hurried." (Trompenaars & Hampden-Turner, 1998). Therefore, although nurses come from a *Universalistic Culture* they are aware that they need more time and shared private spaces with immigrant mothers to achieve a better relationship and a better results during the visits at the Child Health Centers.

7.3   Use of Technology

As mentioned in the results section, nurses use their computers to search for images and videos on the internet while mothers use their mobiles for showing videos/images and as translating tools (apart from calling a chance interpreter during their visit). The results of using a phone interpreter are already analyzed from the point of view of Media Synchronicity Theory (Dennis & Valacich, 1999). In addition, mothers and nurses also use other media such videos and images as a support, as well as brochures, drawings, image-templates, written notes, body-language, etc. The more mediums, the *more symbol variety* in their conversation. Because they are talking face-to-face with no one on the phone, the *immediacy of feedback* is also high/medium high and the parallelism is low. This case is one of the best options that Dennis & Valacich set for a good *convergence process* in communication groups: "...use of media providing high synchronicity (high feedback and low parallelism) will lead to better performance" (Dennis & Valacich, 1999). They also emphasize that media allowing different non-verbal symbols like tone of voice or body-language contribute to the well-being of the group when the participants do not know each other. Therefore having multiple *symbol-variety* during face-to-face conversation helps mothers, nurses and interpreters to arrive to the same understanding agreement.

However, use of mobile technology is limited to some mothers. According to some doulas, they need to teach mothers to use translation apps or just search some information on the internet. This proves that more educated immigrant mothers are more confident in the use of internet and mobile apps, which helps them to be more autonomous in their daily life in Sweden. It can also consequently increase the chances to influence their own's health and their children's when communicating in CHCs. Furthermore, it increases their possibilities of integration.

8 Limitations of this study

The participants were selected by the researcher, so the validity of the nurse group can be questioned (Treadwell, 2013) since only a group of nurses from the same center were interviewed. On the contrary, the doulas were working in different settings in immigrant areas of the city with different mothers. More research is needed from immigrant populated areas and less immigrant ones to compare how the communication between mothers and nurses differs or not. Furthermore, the method can be criticized since interviews do not observe the communication and behaviour among participants in a real setting and do not take into account immigrant mothers as participants.

It might be that the questions asked to the participants were not completely accurate or that the researcher did not perceived all the nuances in the answers to go deep in certain issues due to language problems. As Graneheim and Lundman propose, a text can be interpreted in different ways because it can have different meanings, so in qualitative content analysis there are always issues with trustworthiness, even if the researcher and participant cooperate to get a good understanding of the conversation (Graneheim & Lundman, 2004).

9 Conclusion

The results of the study show that the nurses do their best to achieve the best performance they can with the knowledge and tools they have. However, some training in cultural competence of their immigrant families' main cultures could help to improve both the mothers and the nurse´s communication and satisfaction regarding their meetings in CHCs.

More time and sharing common spaces out of work, like the family´s home, helps nurses, doulas and mothers to know each other enhancing their trust and communication. More time should be allocated for both nurses and doulas to manage communication with immigrant mothers, which can not only contribute to better service, but even to increase chances for the women to integrate into society. Furthermore, increasing the collaboration and communication between doulas and nurses would improve the output of the visits to CHCs, as well as nurses and families's satisfaction. This is especially relevant for some immigrant mothers, who are in difficult situations, with difficult past experiences and lower-educated. More support is also needed to develop their digital literacy, which can lead to increase their participation in society.

9.1 Future research

More research can be done in relation with newly arrived immigrant mothers. How do the lack of Swedish, cultural background and difficult pasts influence their integration in Swedish society compared with immigrant men or women without children?

A very detailed analysis of the use of certain tools by the nurses (i.e., Google, Google translate, 1177, etc.) what they look for, which are the most useful contents, how they use them, how many times, etc. would help to understand their needs for communicating with foreign people. For instance, organizing focus group interviews with nurses would help to develop an interactive image and video database (with the capacity to grow according to the user needs) or an application for mothers and nurses.

The promotion of DART, the online image bank (*DART startsidan. Dataresurscenter för personer med funktionsnedsättning*, n.d.), and studying the levels of satisfaction regarding nurses and families communication could be other field of research.

Analyzing the effectiveness of other communication media channels in the Child Health Centers, like tv-screens, brochures and posters in the waiting rooms, could help to find new solutions for communication effectiveness. Having the possibility to make video conferences with the interpreter for example, would improve the communication and probably decreasing costs; but this would be also another issue to investigate.

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A Participants tables

Table 3

Table of participants: nurses

Age	Nationality / Years living in Sweden if not Swedish	Mother tongue and other spoken languages	Education	Intercultural education	Years of experience working in the same center	Years working in other centers
34	Swedish	Swedish, English and Spanish	Nurse specialized in District Nurse	No	2 years	No
65	Swedish	Swedish, English	Nurse specialized in District Nurse	Some workshops or meetings at my job	10 years	Not answered
53	Finnish, living in Sweden from childhood	Swedish and Finnish	Nurse specialized in Children	No	2 years	25 years in a children clinic
49	Swedish	Swedish and English	Nurse specialized in Children	No	3 years	2 years in a children clinic and 9 years in a school
35	Swedish	Swedish and English	Nurse specialized in Children	No	3 years	7 years in a children clinic

Table 4

Table of participants: social worker doulas

Age	Nationality	Years living in Sweden	Mother tongue and other spoken languages	Education	Years of experience working in the association	Previous work in Sweden
60	Iranian	22	Persian, Dari, Turkish and Swedish	Doula Course and Degree in Industrial Design	10 years	Construction industry
49	Swedish	26	Somali, a bit of English, a little of Italian and Swedish	Doula Course and Nurse Assistant Education	7 years	Social Care assistant and Nurse assistant
35	Finnish, living in Sweden since she was a child	14	Arabic, Swedish and a little of English	Doula Course	2 years	2 years as a Primary School teacher and now Swedish assistant teacher
43	Swedish	23	Somali, Swedish, English and a little bit of Arabic	Doula Course and Nurse Assistant Education	10 years	Social Care assistant and Nurse assistant

B Interviews questions

Table 5

Questions to nurses of Child Health Centers

Background questions	
Age	How old are you?
Country of origin	Where do you come from?
Time in Sweden	If you are not Swedish, how long have you been living in Sweden?
Education	Which is your education? Did you receive any kind of education related to culture matters during your work or nurse studies?
Work	How long have you been working as a nurse in this Barnavårdscentralen? Have you been working in another places?
Language competences	
1st language	What is your mother tongue?
Other languages?	Do you speak other languages? Which ones?

Background related with the Child Health Center	
Planning of the visits	Do you have a plan for the visits? How do you organize the meetings?
Immigrant families visiting VBC	How many % of your families would approximately be immigrants? Who accompany mothers? Children? Husband? Friends? Etc. Do they usually have an interpreter? Who is the interpreter, is he/she a professional? Or do they use family members?
Communication Support Tools:	
Use of technology	Do you use any kind of technology during the visit to facilitate the communication? (pc, tablet, mobile? Could you give examples? When do you usually use them?
Mobile technologies	In case you use mobile technology, which devices do you and your mothers use? Which apps/programmes do you use? What for, in what situations? For how long you think you use these devices? What tools are used by the families?
Communication issues	
	How do you experience your communication with the mothers? Which problems in relation with language do you have? How did you solve the language problems?

Culture differences	
	Which are your main concerns related to cultural differences when you are going to meet the immigrant mothers ?
	Do you experience any cultural differences in communication? Which ones?
	We would like to discuss if you experience difficulties in communication related to the following issues:
	Birth:
	How mothers feel and how is being at home with a newborn baby.
	Family
	maternity/paternity leave
	partner relation, gender equality
	big or small family
	Food and nutrition
	How is the feeding. Do they eat small portions, pure, what is good or bad food, which are the food routines at home
	Breastfeeding or Formula?
	Child teeth/sugar
	Overweight and Underweight
	Sleep
	How the baby or the children sleep.
	Communication with the child
	Bonding with the child/making contact with the baby
	Stimulation of the baby
	Reading, singing and playing
	Education: to shout or to slap the children
	Safety:
	Car safety issues
	Changing diapers at the changing table
	Smoking and alcohol
	Mobile or iPad use

Ending questions	
	What would you change or improve in the visits to make them more effective or satisfying?
	Do you think a mobile tool can be helpful? Which ones?

Table 6

Questions to doulas

Background	
Age	How old are you?
Country of origin	Where do you come from?
Time in Sweden	How long have you been living in Sweden?
Education	Which is your education?
	Have you got some education/training to be doula?
Work experience	Have you always been a doula?
	What was your previous work? (in Sweden or in another country?)
Language competences	
	What is your mother tongue?
	Do you speak other languages other than Swedish?

Background of the women	
	From which country are your mothers from?
	Who accompany mothers to Child Health Centers or Antenatal Clinic? You? Children? Husband? Friends? Etc.
	Do they usually have an interpreter?
	Who is the interpreter, is he/she a professional or do they use family members?

Communication Support Tools:	
Use of technology	Do you or the nurse/mother use any kind of technology during your meetings to facilitate the communication? (pc, tablet, mobile? Could you give examples?
	When do you usually use them?
Mobile technologies	In case you use mobile technology, which devices do you and your mothers use?
	Which apps/programmes do you use? What for, in what situations?
	For how long you think you use these devices?
	What tools are used by the families?

Communication issues: language	
	Which problems of communication do you think the mothers or the nurses have?
	Which problems in relation with language do you have?

Difficulties/differences due to culture	
	Which are your main concerns related to cultural differences when you are going to meet the immigrant mothers ?
	Do you experience any cultural differences in communication? Which ones?
	We would like to discuss if you experience difficulties in communication related to the following issues:
	Birth:
	How mothers feel and how is being at home with a newborn baby.
	Family
	maternity/paternity leave
	partner relation, gender equality
	big or small family
	Food and nutrition
	How is the feeding. Do they eat small portions, pure, what is good or bad food, which are the food routines at home
	Breastfeeding or Formula?
	Child teeth/sugar
	Overweight and Underweight
	Sleep
	How the baby or the children sleep.
	Communication with the child
	Bonding with the child/making contact with the baby
	Stimulation of the baby
	Reading, singing and playing
	Education: to shout or to slap the children
	Safety:
	Car safety issues
	Changing diapers at the changing table
	Smoking and alcohol
	Mobile or iPad use

Ending questions	
	What would you change or improve in the visits to make them more effective or satisfying?
	Do you think a mobile tool can be helpful? Which ones?
	Anything to add?

C   Consent form

Minclusion – Integration med mobilen

Forskningspersonsinformation för

Integration med mobilen – stöd för språk och interkulturell kommunikation för nyanlända

Bakgrund och syfte
Många människor som flyr sina hemländer kommer idag till Sverige. De flesta av dem har mobiler som kan användas för olika syften, bl a för att lära sig språk, få information om Sverige och få kontakt med människor. Projektet avser undersöka mobilvanor och integrationsbehov hos nyanlända arabisktalande personer i Sverige. Vi avser utveckla stöd för språk och interkulturell kommunikation undervisning för nyanlända inom olika områden.

Förfrågan om deltagande
Du har svarat att Du är intresserad av att delta i vår studie och har blivit kallad för få mer information om studien. Efter att Du fått denna information så tillfrågas Du om Du vill vara med i studien. Läs nogsamt igenom information nedan. Tveka inte att ställa frågor om Du har några.

Hur går studien till?
I studien kommer vi att fråga Dig att delta i intervjuer om Din kommunikation med människor från olika länder i arbetsrelaterade aktiviteter och Din mobilanvändning. Intervjuerna kommer att spelas in på audio.

Det insamlade materialet
Det insamlade materialet i samband med den forskning du ska delta i kommer att sparas i ett arkiv. All data (intervjuer och enkäter) kommer att förvaras kodade, vilket innebär att de inte direkt kan härledas till Dig som person. En tillhörande identifieringslista (kodnyckel) förvaras på ett säkert sätt och åtskild. Datan får endast användas på det sätt som du gett ditt samtycke till. De kan endast bli aktuella för ett nytt forskningsprojekt efter det att du lämnat ett nytt samtycke och/eller godkännande skett av Etikprövningsnämnden. Du har full rätt att utan närmare förklaring begära att Din data ska förstöras eller avidentifieras (dvs. de kan inte spåras till Din person).

Vilka är riskerna?
Det finns inga större risker förknippade med denna studie.

Finns det några fördelar?
Deltagandet innebär att Du får en viss möjlighet att öva Ditt språk, lära Dig om Sverige och digitala verktyg.

Hantering av data och sekretess
Dina persondata kommer att ersättas med en kod. Det är enbart studieansvariga personalen som har omedelbar tillgång till kodlistan.

Dina svar och Dina resultat kommer att behandlas så att inte obehöriga kan ta del av dem.

Data och kodlista kommer att förvaras separat i olika brandsäkra skåp. Data kommer att sparas i minst 10 år för att möjliggöra kontroller.

Styrelsen för Chalmers tekniska högskola är ansvarig för behandlingen av personuppgifterna. Enligt Personuppgiftslagen (1998:204) har Du rätt att ansöka om information om vilka personuppgifter som behandlas. Du har rätt att en gång om året och utan kostnad begära ett utdrag över de uppgifter som registreras om Dig, få uppgifter om Dig själv utplånade och få hjälp till eventuell rättelse. Du kan sända Din ansökan till kontaktperson nedan eller till Chalmers tekniska högskola, 412 96 Göteborg, personuppgiftsombud Emma Didring, emma.didring@chalmers.se. Telefon +46 31 772 12 78

Dina persondata kommer att ersättas med en kod. Det är enbart studieansvariga personalen som har omedelbar tillgång till kodlistan.
Dina svar och Dina resultat kommer att behandlas så att inte obehöriga kan ta del av dem.

Data och kodlista kommer att förvaras separat i olika brandsäkra skåp. Data kommer att sparas i minst 10 år för att möjliggöra kontroller.

Publicering kommer att ske på gruppnivå och ingen individ kommer att kunna spåras.

Hur får jag information om studiens resultat?
Du kontakta projektledaren, se nedan för kontaktuppgifter.

Hela studiens resultat kommer att publiceras i vetenskapliga tidskrifter och presenteras på konferenser. Data kommer att publiceras på gruppnivå, aldrig på individnivå. Det vill säga ingen kommer att kunna identifiera Dina data i artikeln.

Försäkring, ersättning
Du ska vara försäkrad genom den verksamhet Du är kopplad till.

Som tack för att Du ställer upp och ger av Din tid kommer Du att få fortsatt tillgång till de mobilapplikationer som vi utvecklar.

Frivillighet
Du kan när som helst under studiens gång avbryta Ditt deltagande.
Du kan också begära att de enkäter och intervjuer Du har lämnat/deltagit i ska avidentifieras. Därmed vet vi inte vems enkät/inspelning är men det kommer att ingå i den slutliga bedömningen av studiedata.

Ansvariga

Ansvarig för studien är
Nataliya Berbyuk Lindström
Göteborgs Universitet
Institutionen för Tillämpad IT
Hus Patricia, Lindholmen
417 56 Göteborg
Telefon +46 73 3268716

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Samtyckesformulär för

Integration med mobilen – stöd för språk och interkulturell kommunikation för nyanlända

Jag har fått information, både muntlig och skriftlig, samt fått möjlighet att ställa frågor och fått dem besvarade. Jag är medveten att jag när jag så vill kan avbryta mitt deltagande utan att ange specifika skäl och utan att det påverkar min framtid.

Jag samtycker till att delta i studien.

…………………………………….. ………………………………………
Underskrift Ort och datum

………………………………………
Namnförtydligande

_____
Till projektpersonal: Undertecknad har lämnat information om studien

…………………………………….. ………………………………………
Underskrift Ort och datum

………………………………………
Namnförtydligande

Roll i studien

……………………………………..

D   Ethical agreement

EPN *Regionala etikprövningsnämnden i Göteborg*

Projektansvarig:
Linda Bradley
Chalmers tekniska högskola
Hörsalsvägen 2
412 58 Göteborg

Dnr: Exp. 2017-11-16
538-17   *2017-12-11*

Granskad och godkänd som sekreterarärende
Göteborg   *2017 12 11*

Bibbi Ringsby Jansson, univ.lektor, bitr vetenskapl sekr
Avdelning för Övrig forskning
Regionala etikprövningsnämnden i Göteborg

Forskningshuvudman: Chalmers Tekniska Högskola

Närvarande beslutande:
Lars-Åke Ström, *ordförande*
Bibbi Ringsby Jansson, *bitr. vetenskaplig sekreterare*
Ledamöter med vetenskaplig kompetens:
Anne Ingeborg Berg *(deltog ej i ärende 832-17 p.g.a. jäv)*
Johan Berlin *(deltog ej i ärende 472-17, 832-17, 843-17, 845-17, 918-17, 919-17)*
Sally Boyd *(deltog ej i ärende 702-17, p.g.a. jäv)*
Elisabeth Björk Brämberg
Kerstin Grundén
Paul Hemerén
Staffan Höjer *(deltog ej i ärende 867-17 p.g.a. jäv)*
Karin Klinga Levan
Peter Korp
Ledamöter som företräder allmänna intressen:
Bengt Fernström
Peter Legendi
Beatrice Toll
Björn Skår

Regionala etikprövningsnämnden i Göteborg
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Granskad och godkänd som sekreterarärende

Projekttitel: Integration med mobilen - stöd för språk och interkulturell kommunikation för nyanlända
Projekt ID: FFF/2016/000021
Version: 1

Beslutsprotokoll från sammanträde med Regionala etikprövningsnämnden i Göteborg, Avdelningen för övrig forskning, den 13 november 2017

Föredragande: Kerstin Grundén

Sekreterarärende efter komplettering

Etiknämnden överlämnar till vetenskaplig sekreterare att pröva ärendet efter att följande kompletteringar inkommit:

att forskningspersonsinformation och samtycke utformas i enlighet med etikprövnings-nämndens mall (se Vägledning till forskningspersoninformation, www.epn.se), till samtliga

grupper av forskningspersoner, d.v.s. också till lärare, personal på boendet och annan personal som involveras i studien,
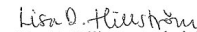
att det klargörs vem/vilka som är forskningshuvudmän, då olika uppgifter förekommer i ansökningen, och

att innebörden av den avvikelseregistrering som beskrivs under punkt 5:1 (forskningsetiska överväganden) i ansökningen förtydligas, samt hur denna registrering avses att dokumenteras, förvaras och användas.

De specifika kompletteringar som görs bör anges i ett separat underskrivet följebrev. Textavsnitt som ändras i ansökningshandlingarna/forskningspersonsinformationen bör tydligt markeras.

Komplettering av ärendet (1 ex) ska ha kommit in till Etikprövningsnämnden inom tre månader från beslutsdatum då ärendet tas upp på nytt. Om komplettering inte inkommit kan ärendet komma att avgöras i befintligt skick.

Att denna avskrift i transumt överensstämmer med originalet intygar

Lisa D. Hillström
Lisa D. Hillström, administrativ sekreterare