Exploring Public Health Nurses' experience with cross-cultural service provision and communication regarding infant and child nutrition

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The two words ‘information’ and ‘communication’ are often used interchangeably, but they signify quite different things. Information is giving out; communication is getting through.

Sydney J. Harris

Exploring public health nurses experience with cross-cultural service provision and communication regarding infant and child nutrition.

http://www.duo.uio.no/

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Abstract
In Norway, public health nurses have a long history of working with health promotion and, in particular, in relation to maternal and child health. Appropriate feeding practices are of fundamental importance for growth, development and health among infants and young children. As the number of children from immigrant families in Norway increases, more public health nurses are working with families whose cultural backgrounds are markedly different from their own. According to some studies, immigrant mothers experience the infant feeding advice provided by public health nurses as limited. These studies describe inadequate advice about the benefits of breastfeeding and the introduction of solid food, specifically, and about infant and child nutrition in general.

This study therefore explores current public health nurses' perspectives on and experiences with cross cultural service provision and communication regarding infant and child nutrition.
A qualitative study design and in-depth interviews and focus group discussions in particular, were employed to investigate this. The data were collected over a period of four months, in three municipalities in Norway (Oslo, Akershus and Østfold), where the prevalence of immigrants is the highest in the country. Research participant were recruited from nine different maternal and child health clinics, and consisted of 24 certified public health nurses.

Findings from this study show that language is perceived as a barrier that leads to a superficial level of communication and cause time constrains; lack of a common understanding of cultural knowledge and food pose as an additional barrier; interpreters are fundamental; visual aids strengthen cross-cultural communication when a common language is missing; booklets on infant and child nutrition are used as complements to verbal advice; group meetings are perceived to have potential for strengthening nutrition counseling with immigrant mothers in particular.

Based on findings from this study, we suggest the following: cultural education for public health nurses, clear interpreter guidelines/education, providing public health nurses with iPads and access to visual nutrition tools, translating and re-working the booklet 'Food for Infants' and making it available on the internet, and acting on public health nurses suggestion regarding the value of providing cross-cultural group meetings for all mothers. The study concludes that such measures are pertinent for strengthening cross-cultural communication regarding infant and child nutrition.

Key words: *Public health nurses, Immigrant mothers, cross-cultural service provision, Infant and child nutrition, Qualitative, Interview, Focus group discussion.*

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Please note that, unless otherwise stated, photos used in this study are taken by me.

Oslo, May 2015

Anne Grotnes Larsen

Clarification of terms, abbreviations and figures

Exclusive breastfeeding: the infant has only received breast milk from his/her mother or a wet nurse, or expressed breast milk, and no other liquids or solids with the exception of drops or syrups consisting of vitamins, mineral supplements or medicines

Solid foods: any solid substance (as opposed to liquid) that is used as a source of nourishment

Infant formula: the infant has received formula milk

Infant nutrition: breast milk and solid food

Infant: from birth to twelve months

Child: above one year of age

Immigrant: persons who are born abroad to two foreign-born parents, and who have moved to Norway

Norwegian born to immigrant parents: persons born in Norway of two foreign-born parents and four foreign-born grandparents

PHN: public health nurse

Table of Content

Chapter 1: Introduction

During the last few decades, Norway has become increasingly multicultural. As per January 2015, immigrants accounted for 13% of Norway's total population. Norwegian-born to immigrant parents accounted for 2.6% (Statistics Norway 2015). These demographic changes challenge the existing healthcare system to properly integrate non-Western immigrants and adapt services in accordance with a multicultural population (Ulrey and Amason 2001, Wandel, Råberg et al. 2008, Kale and Syed 2010, Kale and Kumar 2012, Garnweidner, Pettersen et al. 2013a). One of the main difficulties in the Norwegian health care system is conveying information and communication (Europe 2013). This is stated as being due to how people understand and communicate health, signs of illness and the fact that measures for improving health often vary greatly across cultures (Europe 2013). Health is in addition often influenced by social and cultural background (Betancourt, Green et.al. 2005). In addition, lack of a shared language causes a barrier, which is part of an ongoing discussion with regard to addressing the health issues of immigrants in Norway (Kale, Ahlberg et al. 2010, Kale and Syed 2010). Research has shown that good communication between health personnel and immigrants is linked to user satisfaction and adherence to instructions given, as well as health outcomes (Stewart, Brown et.al. 1999). Hence, cultural competence has gained attention as a potential strategy to improve quality and eliminate ethnic disparities in health care (Betancourt, Green et.al 2005).

Health care can be a complex issue and migration can introduce new public health concerns as well. One of these concerns is the fact that some ethnic minority groups are at a higher risk than the host population of becoming obese and contracting nutrition-related diseases (Johansen, Bjørge et al. 2009, Holmboe-Ottesen and Wandel 2012). This affects children as well, as the prevalence of obesity among children has increased substantially over the last two decades (De Onis, Blössner et.al. 2010). Considering that healthy eating habits established early in life may also continue later (Glavin and Kvarme 2003), it is important that public health nurses reach immigrant mothers with infant nutrition counselling and advice. Early childhood is considered to be one of the most important developmental stages in human life (Irwin, Siddiqi et al. 2007), and breastfeeding provides optimal food for healthy growth and development (Organization 2014). In Norway, public health nurses employed at maternal and child health clinics are responsible for providing preventative care to infants and children and working with health promotion among their caregivers. Providing advice regarding

breastfeeding and balanced nutrition is thus a major focus of their work. The public health nurses' infant feeding recommendations are based on international and national recommendations (Organization 2014, Helsedirektoratet 2015), which state exclusive breastfeeding for six months and partial breastfeeding thereafter for the first one to two years of life. This is followed by recommendations for a well-composed and balanced diet from an early age (Helsedirektoratet 2015).

The public health nurses, like other health professionals in Norway, are now providing care to a diverse population. Their job is challenged by cultural, linguistic, and health literacy barriers (Singleton and Krause 2009), and the quality of the health services provided to immigrants is potentially also compromised. A Norwegian study indicated that immigrant mothers faced challenges in adapting to a new food culture, and that the advice given by health care providers was rarely culturally sensitive (Garnweidner, Terragni et al. 2012). Other Norwegian studies show that health care providers have limited knowledge of the food cultures of their clients and how these cultures influence the interpretation and implementation of the advice given (Fagerli, Lien et al. 2005, Mellin-Olsen and Wandel 2005, Wandel, Råberg et al. 2008). Thus, it is important to learn from the health care providers themselves and their experiences of cross-cultural service provision.

The InnBaKost-project

The present study is part of a larger research initiative titled "InnBaKost: Nutrition and health among immigrant infants and children", funded by the Research Council of Norway and conducted by the Fafo research institute in collaboration with the Nutrition Department at the University of Oslo and the University college of Oslo and Akershus.

The InnBaKost-project was initiated in 2012, with the goal of investigating what young children with immigrant mothers in Norway eat, as well as the mothers' perceptions of the nutrition communication at the maternal and child health clinics. Somali and Iraqi mothers were chosen as the primary research participants because these are the two minority groups with the highest birth rates in Norway. They are also the primary users of the maternal and child health clinics and those who most often accompany their children there. The project is divided into quantitative and qualitative sub-studies and information obtained through interviews with the mothers when their infants are 6, 12 and 24 months of age. The final

interviews – those conducted when the infants are 24 months of age – are presently in-progress, with a calculated completion date of September, 2015.

The present study is part of the qualitative sub-study exploring the factors that influence the research participants' choices regarding breastfeeding and nutrition and their experiences with the Norwegian health system, as well as health personnel's experience with immigrant mothers. The present study focuses on the experiences of public health nurses.

Though it was not the initial intention of this study to focus on any one immigrant group in particular, the public health nurses who participated independently singled out Somali mothers as a group commonly encountered and with whom they have unique experiences. Thus, Somali mothers are a group regularly referred to in this thesis.

Research problem statement

The overall objective of this study was to:

Explore how public health nurses experience cross-cultural service provision and communication regarding infant and child nutrition.

To achieve this, the study had the following sub-aims:

- To explore experiences with breastfeeding and nutrition counselling.
- To explore factors perceived as potentially influencing infant and child nutrition decisions.
- To explore encountered challenges.
- To explore the perceived value of the information material provided.
- To explore the language barriers encountered and experiences with using interpreters.

Structure of the thesis

The overall structure of the thesis takes the form of six chapters, including this introductory chapter. An overview of the following five chapters is as follows:

Chapter two begins by presenting background information about public health nurses, the maternal and child health clinics and the tasks of the public health nurses employed at the maternal and child health clinics. This is followed by a description of their breastfeeding and nutrition advice, written materials and visual aids. A conceptual overview of immigration, acculturation, cross-cultural service provision and equal health rights is presented lastly.

Chapter three presents the research design, including methodology, participants and recruitment strategies. Data collection methods, data analysis and ethical considerations are then discussed, followed by a methodology discussion.

Chapter four describes the findings that emerged from the analysis of the interviews and focus group discussions with the public health nurses. The themes presented are nutrition counselling, perceived challenges, perceived value of the information material provided and language.

Chapter five presents the discussion of the findings, organized with reference to the same themes.

Chapter six contains concluding remarks and future recommendations.

Chapter 2: Background information

This chapter provides background information about public health nurses' work, their tasks at the maternal and child health clinics and their counselling. Information about the written materials and visual aids used by the public health nurses during nutrition counselling will follow. Lastly, this chapter presents a discussion of immigrants and acculturation, cross-cultural service provision and equal health rights.

Public health nurses in Norway

Public health nurses in Norway have, as a foundation, a nursing bachelor degree or equivalent. In the 2008 General Plan for Nurse Education prepared by the Ministry of Education, it is stated that nurses shall have expertise in health promotion and prevention, education and counseling, research and development, quality assurance, organization and management, health policy priorities and the legal framework for the profession. The plan further states that their education shall promote a professional and ethical attitude and a multicultural understanding of health and disease (Kunnskapsdepartementet: 2008). In addition, before they can apply for admission to become public health nurses, they must have worked as fulltime nurses for at least one year. After finishing their education, public health nurses are practitioners who have been trained and educated as public health workers using a partnership and empowerment approach with individuals, families and communities (Grumbach, Miller et al. 2004).

Maternal and child health clinics - public health nurses' work area

Maternal and child health clinics are the public health nurses' main work area. The clinics are responsible for providing preventative and health promotion services to a population in a specific geographic area. This population-oriented responsibility enables long-term needs assessment, planning and provision of services to meet the needs of the specific population. The maternal and child health clinic services are statutory, free and offer a low threshold service for all children from birth to age five.

Maternal and child health clinics differ from curative primary care and specialist services. They do not treat sick children, as this is the responsibility of the mother's primary care physician. The focus is instead on preventative care and health promotion. In addition to providing the children and their families with health education, the services include counseling, standardized examinations, vaccinations, and breastfeeding- and nutrition counselling. In addition, these services are designed to identify risk factors, challenges and/or developmental problems, and to take the necessary preventative measures.

Public health nurses' tasks at the maternal and child health clinics

Initial contact between the public health nurses and the families and their newborns takes place during a home-visit offered within two weeks after birth. This gives the public health nurses and the family the opportunity to become acquainted in the family's own environment. The time allocated for a home-visit is approximately one to one and a half hours. During this time, the public health nurses typically take measurements of the newborn, answer questions and give advice on themes like breastfeeding, nutrition, childcare and weight development. During the infant's first year of life, his or her health and development is evaluated by public health nurses at the maternal and child health clinics. The evaluations take place at the following intervals: four weeks, six weeks, eight weeks, three months, four months, five months, six months, eight months, ten months and twelve months. After the infant's first year of life, the child attends the following check-ups: 15 months, 17-18 months, two years, four years and five years.

The time allocated for each of the health consultations is half an hour. When there is a need for interpretation, the consultations are often extended to an hour. At each health consultation, the infant's/child's weight and length is measured and the vaccination program is followed. All children born in Norway have the right to be vaccinated in accordance with the vaccination program, though doing so is voluntary. Through health communication, familial needs, problems and resources should ideally be discussed. The public health nurses' further assist parents to make informed choices by providing them with evidence-based information on subjects like breastfeeding, introduction to solid food and nutrition. The parents thus assume the main responsibility for health promotion and preventative measures for their children, while the public health nurses provide support (Helsedirektoratet 2011).

Breastfeeding and nutrition counselling at the maternal and child health clinics

Public health nurses play an essential role in guiding infant feeding practices, encouraging and facilitating breastfeeding, and providing advice to mothers and families about the value of breastfeeding, or, when needed, the proper use of infant formula. Norway follows the World Health Organization's breastfeeding recommendations (Helsedirektoratet 2001, Organization 2014). According to these recommendations, to achieve optimal growth, development and health, infants should be exclusively breastfed for the first six months of life. Thereafter, infants should receive nutritionally adequate and safe complementary foods, while continuing to breastfeed for up to two years or beyond (Helsedirektoratet 2001).

Breastfeeding initiation and duration have relatively high rates Norway. The National Dietary Surveys among infants, with representative samples of children at 6, 12 and 24 months of age, were carried out from 1998-99 and 2006-07, and the 'Spedkost' and 'Småbarnskost' surveys from 1999 and 2007 (Helsedirektoratet 2006-2007, Kristiansen, Lande et al. 2010). The results among the six month old group, not including children whose mothers were born outside of Norway, indicate that 95% of the infants were breastfed at four weeks of age, 85 % at four months of age and 80% at six months of age. The exclusive breastfeeding rates were 82% at four weeks of age, 46% at four months and 9% at six months of age. When the infants were six months of age, 80% of them had been introduced to solid food. The knowledge about diet and infant feeding practices among Norwegian born infants with immigrant parents is limited, which is why the InnBaKost-project was initiated.

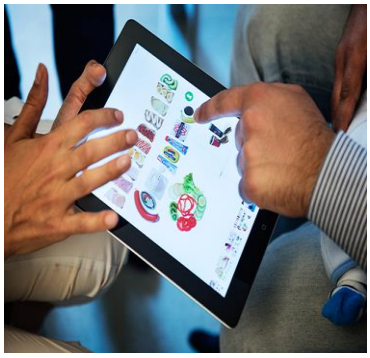
Written supplements to verbal nutrition advice

In addition to the counselling that takes place, public health nurses provide mothers with various supplementary information materials. 'Food for infants' is a 59 page booklet written in Norwegian. The main subjects covered are breastfeeding, introduction of solid food at six months of age and age-related recipes and food suggestions. Dietary advice for situations like constipation, diarrhea and children who eat too little or too much is also included. There is also advice on healthy food suggestions for one year of age and onwards.

'How to breastfeed your child' is a 40 page booklet, provided in Norwegian, that addresses the following topics: preparedness for breastfeeding and getting started after birth, breastfeeding when you come home, premature and sick children, and advice about how the mother should care for herself, for her nutrition needs and for her pregnancy prevention needs. It also provides internet links for additional information and/or suggestions for further reading.

Visual application, a research project not yet available at all health clinics

Figure 1: The Somah app[1]
Foto: Benjamin A. Ward



SOMAH is an acronym for 'Samtaler Om Mat for Helsestasjoner' – 'Conversations about food for health clinics'. It is the name of an application developed by researchers at Akershus University College, Norway, in collaboration with public health nurses and midwives. The application has pictures of food and is meant to be used by health personnel in nutrition counseling. By using simple language and visual materials, the application is designed to be helpful when language barriers or challenges associated with low health literacy are present. The application is made for a hand-held unit, like an iPad, and is hence portable.

Immigration and dietary acculturation

Immigrants bring a rich cultural heritage to the host country, potentially including dramatically different beliefs, values and customs (Satia-Abouta, Patterson et al. 2002). However, migration to a new country can also represent a substantial shift in a person's lifestyle, and these changes can result in rapid modifications in chronic disease risk (Ziegler RG 1993, Satia-Abouta, Patterson et al. 2002), as well as the adoption of less healthful dietary habits. Dietary habits are influenced by many factors, including the availability of food, level of income and food beliefs, to name a few (Gilbert and Khokhar 2008). Several studies suggest that migration may lead to unhealthy dietary changes (Misra and Ganda 2007, Wandel, Råberg et al. 2008, Dekker, Snijder et al. 2011, Zahid, Meyer et al. 2011), and, in addition, that it might have an effect on breastfeeding (Riordan and Gill-Hopple 2001). Migrants do not necessarily always demonstrate worse overall health when compared to non-migrants (Popovic-Lipovac and Strasser 2013). However, migrants generally have a more unfavorable risk factor profile, such as higher risk of type-2 diabetes and hypertension (Misra and Ganda 2007, Dekker, Snijder et al. 2011, Zahid, Meyer et al. 2011).

With regard to migration, the term *acculturation* can, in general, define the process by which a racial/ethnic group, usually a minority, adopts the attitudes, values, customs, beliefs and behavior of a new culture (Satia-Abouta, Patterson et al. 2002). When members of a minority

[1] http://www.hioa.no/News/Satser-paa-kostholdsapp-for-innvandrerkvinner

group adopt the eating patterns and food choices of the host country, the acculturation process is called *dietary acculturation* (Satia-Abouta, Patterson et al. 2002). Dietary acculturation is considered a multi-dimensional, dynamic and complex process and does not appear to move linearly from one end of the acculturation continuum to the other (Satia-Abouta, Patterson et al. 2002, Holmboe-Ottesen and Wandel 2012). Researchers have proposed models and theories of dietary acculturation, suggesting how food patterns change after migration (Koctürk 1995, Satia-Abouta, Patterson et al. 2002, Koçtürk 2004). Satia-Abouta's (2002) model assumes that socioeconomic, demographic and cultural factors influence the degree of exposure to the host country's food culture, hence suggesting that psychological factors, taste preference, food preparation and dietary patterns can change after arrival to the new country. According to Kocturk-Runefors' (1995, 2004) Food Patterning model, dietary changes occur in two opposing forces, one that is directed toward conserving the food traditions after migration and the other towards change. Her model focuses on the power with which different foods relate to cultural identity, with identity and taste forming the two extreme poles. Hence, staple foods, such as potatoes, wheat or rice, might be selected by immigrants when they assert their culture. When adapting new food practices, taste has a priority over identity. Hence. the accessory foods – fat, spices, nuts, sweets, fruits and drinks – are usually adopted first and not considered 'real foods' by the immigrants. Therefore, the low level of cultural prejudice against these foods paves the way for dietary changes in the traditional diets.

Immigration, and especially the resulting lifestyle acculturation, have an impact on the dietary practices of all groups of immigrants (Popovic-Lipovac and Strasser 2013). Since female migrants are often the ones purchasing and preparing the meals, women have great influence on their family's nutrition and health behavior (Satia-Abouta 2003) and should thus also be supported in their nutrition education in order to have a positive impact on their families' and children's food behaviors (Hart, Herriot et al. 2003, McKee, Maher et al. 2010).

Cross-cultural service provision and nutrition communication

Culture and language provide the experiential context for comprehension of health information (Andrulis and Brach 2007). The cultural beliefs, values and preferences a person influences how he or she interprets healthcare messages (Andrulis and Brach 2007). Hence, health communication plays an important role in the prevention of diet-related diseases and the promotion of a healthy diet, as changing diet habits is one of the most important and

underestimated factors to prevent diseases (Koster, Verheijden et al. 2005). Thus, relying on a variety of health behavior change theories, the assumption is that effective communication of information can change a person's intention, which will then lead to a change in behavior (Pasick and Burke 2008, Pasick, Burke et al. 2009).

The increasing number of immigrants from economically less privileged parts of the world to both Western Europe and North America, and the diversity this represents, is often perceived as a challenge to existing healthcare services, which were traditionally organized to cover the needs of the native population (Kale and Kumar 2012). Previous research indicates that health professionals may find it challenging to communicate nutrition advice to a multicultural population (Holmboe-Ottesen and Wandel 2012, Garnweidner, Pettersen et al. 2013a), and even more so when immigrants are not proficient in the language used in the host country (Kale and Kumar 2012). Another study found that nursing students learn too little about migration and health to be able to offer immigrants equal health services. It is stated that their skills are poor, especially regarding intercultural communication (Magelssen 2012). Other studies show that health care providers have limited knowledge of the food cultures of their clients, how these cultures influence the interpretation of the advice given, and the ways that this advice is practiced (Fagerli, Lien et al. 2005). Communication efforts aim for more than increasing an individual's health and nutrition knowledge. They also aim to help receivers to sustain behavior change and to empower [2] individuals in health decision-makings (Garnweidner 2013). These aims require specific communication skills by the nutrition-related informant (Garnweidner, Pettersen et al. 2013a). It is suggested that there are three factors that create a *triple threat* to effective communication: language, cultural differences and low health literacy. Today, managing the triple threat factors is seen as a prerequisite to safe and effective health care (Schyve 2007).

Equal health care rights

A democratic goal is that every person has the right to equal care regardless of nationality. The Universal Declaration of Human Rights (Assembly 1948), adopted by the UN General Assembly in 1948, proclaims a common standard for all people and nations. The declaration states in article 2:

[2] Empowerment in health promotion is defined as the process of helping individuals to increase the ability to plan and take control of their health matters.

> *"Everyone is entitled to all the rights and freedoms set forth in this Declaration, without distinction of any kind, such as race, colour, sex, language, religion, political or other opinion, national or social origin, property, birth or other status. Furthermore, no distinction shall be made on the basis of the political, jurisdictional or international status of the country or territory to which a person belongs, whether it be independent, trust, non-self-governing or under any other limitation of sovereignty."* (UN 1948)

In Norway, Samhandlinsreformen[3] ('Cooperation Reform') states that equal access to good and equitable health care, regardless of personal finances and residence, shall remain the mainstay of the Norwegian welfare model. The obligation to provide equal health is also, among others, anchored in the Kommunehelseloven[4] ('Municipal Health Service Act'). Further, the Pasient- og brukerrettighetsloven[5] ('Health & Rights Act'), gives patients and users rights with regard to health and care services and aims to ensure that patients and users have equal access to health services of good quality. Equally, health personnel's obligations are reviewed to ensure that health communication is understood by all patients. The information shall, among other things, be adapted to the recipient's cultural and linguistic background. The information shall be provided in a considerate manner and health personnel shall, as far as possible, ensure that the receiver has understood the content and meaning of the information given.

In 2013, Helse- og omsorgsdepartementet[6] (the 'Norwegian Ministry of Health and Care Services'), presented a four-year strategy on immigrant health. This is part of the government's strategy to reduce social health differences and guarantee equal health and care services for all. It states that the focus, among other things, should be on prevention and better local access to health services. In addition, the strategy largely targets health personnel and suggests a need for more cultural competence in the health sector and better translation and interpretation services.

[3] Samhandlingsreformen (2008/2009) report nr. 47
[4] Kommunehelseloven LOV 1982-11-19 nr.66, §1
[5] https://lovdata.no/dokument/NL/lov/1999-07-02-63#KAPITTEL_3 (accessed 23.02.2015)
[6] Nasjonal Strategi om Innvandreres Helse , Equal Health and care Service, 2013.

Chapter 3: Methodology

This chapter will describe the methodology, participants and recruitment strategies, before examining the methods chosen and how they were used. Data analysis, ethical considerations and a methodology discussion will follow.

Methodology

Qualitative methodology enables the researcher to strive to understand the meanings that people have constructed about their worlds and experiences (Merriam 2002). Qualitative health research, in particular, can investigate the experiences, understandings and perspectives of practitioners and patients, potentially shedding light on the complex question of how evidence-based knowledge manifests in practice and is experienced by those involved (Green and Britten 1998). With a focus on exploratory, in-depth inquiry and a recognition that reality, experience, meaning and truth are necessarily subjective, multiple and continuously constructed, negotiated and contested, the value of qualitative methods lies in their ability to systematically pursue the kinds of research questions that are not easily answered by other methods (Green and Britten 1998). Thus, a qualitative study design utilizing in-depth interviews and focus group discussions was selected as best suited to this exploratory investigation of public health nurses' experiences of and perspectives on conveying infant feeding and nutrition advice to immigrant mothers.

The data collection for this research was carried out in the Oslo, Akershus and Østfold municipalities between April and July of 2014.

This study is part of a larger, on-going project studying the dietary and infant feeding practices of Somali and Iraqi immigrants living in Oslo. Hence, the project's participants thus far have included immigrants themselves and the focus has been on their perceptions of and experiences from the consultations they have had at the maternal and child health clinics, as well as their encounters with the public health nurses'. With that in mind, the public health nurses' were intentionally selected for this study, so as to increase understanding of their perceptions and experiences of conveying infant feeding and nutrition advice to Somali and Iraqi immigrant mothers. The inclusion criteria were that the public health nurses' worked at maternal and child health clinics that provide services to infants and children born to Somali and Iraqi mothers.

A total of 24 public health nurses' from 9 maternal and child health clinics were included. All of the public health nurses' were female and of ethnic Norwegian background, thus speaking Norwegian as their main language. Hence, the interviews and focus group discussion were held in Norwegian, with the coding being translated to English. This is due to this study being part of a master thesis in International Community Health, a program taught in English.

Six individual, in-depth interviews with public health nurses and three focus group discussions with four to eight public health nurses each were conducted, as will be further described in what follows.

Participant Recruitment

Data was collected among public health nurses' working at maternal and child health clinics. A list providing an overview of health clinics in Oslo, Akershus and Østfold municipalities was obtained from the leaders of the main research project. The project leaders and assistants had, one year earlier, contacted some of these maternal and child health clinics and, at that time, asked them for help to purposively select immigrant mothers willing to participate in in-depth interviews. Some maternal and child health clinics responded positively at that time and were able to assist. None of these clinics had previously been asked to participate themselves, i.e. public health nurses' had not been interviewed.

Upon receiving the list with addresses, telephone numbers and e-mail contact information about the various maternal and child health clinics, I systematically started making phone calls in order to find potential participants. The receptionists at the maternal and child health clinics were the first persons I came in contact with. After a short personal introduction and explanation of the project, the phone call often ended with the receptionist saying that someone, a public health nurse, from the maternal and child health clinic would return the call. Reflecting upon this, I decided to follow up with e-mails and personally visit the health clinics, as well as to contact some additional maternal and child health clinics that were not previously listed, as to potentially increase recruitment.

E-mail information sent to the maternal and child health clinics included a brief introduction to the main project with an internet link from which additional project information could be obtained and a brief introduction to this sub-project, as well as my own background and role

as a researcher. I then followed up by personally visiting the maternal and child health clinics and referring to the emails sent. The personal visit worked as a 'door opener' and initiated further contact. With this contact, the maternal and child health clinics potentially interested in enabling their public health nurses' to participate were identified. Throughout these discussions, a topic that regularly came up was the number of public health nurses' who could possibly attend interviews. Since the interviews took place at the maternal and child health clinics and during the public health nurses' work hours, only lunch- or shorter breaks could be used for this purpose. As a result, we engaged in telephone and/or mail contact on several occasions before finding a convenient date and time for the interview. Hence, I had to be flexible in order to be able to meet the public health nurses at a time of their choice and conveniences. Another issue that initially came up was the interview lengths. With emphasis on wanting to hear the public health nurses' experiences and opinions with regard to the aim of the study, it was mentioned that any time at all that could be set off for an interview would be appreciated. I felt that this flexible approach was much appreciated and possibly encouraged public health nurses to do their utmost to participate, despite their busy schedules and full workloads.

Data collection methods

In-depth interviews

Findings from qualitative research can provide useful explanations for health practices and aid in the development of strategic health communication (Merriam 2002). Among the most common methods of obtaining data for qualitative analysis is the interview. Among the strengths of the interview method is that it is flexible, allowing the researcher to direct the interview in accordance with individual responses and the interpersonal dialogue that takes place (Fitzpatrick and Boulton 1994). Hence, the researcher can potentially obtain quite detailed and nuanced information regarding the perceptions and reasons behind the participants' statements (Fitzpatrick and Boulton 1994).

One limitation to these interviews lays in the researcher's own ability to exercise neutrality with regard to the subject matter (Green and Britten 1998). Because in-depth interviews require the active participation and judgment of the interviewer, he or she needs the ability to demonstrate interest in the respondents without being excessively involved.

A semi-structured interview guide may be described as providing a flexible, thematic framework that allows for variations in the formulation of the interview questions and their

order, as well as space for new themes to arise during the interview (Smith, Flowers et al. 2009). A qualitative study design that utilized in-depth, semi-structured interviews was thus chosen as that most appropriate for investigating the participants' perceptions and experiences with regard to the study aims.

Six individual in-depth interviews were conducted at the maternal and child health clinics. The interviews took place in the same rooms that the consultations were carried out in, i.e. the natural setting of the public health nurses' office. Due to the fact that the interviews took place at the public health nurses' own work sites and mostly during their lunch breaks, there was a time-limit as to the length of the interviews. The interviews had duration of ± 40 minutes with the exception of one public health nurse who had the opportunity to allocate extra time, and that interview lasted 90 minutes.

A semi-structured interview guide was designed and used to elicit the public health nurses' narrations about and reflections upon their experiences, perceptions, practices and feelings. By using open-ended questions, the public health nurses' were also given the opportunity to express themselves freely, in ways that both they and myself, as a researcher, felt were relevant to the general objective of the research. To ensure good communication, focus was placed on building trust with participants by active listening. Before starting each interview, the public health nurses' were ensured of their own and the maternal and child health clinics anonymity. Effort was made to make the interview situation as relaxed as possible in order for the public health nurses' to feel comfortable during interviews.

The interviews opened by asking the public health nurses to share some of their general experiences of giving feeding and nutrition advice to mothers, regardless of the mothers' ethnicity. This was intentionally utilized as an initial 'discussion starter' and made for an easy transition into the main research questions. Following this initial, introductory conversation, the interviews then included questions related to the aim of the study and, namely, experiences and perspectives related to the following: feeding guidelines, ways of conveying advice, promotion of breastfeeding, exclusive breastfeeding, the use of interpreters, matters of diversity and cross-cultural service provision, educating parents and health challenges. During the interviews, the public health nurses shared in-depth information about their experiences, perspectives, perceptions and opinions. The public health nurses were also asked if there were any questions or topics that they felt were missing or that should be included in the research,

as well as if they had any additional matters that they wished to share. Not all questions that could have been relevant to ask were asked in all interviews. The difference in the dynamics of individual interviews and sometimes the influence and/or distractions of sounds from the waiting area meant that I had to be flexible and understanding regarding the public health nurses' work situations. The individual interviews often ended abruptly due to the public health nurses' time constraints. During interviews, the sound of children crying or making noise could sometimes be heard coming from the waiting room. When this took place towards the end of the interviews, I felt that it might have created some pressure for the public health nurses to complete the interviews quickly, as their responses were often rather rapid. There were otherwise no interruptions during the individual interviews.

Focus group discussions

The focus group is a discussion-based data collection method that produces conversational data via group interaction. The aim is to facilitate conversation among the participants rather than between the interviewer and an individual participant (Millward 1995). The dynamics of focus groups are such that experiences and perspectives shared by individual participants can encourage group dialogue and the sharing of additional experiences and perspectives from others, thus providing broad insight into a phenomenon and its nuances. Focus groups are particularly useful when researchers wish to quickly establish the range of perspectives on an issue of importance among different groups – for example, when it is felt necessary to "bridge a gulf" in understanding between providers of a service and the users (Fitzpatrick and Boulton 1994). In addition, this method presents particular potential with regard to the exploration of various phenomena related to health-related experiences, perceptions and perspectives (Fitzpatrick and Boulton 1994).

The limitations of focus group discussions include the negative effect that the group dynamic might have on individuals wishing to share alternative views. It also may not always be possible to fully elaborate on or explore the details of individual statements and perspectives. Factors related to social desirability, conformity and the group's' heterogeneity might further influence the interaction that takes pace and the data produced (Fitzpatrick and Boulton 1994, Millward 1995). Similarly, it can be difficult for the researcher to carefully maneuver the task of facilitating dialogue that explores nuances and encourages expression of diverse and alternative perspectives without otherwise becoming so involved as to bias the discussion. As the researcher, I have reflected upon such limitations throughout all project phases and have

striven to manage them throughout the data collection. As such, focus group discussions were intentionally chosen for this study, both as valuable in their own right and to complement the in-depth interviews.

Each of the three focus group discussions was conducted at the maternal and child health clinics, in meeting rooms. The meeting rooms were chosen since they enabled the public health nurses and me to sit in a circle, which facilitated discussion. The focus group discussions had durations of ± 60 minutes. The interview guide used was the same as for the in-depth interviews. As such, the in-depth semi-structured interview guide helped to create a comfortable flow during discussions and allowed not only myself, as a researcher, but also the participants, to direct the dialogue in accordance with that which they perceived as relevant and important. Focus was placed on building trust with participants by active listening. The public health nurses' were ensured of their own and the maternal and child health clinics anonymity and told that their participation and contribution to the project was very much appreciated.

During the focus group discussions, the public health nurses attending had different time schedules and that led to a certain degree of interruptions when someone had to leave the room. Everyone attending the focus group discussion was fully aware of this situation beforehand. Subsequently, when a public health nurse had to leave the room, it was acknowledge by a faint smile and a nod of the head as to show that we all understood. When this occurred, the discussion continued without interruption as it was in everyone's interest to be helpful and productive with the time available. Due to the time constraints of both the project and its participants, no follow-up interviews were conducted.

At the end of the interviews and the focus group discussions, the public health nurses' received a gift card as gratitude for their participation.

Use of an audio-recorder

Use of an audio-recorder was chosen as the preferred method for documenting interviews and focus group discussions, since it enables the interviewer to fully concentrate on the conversation. The ability to later listen to each interview repeatedly further ensured accurate translations and written accounts that meaningfully reflected the interaction that occurred. Before each interview, the participants were asked if they were comfortable having the

interview recorded. They were further told that this was voluntarily and that the researcher did not mind taking written notes if that was preferred. In addition, the principles and practices of ensuring anonymity and confidentiality were carefully explained. Every participant agreed to have the interviews recorded. This was especially helpful during the focus group discussions when the dialogue was quick and, as such, sometimes challenged me to clearly hear what each of the participants said.

A possible limitation of using an audio-recorder might be the affect that it could have on the participants. For some, the presence of a recorder might have made them reluctant to freely express themselves and, as a result, might have affected what they shared during interviews. I was careful to monitor this possibility throughout the data collection and did not feel that the presence of the audio-recorder negatively affected these interviews.

Data analysis

By use of a flexible, grounded theory approach, the collected data was transformed into a more abstract form of information. The theory follows six steps, in which five are used in this thesis; (1) Data collection; (2) Documentation; (3) Open coding; (4) Selective coding; (5) Theoretical coding; (6) Integration. (Dahlgren, Emmelin et al. 2004). All the audio recorded interviews and focus group discussions were transferred to a computer. They were then listened to, transcribed verbatim and re-checked against the audio recordings in order to ensure accuracy. The *OpenCode 4.01* program, developed to follow the grounded theory steps (Dahlgren, Emmelin et al. 2004), was used as a tool to further facilitate the process of thematically organizing and coding the collected data, thus assisting in the process of identifying, naming, categorizing and describing phenomena found in the texts. This entailed reading each line, sentence and paragraph in search of answers to the questions such as, "what is this about? What is being referenced here?"

21	HS: Det er litt sånn på språk, med nyanser, Ikke sant. Hva	breastfeeding, milk, language, nutrition knowledge, phn advice	NUTRITION KNOWLEDGE/ADVICE
22	de oppfatter og ikke oppfatter. Og så syns jeg mange av de	breastfeeding, milk, language, nutrition knowledge, phn advice	NUTRITION KNOWLEDGE/ADVICE
23	ammer veldig mye og lenge om natta også. Og det der med	breastfeeding, milk, language, nutrition knowledge, phn advice	NUTRITION KNOWLEDGE/ADVICE
24	melk og tenner og få forståelse for det. Fordi de trur ikke	breastfeeding, milk, language, nutrition knowledge, phn advice	NUTRITION KNOWLEDGE/ADVICE
25	at det er sukker. Det har i hvert fall jeg brukt tid på	breastfeeding, language, nutrition knowledge, phn advice	NUTRITION KNOWLEDGE/ADVICE

Figure 2: Example from coding

Selective coding refers to the process throughout which a final set of categories is established (Dahlgren, Emmelin et al. 2004). In conjunction with the method of constant comparison, this procedure involved comparing different views, situations, actions, and experiences and comparing previously analyzed data with emerging categories. The aim was to challenge myself to consider contradictions, nuances and alternative interpretations throughout the process. Finally, as a set of four categories emerged, I tried to use theoretical coding by looking for connections between the different categories.

Data saturation

According to Kvale and Brinkmann (2009), there are no fixed rules when it comes to the ideal number of interviews for any given project. In small-scale qualitative research, it is often around 15 ± 10 (Brinkmann and Kvale 2009). The goal of this project was to continue data collection until a point at which meaningful coherence emerged among the collected data and the significance of new findings began to diminish. While I was successful in pursuing this goal, I also recognize that it could have been ideal to conduct longer interviews, follow-up interviews, or potentially include more participants. But, within the realistic confines of a master's project, I had to balance the importance of saturation with that which was actually feasible given the time and resource limitations. I feel that I managed this balance well and completed my data collection with an abundance of quality data material.

Ethical considerations

This project was included in the approval granted to the InnBaKost project from the Regional Committees for Medical and Health Research Ethics (REK). There was no direct benefit or potential harm for the public health nurses or maternal and child health clinics for participating in this study.

Informed consent

Voluntary, informed consent and, therein, the right of competent individuals to freely choose whether or not to participate in research, is a fundamental principle of medical research ethics (Merriam 2002). Potential participants therefore need adequate and understandable information about a research project in order to make a personal choice.

Before each interview, an information sheet with the researcher's name and contact information was handed out together with the informed consent form. The research was

carefully explained. The public health nurses were told that participation in the study was voluntary and they could withdraw at any time. It was further emphasized that participation in the study should be a personal choice and based on a genuine interest to participate. The consent form was signed by both the researcher and the public health nurses' prior to starting the interviews. The study was carried out in accordance with the ethical standards upheld in the Helsinki Declaration (Association 2009).

Anonymity and confidentiality

All attempts were made to ensure anonymity and confidentiality. Collected data, transcripts and audio recordings were stored on a password secure laptop, accessible only by me. No public health nurses' or maternal and child health clinic names were obtained or registered as to reduce the probability of recognition. Data obtained were used only in accordance with the purpose of the study as described.

Methodology discussion: reflexivity, trustworthiness, and study strengths and weaknesses

Assumptions and pre-understandings of the master student

My nutrition pre-understanding and knowledge about infant feeding practices stem from my nursing background, current master's education and being a mother myself. This combination of experiences has influenced and shaped my personal views regarding the concept of health and what it is. Even though I lack the public health nurses' professional experience, I do share their fundamental views regarding health promotion and preventative health care. This may have been an advantage with regard to removing the potential power imbalance between the research participants and I. Moreover, reflecting upon this made me aware of the importance of not superimposing my own pre-understanding on my interpretation of the public health nurses' experiences and perspectives. I had, after all, no previous knowledge about conveying infant feeding and nutrition advice to immigrants. By continuously reminding myself of my role as a researcher, I sought to non-judgmentally explore the public health nurses' experiences and perspectives.

I had, prior to conducting the interviews, received training in qualitative research methods and analysis, which included matters of particular importance to this study, such as communication and interview techniques. I therefore felt comfortable conducting the interviews on my own. Since I am part of the bigger InnBaKost project, I had the opportunity to review transcripts from interviews conducted with Somali and Iraqi mothers. This gave me

valuable insight, helping me to gain a deeper understanding of the whole research project, the context within which the phenomena under study are situated and the various perspectives from which they might be considered. It was also helpful when formulating my own research questions, since previous studies explored immigrant mothers' perceptions of the public health nurses' and the maternal and child health clinics. This helped me to identify themes to explore in this project prior to collecting data and, upon data collection completion, provided a comparison for my own research findings. A further strength of this study potentially relates to the fact that there was no need for interpreters, which might have reduced the risk of possible misunderstandings or misinterpretations.

Trustworthiness of data collection

'Trustworthiness' describes the general extent to which research results can be 'believed'. Though often framed in terms of validity and reliability in quantitative research, assessment of trustworthiness in qualitative research demands unique approaches (Shenton 2004). Trustworthiness also depends upon whether participants are willing to share their experiences and opinions (Shenton 2004). To ensure that this was the case, all the public health nurses' were informed, both in writing and orally before each interview, that participation was voluntarily. It was further stated that there were no right or wrong answers to any of the questions. I felt that the public health nurses participating in this study were genuinely interested in their profession and desired to openly share their perspectives on and experiences from their interactions with immigrant users of the maternal and child health clinics. For example, the public health nurses' reflected upon their own experiences and responded to interview questions by describing what they felt and their own opinions, as opposed to answering in a way that would present them favorably.

The product of qualitative research contains no "hard data" that can be used to replicate the results of the study. The only instrument is the researcher him/herself, and this instrument's reliability and validity are in its trustworthiness. What is the truth value of qualitative research? Do the findings of the study make sense? Do we have an authentic portrait of what we are looking at? (Patton 1990). To answer these questions, attempts were made to make this study as trustworthy as possible. Among alternative concepts and models proposed for such, Guba's constructs have won considerable favor (Shenton 2004). Guba's model is based on four aspects that he suggests are central to and should be considered when assessing the trustworthiness of a study (Krefting 1991). I will therefore relate to these four concepts:

credibility, transferability, dependability and confirmability, as described by Guba (1981), to discuss the trustworthiness of this study.

Credibility

Credibility refers to the extent to which the interpretations of the data accurately reflect the participants' experiences and a truth external to the researcher (Shenton 2004). In qualitative research, truth is understood as inherently subjective and multiple, and it is usually pursued via the exploration of human experiences (Krefting 1991). There are several ways to promote credibility, including the adoption of well-established research methods suitable the particular research inquiry. This was achieved by continuously reflecting upon methodological choices and my own role as a researcher. In addition, I have supervisors who are experienced researchers and who have assisted me in these reflections.

Credibility also includes understanding the context. Being a nurse myself, I have some pre-understanding of the public health nurses' work situation. I felt that this helped to establish trust between the participants and myself. This might have also increased my ability to accurately understand, interpret and contextualize the data collected. At the same time, reflecting upon my researcher role helped me to avoid taking for granted my ability to understand, challenging me to explore rather than assume that my interpretations and understandings were indeed accurate. It also kept me from becoming too immersed in and influenced by the public health nurses' opinions despite our shared professional background.

Transferability

Transferability refers to the extent to which the findings of one study can be applied to other contexts or situations and, for example, to a wider population (Guba 1981). An important strength of qualitative methods is that they are carried out in natural settings with few controlled variables. However, because each research setting and context is unique, these research findings are less amenable to generalization (Krefting 1991). As noted by Guba and Lincoln (1982), transferability is primarily the responsibility of the person wanting to transfer the findings to another situation than that of the original study. As long as the original researcher provides a transparent account of the research and presents sufficiently descriptive data to allow comparison, transferability has been addressed (Guba 1981, Guba and Lincoln 1982, Lincoln 1985). The aim of this study was not to generalize findings, but to rather give a

good, clear and honest description of the public health nurses' perspectives and experiences. This might then allow future researchers to decide if findings can possibly be transferred to other settings (Guba 1981).

Dependability

In qualitative research, it is difficult to show that, if the research was repeated in the same context, with the same methods and participants, similar results would be obtained (Krefting 1991, Shenton 2004). This is due to the constantly changing nature of the social world and the phenomena being studied. Qualitative research emphasizes the uniqueness of the human situation, so that variation in experience rather than identical repetition is sought (Morse and Field 1996). In order to address such matters of dependability, the research process should be described in detail, as to show a clear relationship between the study objectives, design, methods and interpretation and reporting of results (Shenton 2004). The main objective of this study was to explore the public health nurses' experiences of conveying infant feeding and nutrition advice to immigrant mothers, and this objective has guided and motivated the study design and methodological choices throughout. Furthermore, emphasis has been put on trying to describe the entire research process as transparently and thoroughly as possible.

Confirmability

Confirmability is a step taken to help ensure, as far as possible, that the research findings result from and reflect the experiences of the participants (Krefting 1991). Complete objectivity is difficult, if not impossible, in qualitative research, given the researcher's subjectivity and the interpretative, interpersonal nature of knowledge production (Shenton 2004). To reduce the effect of researcher bias, confirmability can be enhanced by the use of triangulation and detailed methodological description (Shenton 2004). To further improve this study's confirmability, I practiced reflexivity throughout all research stages, reflecting upon the public health nurses narrations, the dynamic of these interpersonal data collection encounters and my own subjectivity and pre-understanding. I have done my utmost to meaningfully understand and truthfully represent the experiences and perspectives of my research participants, but, despite continuous reflection on such matters, recognize that there are always still possibilities for misinterpretations and misrepresentations.

Chapter 4: Results

This chapter presents the findings that emerged from the analysis of the interviews and focus group discussions with the public health nurses. The data are presented according to the following themes: (1) Nutrition counseling, (2) Perceived challenges, (3) Perceived value of information material provided, (4) Language.

Nutrition counseling

The findings are discussed in relation to breastfeeding- and nutrition counselling and factors perceived as potentially influencing infant and child nutrition decisions among immigrant mothers.

Breastfeeding advice

The public health nurses recommend exclusive breastfeeding for six months while acknowledging that they regularly review evolving ideas about whether or not the recommendations should be four to six months instead. This advice is, at times, communicated during pregnancy classes in which the public health nurses inform expectant mothers about the maternal and child health clinics and their services. The public health nurses participating in this project viewed this as a great opportunity to counsel about exclusive breastfeeding. They further perceived this initial contact as providing a door-opener between the mothers and the public health nurses. This was due to the fact that many mothers do indeed contact the public health nurses if they experience breastfeeding challenges or need breastfeeding support. The public health nurses consistently agreed that any mother having trouble with breastfeeding would either be seen at the maternal and child health clinics the same day and/or receive home visits if needed. However, several public health nurses reported that there are considerably fewer immigrant than Norwegian mothers who initiate contact regarding breastfeeding matters. A clear distinction was thus made between the Norwegian and immigrant mothers who took contact with the public health nurses for breastfeeding support and/or counselling.

All participating public health nurses reported giving exclusive breastfeeding advice in the same way, verbally and by giving out a booklet with breastfeeding information to all mothers, Norwegian and immigrant alike. However, the public health nurses also acknowledged ongoing research and reviews of exclusive breastfeeding recommendations. Some cited, for example, studies suggesting that introducing wheat to infants around four months of age

might protect against the development of celiac disease. This created challenges during breastfeeding counselling. As one put it:

> *"All of us public health nurses think it has been a bit difficult with regard to these feeding guidelines that say to wait until six months, and exclusively breastfeed until then, and thereafter begin to introduce (solid food). (…) but then it says with small print that one can start early with porridge if the sleep quality is poor.(…) New research says that one shall introduce gluten around five months, that it is a benefit regarding possible development of celiac disease. So it is difficult with that pendulum." (PHN, 6th interview)*

Despite ongoing review of exclusive breastfeeding recommendations and the perceived challenges associated with such, all the public health nurses agreed on the importance of exclusive breastfeeding and strongly support it. They also spoke of the positive effects of breastfeeding for both the mother and her child. However, when describing the exclusive breastfeeding advice that they themselves provide, the public health nurses deviated from the recommended 6-month exclusive breastfeeding duration, as the following quote illustrate:

> *"(…) exclusive breastfeeding is still recommended somewhere between four and six months. (…) the recommendations are still six months, but are in transition. So, right now, I am slightly flexible with the boundaries and recommend mothers to exclusively breastfeed four to six months"* (PHN, 3rd interview)

Another factor cited as affecting breastfeeding duration was the introduction of infant formula. However, none of the public health nurses in this study recommend infant formula feedings. The public health nurses do, however, receive questions on infant formula. According to them, a commonly asked question from immigrant mothers in particular is: 'when can we start with infant formula?' According to the public health nurses, most infants have a healthy and even weight gain on breast milk only and, hence, complementary feedings using infant formula are perceived as unnecessary. A few public health nurses focus on the value of breast milk over time though and try to support the supplementary formula feeding practices of mothers who find breastfeeding challenging. It is perceived that this gives some comfort to mothers who really want to breastfeed but for some reason are unable to or do not have as much milk. As one public health nurse explained:

> *"I always talk about, and to Norwegian mothers as well, the value of breast milk over time. Even small amounts of breast milk are good for the child and I think that can be comforting for a mother who with all her heart, wishes to breast feed but is not able to exclusively breastfeed. I tell them: 'the milk you have is extremely important and is full of antibodies (...). I also think it can be a motivation for Somali mothers who say: 'I do not have enough milk'. Then I tell them: 'The milk you have is very good, so it is important to give. Hold out as long as you can.' I think that is important to say."* (PHN, 2nd interview)

The public health nurses try to motivate mothers who experience that they do not have enough breast milk. The public health nurses focus their advice on explaining that it is normal for the breast milk production to vary over time. Hence, the advice is to breastfeed frequently. In addition, the mothers are told to increase their intake of liquid in order to stimulate their milk production. Many of the public health nurses in this study reflected upon this advice, as they perceived the task of motivating mothers, and immigrant mothers in particular, to stimulate increased milk production as particularly challenging. This is frustrating for the public health nurses because, according to them, if the mothers followed their advice, the milk production would, in most cases, positively increase:

> *"We try to motivate the ones that say: 'No, we have to give some infant formula because it is not enough (milk) what I have.' Then we really try to explain about frequent breast feeding and (say) then you stimulate milk production."* (PHN, 6th interview)

When breastfeeding is well established and working, the public health nurses do not give further breastfeeding counselling, though they are always available to answer questions and offer support. However, it appears to them that the majority of questions come from Norwegian mothers, while immigrant mothers rarely come with questions related to breastfeeding.

Nutrition advice

Nutrition advice is, by most of the public health nurses, identified as a subject at each of the consultations. Already at the initial mother and infant home visit, they start to mention the transition that will eventually take place from breastfeeding to solid food. At this visit, the public health nurses report that they inform the mothers that the infant's digestive system can

tolerate solid food from four months of age. The public health nurses perceive this as 'giving information'. The purpose of this information is, according to the public health nurses, to educate the mothers and prepare them for the time when their infant will be introduced to solid food:

> *"We say that the recommendations are; exclusive breastfeeding the first six months and that it is the absolute best for the infant. (...), but give information that it is possible to start (solid food) from four months (...).* (PHN, 1st interview)

Another factor that causes deviation from exclusive breastfeeding recommendations is the currently on-going review of these recommendations. This causes inconsistency in *when* the public health nurses advise mothers to start introducing their infants to solid food:

> *"New guidelines are coming so we (public health nurses) lean towards recommending introducing tasting samples from four months. We say, tasting samples, not large portions."* (PHN, 6th interview)

When the infants are between three and four months of age, the public health nurses give out the Norwegian booklet, 'Food for Infants', to all the mothers. Some of the public health nurses talked about this booklet as being a foundation, or serving as a base, for their nutrition counselling. This was due to the perception of the booklet as addressing relevant infant and breastfeeding topics, as well as giving concrete advice on and suggestions for food for infants. As an introduction to solid food counselling, the public health nurses tell mothers to start offering small taste-portions to the infant. A taste-portion is one teaspoon. Thereafter, the advice is to gradually increase the amount of food to two or three teaspoons per day and to introduce one food type at a time. In addition, the public health nurses stated that they tell mothers to wait for three days before introducing the infant to another food type in order to exclude possible allergic reactions. All the mothers are advised to continue breastfeeding after introducing their infant to solid food. Additionally, the public health nurses advise the mothers to breastfeed first and offer food thereafter in order to maintain their milk production.

According to the public health nurses. the solid food counselling varies depending on the infant's overall development. Some of the public health nurses said the infant's weight is a factor that influences their feeding counselling, and especially when infants are four months of age or above. Mothers whose infants level out in weight or do not gain weight as recommended are advised to introduce solid food, usually porridge, as explained by one public health nurse:

"If it is a mother who is exclusively breastfeeding and expresses that is what she does, and the child still gains weight nicely, then I say: 'then you continue with that until you come back to me next time' (...). If it is a child who begins leveling out a bit in weight and the mother (...) says that now she is giving Nan (infant formula), one or two bottles each day, then I can say: 'I think that we carefully start with porridge,' but then I say that she has to breastfeed before offering solid food." (PHN, 1st interview)

The public health nurses stated that it is pertinent to advise mothers to continue breastfeeding even after introducing their infants to solid food, as shown in the quote below:

"(...) if the infant is over four months, exclusively breastfed and needs more food; Instead of filling up with formula, I can recommend to start with small portions of porridge, but to breastfeed first and offer the solid foods thereafter. They should not stop breastfeeding when introducing solid food." (PHN, 5th interview)

In addition to the infant's weight development, the sleeping pattern is also a factor contributing to the public health nurses solid food counselling. If an exclusively breastfed infant over four months of age starts waking up more frequently to feed and is perceived as being unsatisfied on just breast milk, most public health nurses reported advising the mothers to start giving their infant small porridge portions, as indicated by the quote below:

"If the infant sleeps well during night and does not wakes up every hour, then one waits a bit with the porridge, but if it starts getting difficult with night sleep and they wake up every hour or so (...) then one can give porridge." (PHN, 6th interview)

When talking to the public health nurses about the factors that they consider when determining their initial solid food counselling, they all stated that introducing an infant over four months of age to solid food is perceived as being much better than using infant formula. The reason for this, they explained, is that solid food interferes less with breastfeeding duration. As one public health nurse explained:

"(...) should we say they have a child at four and a half or five months (...) who do not gain enough weight (...) and the mothers have tried to increase milk production, then I never recommend infant formula. Then I recommend to supplement food and that is also what is recommended because, like I tell the mothers, Somali and others, formula has a sad tendency to affect the milk production while food does not (...) because food is in such small amounts." (PHN, 2nd interview)

When the public health nurses were asked about food counselling to immigrants, they responded that they often start by asking the mothers what food they usually eat at home. In addition they ask immigrant mothers what food they used to eat themselves when they were growing up. Vegetables, rice and chicken are common answers. This is perceived as a good way to initiate communication about infant food and nutrition. Furthermore, this is especially helpful to the public health nurses when mothers indicate that they do not know what food to give their infants. The public health nurses can then elaborate further on food that the mothers had mentioned and in this way, give age appropriate nutrition suggestions, as shown in the statement below:

> *"If there is someone who does not know what (food) they should give (their infant) we try to find out(…) (Mother answers) rice and a lot of vegetable soup. We do not talk about the very small (infants), but from seven to eight months. (…) then I (public health nurse) say; vegetable soup is good (…), not pre-made Toro. (…) that is good food for children and you can mash and take out some vegetable from the soup and mash so that it is not only soup, because that can be a bit thin, few calories."* (PHN, 2nd interview)

In a similar way, another public health nurse reported asking immigrant mothers what they are used to eating and how they introduce infants to food in the country they are from. The public health nurse explained that she is trying to encourage immigrant mothers to trust in themselves when giving nutrition advice:

> *"I think it is a lot of good in their diet too and to ask: What would you have done in your home country? What would you start to eat and when? Just to get them to trust in themselves. That is important, and not that they should come here and have to get right into Norwegian eating habits because that is not my point (…). It is just for me to see that their food is well balanced."* (PHN, 3rd interview)

When immigrant mothers tell the public health nurses that they do not know what food to buy for their infant and/or where to find it, the public health nurses further try to assist and be of help. Even though most public health nurses stated that they are careful not to advertise for any particular brand, they tell immigrant mothers the name of the food or porridge products, as well as where they can go to buy it.

Factors perceived as potentially influencing infant and child nutrition decisions

The desire to have chubby infants was, by the public health nurses, perceived to be especially common among immigrants, and among Somali mothers in particular. All the public health nurses perceived this as a predominant factor influencing the immigrant mothers' infant and child nutrition decisions. All the public health nurses stated that they regularly meet immigrant mothers at the maternal and child health clinics who proudly show off their chubby infants. The more 'rolls of fat' their infant has, the prouder the mother. The public health nurses stated that they have been told by immigrant mothers that a chubby infant symbolizes status for them. This caused most public health nurses to reflect over this phenomenon:

> *"The Somali (...) are very hung up on their children becoming big and 'chubby'. (...) we always go through the percentile for height and weight, look and compare, and then I am very conscious when I see where the percentile curves cross and stretch above. Then I have to explain for them (immigrant mothers) that it is important that the kids do not get problems with their weight later."* (PHN, 5th interview)

In a similar way, another public health nurse shared her experience with immigrant mothers who desire chubby infants:

> *"(...) even if we say (to them) that your child is gaining weigh nicely and you do not need to give any infant formula, that is what they want to do. They want their child to have a higher weight"* (PHN, 3rd FGD)

All the public health nurses perceived immigrant mothers' desire to have chubby infants as possibly affecting their exclusive breastfeeding patterns and leading to an early introduction to infant formula. Immigrant mothers were perceived as having low rates of exclusive breastfeeding as well as lacking full understanding of the term *exclusive breastfeeding.* The public health nurses stated that, when asking immigrant mothers if they are exclusively breastfeeding, they answer that they do indeed breastfeed exclusively. Upon further questioning and, specifically, asking the mothers if they do not give their infant anything extra, the public health nurses perceived immigrant mothers to be seemingly surprised when they answer; *of course* they give their infant something extra, as shown in the quote below:

> *"The mothers say that they breastfeed exclusively, but they do not. They give a little extra (infant formula). You can ask a Somali mother if the child gets only breast milk (she answers): 'oh yes'. Then I ask: 'Do you not give that little bottle in the evening?'*

(Mother answers): 'oh yes, of course'. Very few Somali mothers breastfeed exclusively. Many almost breastfeed exclusively. That will say that they give that little extra dose (infant formula) morning or evening just to be sure that the child gets what it needs.(...) I have many Somali mothers that breastfeed for a long time and breastfeed a lot but they all give that little extra. It is funny and it is especially among Somali mothers (...) because you have Norwegian mothers too who are not sure if they have enough milk and they also give little extra, because the child maybe sleeps a bit better. So it is not such big difference there. You will always find women regardless of culture that give a little extra just to be sure, even if they know that it is not necessary. So it is not that I find it odd, but rather that it is the whole group (Somali mothers). It is an interesting observation. (PHN, 2nd interview)

Not only was the desire to have chubby infants a factor that was perceived to potentially influence the mothers' decisions regarding infant and child nutrition, but the close family members were perceived to do so as well. Half of the public health nurses stated that they perceive immigrant mothers, as well as Norwegian mothers, to be influenced and take breastfeeding and nutrition advice from someone other than them. New mothers in particular were perceived as listening to and taking advice from close family members, for example, their own mother, grandmother or mother in-law. Some of the public health nurses perceived this as a common phenomenon that was not necessary culture bound and believe that this possibly had to do with the environment a person has grown up in and is accustomed to, as discussed in a focus group:

"I think that the environment has a lot to say regarding how one thinks, what one knows and what one learns. If one knows other families and feels very much like them, then you do like them." (PHN 1, 2nd FGD)

"(...) actually in all cultures, I think one can feel that mothers-in-law give other advice than public health nurses. Yes, I believe so." (PHN 2, 2nd FGD)

"I had a Norwegian mother here the other day that ran out and bought infant formula because her grandmother meant that she did not have enough nutrition in her milk." (PHN3, 2nd FGD)

Another public health nurse shared her perception of who mothers take breastfeeding and nutrition advice from, and also stated the similarities between immigrant and Norwegian mothers:

> *"I think it varies (if advice is followed), just like it does among Norwegian mothers. There are many times I feel: 'have you heard what I have said?' or 'ok, you do as you are used to or you do as your mother tells you to do?' Of course we experience that, and that is the same with the Somali. I think it has to do with what we (humans) do, are used to doing. I had a Norwegian mother here who said she was totally distraught because she was so tired of her mother-in-law who told her that she should not give her child food more than every third hour because then it (the infant) got spoiled. (…) Research shows that is not how it is any longer. It is a very good example of that pressure (from one's own network) and it is not that many years ago that mothers-in-law in Norway had children, and still to go out and postulate that so clearly."* (PHN, 2nd interview)

Perceived challenges

This section describes the findings about the challenges identified and perceived by the public health nurses as potentially unique to cross-cultural service provision, as well as how the public health nurses think that some of these challenges possibly affect the quality of their services and communication and their proposed solutions.

Challenges potentially unique to cross-cultural service provision

When the public health nurses talked about challenges of cross-cultural service provision, they mentioned the following: language, food culture, overweight, infant formula, cow milk and sweets.

Language was, by far, the most mentioned challenge and thus emerged as a category of its own, which will be further described. It is interesting to note that the public health nurses emphasized the importance of nuances in the language. The word *nuance* was used repeatedly throughout interviews and during focus groups discussions. A possible reason for this is that the public health nurses described themselves as dependent on using nuances in the language during counselling. If unable to do so, like in communication with immigrant mothers who do not speak Norwegian, it was perceived that some of the important information 'gets lost'. The public health nurses explained that, often, during counselling, nuances in the language can be the factor that solves a problem. Hence, being able to communicate using nuances was perceived as being of extra importance, for example when immigrant mothers state that they experience problems related to breastfeeding and/or infant and child nutrition. In such a situation, the public health nurses stated that, in order for them to give accurate counselling and/or information, they have to fully understand what the problem is really about. In doing so, nuances were perceived as being invaluable communication factors. It is equally interesting to note that most of the public health nurses perceived that nuances in the language get lost even when they communicate through interpreters, as explained in the following quote:

> *"Communicatively, it is much easier to give advice to Norwegian women because one can communicate details. One can communicate with nuances. One can ask; what you said there, do you mean that..? That is* ***much more*** *difficult with Somali women. If you use an interpreter, you lose the nuance. (…) nuances are so important in relation to counselling, in relation to breastfeeding for example; what is this about? It can be a tiny little thing (problem). When one has found out (…), when that is solved and taken*

care of, there is no other problem. That nuance can be a lot more difficult with Somali women and it is a question of communication and language. (…)One does not have those nuances. You cannot describe the degree of stinging in the breast (…) and compare it with something else the same way as a Norwegian mother can. (PHN, 2nd interview)

Since the public health nurses perceived communication, and verbal communication specifically, as foundational during couseling, not speaking the same language was perceived as a substantial barrier. Hence, it was also stated that the language barrier has an effect on the quality of the public health nurses services, as indicated by the quote below:

"(…) I think that some Somali women, or other foreign women, get inferior breastfeeding guidance compared to Norwegian mothers and foremost it is about communication. (…) Of course it makes it much more challenging and of course much worse counseling. I am much less satisfied, sometimes, with that counseling compared to the one I can give to Norwegian families" (PHN, 2nd interview)

In addition, the public health nurses stated that it took longer time for them to explain things to immigrant mothers when there was a language barrier. Unfortunately, this, at times, led to time constraints for the public health nurses. The public health nurses stated that this was possibly due to the fact that there were standardized procedures for each of the consultations that they had to follow. Hence, they often moved quickly through the consultations in order to cover the specific topics. The public health nurses further stated that this, at times, caused immigrant mothers to misunderstand their advice. One public health nurse explains and reflects upon this:

"There are some challenges especially because it often goes a bit fast (consultations) and the advice we give are standardized and it is easy to think that our new countrymen think like us. We can see along the way that they misunderstand (…). When we tell them to use water as a thirst quencher, we know how important that is, but they in a way think: 'But I can buy juice for my child'. Maybe we are not clear enough why *water is important instead of juice. (…) Yes, challenge is 'time'. It (consultations) takes longer time."* (PHN, 1st interview)

The public health nurses emphasized that the standard procedures they have to follow at each consultation should not be misunderstood or compared to a check list. The standardized procedures are rather intended to serve as a guide to navigating the health topics that each consultation should address, as well as informing age appropriate nutrition advice.

Differing food cultures was a matter that further challenge the public health nurses. They stated that this is partly due to the mothers' lack of familiarity with Norwegian food culture and, hence, lack of pre-understanding of the food that the public health nurses refer to during nutrition counselling. Likewise, the public health nurses recognized themselves as having limited knowledge of immigrant food cultures. The combination of not speaking the same language and not sharing or having knowledge of each other's food culture was, by some public health nurses, perceived as further challenging them when discussing food and giving infant and child nutrition advice to immigrant mothers. A public health nurse from a focus group explains:

> *"They basically have a bit different eating habits compared to us (...). We are very much for porridge and sandwich (...) maybe they, in their culture, are used to a totally different type of cooking. Then it becomes a little difficult there in regards to what (food) they should give to their children. Maybe they have grown up with some (food) that they do not get hold of or cannot make here."* (PHN, 2nd FGD)

In a similar way, a public health nurse from another focus group share her perception:

> *"They (immigrants) have a totally different diet in their culture (...) compared to what we are used to. (...) when we start talking about sandwiches, they do not understand. (In contrast)When we talk about diet (with Norwegians) we understand each other."* (PHN, 3rd FGD)

In addition to lacking familiarity with the Norwegian food culture, the public health nurses state that they do not perceive their counselling as having any impact. They explain that it is their perception that immigrant mothers do as they are used to, instead of following the public health nurse's nutrition advice. One public health nurse explains:

"I feel that when they are here (during consultation) it can seem like they take in information, but then when they come home to their own (...) my perception, from the community, is that they then get back into old routines, that is what I feel. Then you do what feels secure and what you grew up with and are used to, even if you have moved to Norway. (...). There is no duration of the advice. No, I do not reach them the way I feel that I give advice, unfortunately." (PHN, 3rd interview)

Overweight among infants was identified as another challenge in cross-cultural service provision. The public health nurses perceived this to be due to immigrant mothers' different norms with regard to infant weight and that which is considered as being overweight. Hence, the public health nurses explained that they need to spend extra time informing them that it is not healthy and that it is important to think long-term with regard to infant and child health. Giving nutrition advice to immigrant parents was, moreover, perceived as challenging overall. This was based on the public health nurses' perception that immigrants often answer their nutrition questions by giving the 'correct' answers. Their answers are, in turn, not perceived to correlate with what they are actually doing. For example, when public health nurses try to map the food intake of overweight infants or children, they ask what food the infant eats. The public health nurses then perceive that immigrant mothers, and fathers when at the maternal and child health clinics, often respond to their questions by stating the 'correct' healthy food choices. Some public health nurses perceive this to be due to the immigrants' knowledge of which questions would be asked and which answers the public health nurses would like to hear, i.e. healthy food choices. The public health nurses thus perceive some immigrants as answering their nutrition questions with what they presume to be the correct nutrition answer instead of comprehending the consequences of overweight. One public health nurse from a focus group explains:

"(...) overweigh is a big challenge. I just had a Somali girl that is pushing 97, 5 percent on the curve. She is too big, but it is of no concern to the father, who says: 'Eating healthy food, Fish and vegetables. Not juice'. They know exactly what I am going to ask. I have four of his children and they are big, but they do not see that in the same way (...). Both I and the medical doctor point out the weight, but there is not any point. There has to be something with the pre-understanding, what we think is

overweight and what they maybe think is overweight. I do not know. (…) Can one only eat fish and vegetables and get that big? That is not possible." (PHN 1,1st FGD)

A public health nurse with similar experiences of immigrants giving the 'correct' nutrition answers explained as well her perception of immigrants as not thinking about the food that they give their children in-between meals:

"I explain that it is important that the children do not get problems with their weight. (…) They (the parents) are so good at giving the right (healthy nutrition) answers to my questions. When I (in addition) ask if they (children) do not eat biscuits or potato chips they (parents) suddenly answer: 'Yes, they do.'(…). You (public health nurse) have to be good at unravelling things." (PHN, 5th interview)

In addition, some public health nurses perceive immigrant mothers as hesitant to return to consultations if the topic of their infant or child's weight is addressed. The public health nurses explain that immigrant mothers, at times, cancel their children's weight-control-appointments. Weight is, according to these public health nurses in a focus group, an overall sensitive subject:

"(…) weight (…) is a very sensitive topic." (PHN 1, 3rd FGD)

"Yes, very." (PHN 2, 3rd FGD)

"Yes, it is difficult. (…) I notice that this (weight) is a very, very sensitive subject, enormously so, (…)." (PHN 3, 3rd FGD)

Infant formula, as previously mentioned, was perceived by the public health nurses as interfering with exclusive breastfeeding among immigrant mothers and was hence also identified as a challenge for the public health nurses when giving breastfeeding advice. For example, the public health nurses stated that exclusively breastfed immigrant infants gain weight and develop normally in accordance with their age recommendations. Hence, the public health nurses perceive breastfeeding as going well and therefore reported feeling astonished when the mothers would seemingly suddenly state that they do not have enough breast milk. This is, according to the public health nurses, common among immigrant mothers. In addition to infant formula being a topic discussed during interviews and focus

group discussions, the public health nurses stated that they often reflect upon this behavior as most of them struggle to understand the underlying cause:

> *"The Somali I have met says that they do not have enough milk, so they need infant formula. (…) I have thought, I do not know if that is true, but I have thought that maybe that is a thing that they have learned to say, so that we do not nag them too much about breastfeeding?"* (PHN 1, 1st FGD)

> *"I think that many have enough milk though, because we see that they (the infants) have a nice steady weight gain on breast milk but then it comes: 'No, I do not have enough milk.' That can indicate that they wish to bottle-feed?"* (PHN2, 1st FGD)

In a similar way, another public health nurse stated her experience:

> *"They ask if they can start with 'Nan' (infant formula). Then I ask: 'Why?', because the baby is gaining weight nicely. Then they smile and I do not always get a proper explanation to why they do not want to continue breastfeeding. No, I still have not found out and cannot fully understand this."* (PHN, 3rd interview)

Cow milk[7] and excessive consumption are perceived as common general challenges when PHNs give infant and child nutritional advice to immigrant mothers. As stated by the public health nurses, when immigrant children are above six months old and have started on solid food, too many end up drinking too much cow milk. They then get their own 'milk-bottle-meals' according to the public health nurses. Hence, cow milk ends up replacing food and becomes a large part of immigrant children's diets. The public health nurses perceive this to be especially common among infants and children of Somali immigrants. It is the public health nurses' experience that, when immigrant mothers do not set any limit for the amount of cow milk consumption, the infants and children fill up on milk. When they are then offered food, they are not hungry or interested and they often become light eaters. The public health nurses perceived this to be a common general challenge and spend a considerable amount of time discussing the excessive cow milk consumption with immigrant mothers during their consultations:

[7] Children can run into problems if they drink too much cow milk (more than 24 ounces a day) and eat too few iron-rich foods, like red meat and green leafy vegetables. Cow milk is **not** a good source of iron. In fact, milk makes it harder for the body to absorb iron and can contribute to iron deficiency and anemia. http://kidshealth.org/parent/medical/heart/ida.html

"There is a lot of unnecessary milk drinking among a bit older children. Everything seems to be solved by a bottle of milk and often a bottle of whole milk, which we do not recommend. (…) I can repeat this over and over because, if the mothers have decided that whole milk is good and often with a little bit of cream added, then it is very difficult to come through. This is especially among immigrant families because most Norwegians have this knowledge." (PHN, 2nd interview)

Since the excessive consumption of cow milk among immigrant infants and children was perceived as common, most of the public health nurses stated that they automatically ask immigrant mothers about cow milk consumption. In the same way, when public health nurses meet immigrant mothers who are worried because their infant or child does not want to eat any solid food, the public health nurses automatically ask how much cow milk the infant or child drinks. The public health nurses hence perceived that immigrant mothers did not fully understand the relation between drinking lots of cow milk and not being hungry:

"(…) when the infant is over six months old or when they have started to eat solid food, then there are many that rather drink a lot of cow milk instead of eating solid food, such that milk becomes a large part of the diet. They can also put other things into the milk (…) sugar-syrup, coca cola (…) sugar, to get the children to drink it. And honey too. (…) I think that is something that is very common. That is the first I ask when they come and say that their child does not eat. The child is eight, nine months. (I ask): 'OK, but how much milk does your child drink?' Then you see that it usually is very much milk." (PHN, 3rd FGD)

A few of the public health nurses also stated that excessive consumption of cow milk becomes evident when immigrant children attend their one-year consultation. The reason for this is that the blood tests taken at this time often reveal low levels of hemoglobin, a possible contribution to iron-deficiency and indication that too much milk is being consumed. The public health nurses, in turn, struggle to comprehend why their advice was not followed, as indicated by the quote below:

"It is paradox that we give nutrition advice and talk about healthy diet and the transition to solid food at six months. Then they come for their one year consultation and all the non-Western (…) have low hemoglobin. Then they have not followed what

we have said, and then we have not reached them either (with counselling). Then the diet has consisted of more milk than we have said." (PHN, 1st FGD)

Even though most public health nurses perceived themselves as continuously counselling immigrant mothers about the negative health effects that could come from excessive cow milk consumption, they did not perceive themselves as reaching the mothers with this advice. This was something that the public health nurses reflected upon, as in the below quote:

"Many Somali children drink a lot of milk, even if we advise a maximum five to six deciliter a day. As time goes by they get a lot from a bottle, regardless of repeated counselling. I do not know why this is? Does it have to do with our counselling or is it their understanding? I am not sure?" (PHN, 3rd interview)

Sweets, such as candy, sugar, soft drinks and honey are perceived by the public health nurses as commonly used by immigrants, in addition to lots of oil in their cooking. During home-visits, the public health nurses state that they often see sweets lying around and hence easily available for children to take and eat at any time. The public health nurses perceived this as challenging from several different viewpoints. For example, the public health nurses stated that, during consultations with immigrant mothers and when communicating nutrition, the immigrants' use of sweets and oil can easily be overlooked by the public health nurses, i.e. not mentioned. The reason for this exclusion, according to the public health nurses, is that the ways in which immigrant mothers incorporate or use these products are so far from the Norwegian diet and the public health nurses' own infant feeding knowledge that the public health nurses do not even think about asking. For example, the public health nurses stated that immigrant infants and children can get a bedtime bottle of tea with sugar or that an infant's pacifier can be dipped in honey. The public health nurses further stated that this can be equally challenging the other way around, i.e. that immigrant mothers are so used to their own practice and perceive it as common, that they too do not mention their use of candy, sugar, sweets, oil etc. to the public health nurses. The public health nurses perceive this as unfortunate, since not knowing an infant's or child's intake of sweets might result in misconceptions that possibly impact their nutrition advice. In the same way, the public health nurses reflected upon the fact that many immigrants state that they use a lot of vegetables in their diet. That sounds very healthy, but according to the public health nurses, the immigrants often fail to mention the large amounts of oil and sugar that are added to the vegetables in

their cooking. The public health nurses therefore stated this as challenging when communicating nutrition advice and/or mapping immigrant infant and child nutrition:

> *"(…) there is quite a lot of fat in what they make (their food). Even if they use oil of good quality, they still add too much (…), and we see that. In the future we will see the result from this by an increase in heart disease. (…). We can see that some of these women become large (…). We also think that they (immigrant women) have the same diet as their children are growing up with."* (PHN 3rd interview)

The public health nurses further reflect upon immigrant children and their future eating habits, as well as the over consumption of sweets. The public health nurses state that children that are allowed to and used to eating sweets also start craving sugar and hence get into bad habits that are difficult to break. The public health nurses perceive immigrant mothers, in particular, as failing to deny their children the sweets that they fancy. A public health nurse shares her perception:

> *"It has to do with saying* ***no*** *to their children when they fancy something. I am thinking about the knowledge around that, in regards to teeth. They are used to give sweet things and drinks (to their children). We talk a lot about that (during consultations), and to use water, and explain about saliva and how important it is to drink water (…). I talk about these things, but then the children want candy and then there is a culture where they (the immigrants) are used to letting their children get what they want. Maybe it is not so easy then (to follow advice)? They (immigrant mothers) do not fully understand the consequences (of eating sweets)."* (PHN, 4th interview)

Proposed solutions

Half of the public health nurses described wishing to learn more about different ethnic groups and providing cross-cultural services. It was perceived that this would be helpful for them professionally and something that might strengthen their communication with immigrants. The public health nurses stated that they perceived themselves as having too little education with regard to this, as explained by the public health nurses in the two quotes below:

"(...) as a public health nurse, one does not have enough basic education in relation to meeting different ethnic groups. It is more on a general basis and out in the municipalities we do not have enough resources to learn on different ethnicities." (PHN, 1st interview)

"(...) if I should state what I think would be useful for me as a public health nurse advisor, then it would be to have access to basic knowledge regarding what is traditional food for children and thoughts, regarding nutrition, from the different cultures that I advise against. (...) I think that would be exciting because I have knowledge of nutrition and knowledge of how to convey it but, I lack some information, like culturally conditioned pre-understandings." (PHN, 2nd interview)

It was interesting to note that one public health nurse did have cultural pre-knowledge from previous experience working with asylum seekers. She explained that the public health nurses then had been offered relevant courses and education with regard to different ethnic groups and, hence, were perceived as having obtained basic cultural knowledge. This was, according to the public health nurse, an advantage and perceived as being invaluable in her current position when counselling immigrant mothers at the maternal and child health clinic. The opposite, not having cultural pre-knowledge, was also discussed with this public health nurse and how she assumed that would be:

"Then I think that the challenge would have been that we (immigrant mothers and public health nurse) had been on each our own planet (...). That is how challenging I think it would have been. Then I would have talked about how things work here (in Norway) and they (immigrant mothers) would sit with their pre-knowledge regarding how things shall be and so in a way, there is no bridge." (PHN, 5th interview)

When the public health nurses proposed solutions for what they perceived as challenges, *group meetings* and *more time* during consultations were repeatedly mentioned. Most of the public health nurses emphasize group meetings as a method of large potential in order to reach immigrant mothers with a variety of relevant topics, including all of the perceived challenges. Hence, the public health nurses spoke enthusiastically of such meetings. Some examples from the public health nurses experience of group meetings came from group

consultations when infants were four and eight months old; cross-cultural cooking courses and cross-cultural nutrition information given together with the dental services. Upon further questioning, the public health nurses were able to explain and specify what they perceived to be the specific advantage with group meetings. The public health nurses then stated that, at group meeting, the mothers have the opportunity to share experiences with each other. Even though it is perceived that the most resourceful immigrant mothers are the ones attending the group meetings, their attendance and what they learn is, by the public health nurses, evaluated to have positive ripple effect. This is based on the perception that when immigrant mothers get a better understanding of a topic, for example relating to infant and children nutrition, they share their knowledge with other immigrant mothers. Hence, several immigrant mothers end up with a better understanding of this topic. The public health nurses experience that they have more and better communication with immigrant mothers around topics that have been brought up in these groups.

The public health nurses state that group meetings also have the potential advantage of strengthening and developing a trustful relationship among mothers, regardless of nationality and, in addition, between the mothers and the public health nurses. A trustful relationship, where the person is *seen* was further perceived to directly impact how immigrant mothers relate to the public health nurses and, hence, their counselling. Consider the quotes below:

> *"(...) I think that the relationship has very much to say in regards to how much you listen to the advice that you get. (...) If you see, the whole person, then they (immigrant mothers) get more confidence in you and want to come back."* (PHN, 4th interview)

> *"If one have establishes trust and knows the family well, gradually I actually think it is easier for advice to be followed."* (PHN, 3rd interview)

While the public health nurses described group meetings and their possible potential, they also stated the importance of keeping the focus on the topic of children and their needs. A public health nurse shares her experience after such a meeting:

> *"It was many (mothers) that thought it was so exciting (to meet) and they got interested of each other. The Norwegians got interested in how the Somali prepared*

their food. (…) we can learn a bit from each other, at the same time as we (the PHNs) have an overarched idea of what is important for children." (PHN, 3rd interview)

Additionally, some public health nurses had experience from co-operation projects between the maternal and child health clinic and the municipalities. In such projects immigrant mothers and their infants or children were invited once a week to group meetings where they would learn some Norwegian in addition to discuss topics related to childrearing. The public health nurses had several examples of the positive outcomes from such meetings. One example is quoted below:

"I had an immigrant mother that came to a group meeting not long ago. She is so pleased, but she has learned Norwegian though. She thought it was so exciting and it was fun to see how the other (Norwegian) mothers accepted her and happily wanted to include her." (PHN, 2nd FGD)

In a similar way, a few public health nurses shared inspiring stories from Norwegian and immigrant mother group meetings and, more so, meetings that they (immigrant mothers) had arranged:

"One immigrant mother (...) is so determent to find her place in the Norwegian society that she arranged a maternity group meeting. (...) and the (Norwegian) mothers, it was so fun for them. (...) Yes, then I think that something (positive) is taking place." (PHN, 6th interview)

Part of the public health nurses' proposed solutions was their perceived need to have more time during consultations, and with immigrant mothers in particular. The public health nurses explain this in the quotes below:

*"The challenge is **time**. It takes longer time (consultations with immigrants).Yes it does, and we do not have it (time). We have expressed a desire to get more resources to this maternal and child health clinic that have a lot of immigrants. (…) one need more time, that is a challenge."* (PHN, 6th interview)

"We should have much better time to give advice regarding nutrition. It has a lot to do with time refrains." (PHN 1, 1st FGD)

"(...) it is not sure that we reach them with nutrition advice. Maybe there are other methods or maybe there should be more groups? Yes, better time and more groups." (PHN 2, 1st FGD)

Perceived value of the information material provided

This presents the public health nurses' reflections on the value of the written information material that they provide immigrant mothers.

Written information

The information booklets on infant and child nutrition, which the public health nurses give to all mothers, are in Norwegian only. These booklets form the foundation of the public health nurses' advice and recommendations. Hence, the public health nurses were unified in their perception that it is not good enough to only be able to provide immigrant mothers with Norwegian information material. They stated that they have long requested appropriate, translated information. In fact, the public health nurses expressed dissatisfaction and found it startling that the Directorate of Health gives out such important information in Norwegian only. Some public health nurses, during a focus group, discussed their perception regarding the information material provided to immigrant mothers:

> *"I think that it should be more information in their language. (...) Like, 'Food for Infants', if that had been in different languages. Because they (immigrant mothers) accept it, but it is not certain that they understand much of what it says there."* (PHN1, 2nd FGD)

> *"(It should be) more written information that they could get, such that they could sit down in peace at home and look through it. Because then they would have a totally different perspective next time they come. Maybe we would have gotten some questions then, in regards to our counselling, if it (information) had been in their native language?"* (PHN2, 2nd FGD)

A few public health nurses stated the importance of not only translating information material but, in addition, making it culturally appropriate. The public health nurses then referred to how culture affects peoples' understanding of health information, for example different ethnic groups may have different needs and/or beliefs that might affect their interpretation. It was stated that health information material that works well for Norwegians might not work as well for people from other cultures. Culturally appropriate health information should therefore, according to the public health nurses, include themes that are familiar to immigrants and reflect their traditions, for example culturally appropriate images and concepts. Hence, *words* and/or *settings* might need to be re-formulated. When translating health information, a person who knows the traditions should preferably assist in identifying the appropriate health

messages that are likely to work best within a culture. Culturally appropriate health information was perceived to have the potential to make the information material easier for immigrant mothers to relate to and hence possibly increase the quality of the public health nurses' overall nutrition counselling. A public health nurse reflects upon this in the quote below:

> *"(…)not translated, because it has to be re-worked in regards to traditions. That there is someone that knows Somali traditions, knows Somali, or other languages. That one does not only translate directly because one has different pre-understandings and that is important."* (PHN, 2nd interview)

In a similar way, another public health nurse positively mentioned culturally appropriate information material. The public health nurse descrobed this with regard to a different subject, diabetes, but nevertheless mentions the value of how that information is presented and made culturally appropriate:

> *"There is a brochure (…) regarding diabetes and it is about the diet. It is made as a story about a foreign lady and how she lives her life and how she makes food choices (…). It (the brochure) is very well made because it really focuses on their (immigrants) life and their way of living. (…) I think that is a good brochure and something similar can be made (regarding infant nutrition)."* (PHN, 4th interview)

The public health nurses do, however, have some translated information material that they can give to immigrant mothers in the form of hand-outs on, for example, cod liver oil. This was perceived as positive for several reasons. For example, from the public health nurses' viewpoint, translated information might indicate to immigrants that they are interested in them as individuals, thus strengthening the immigrant/public health nurse relationship. The public health nurses further perceived that immigrant mothers comprehend their counselling better when it is complemented by written information in their language. This perception was based on the fact that the public health nurses experience very good compliance, especially with regard to immigrants giving their children cod liver oil as advised. Hence, they stated that translated material is of great importance. Some of the public health nurses additionally stated that they are able to obtain translated breastfeeding information from the Norwegian Ammehjelpen, mother-to-mother breastfeeding support group, whose website provides breastfeeding information in 18 different languages. Hence, the public health nurses can print out breastfeeding information for immigrant mothers in the appropriate language, if available.

The public health nurses perceived immigrant mothers as being interested, happy and appreciative when they receive any information in their native language, as indicated by the quote below:

> *"We have some information in other languages but it is not much. (…) They (immigrants) are always happy when they get information in their language. (…) They are eager for information. If we say: 'you should try this or that', then they say: 'write it down for me so I can take it with me'. Then I think that is a way to show that they are interested and not only say: 'Yes'. They actually want to have it in writing, such that they can go and buy the right thing."* (PHN, 4th interview)

It should be noted that most of the public health nurses are aware that translating and re-working the infant and child nutrition booklets will not be of help to all the immigrant mothers. The public health nurses also have illiterate immigrant mothers who are not capable of utilizing any written material. As explained by the public health nurses, these immigrant mothers are functionally illiterate, i.e. they can manage to write a few words and simple sentences and for example, read signs. They would not, however, be capable of reading a complete booklet with information on infant and child nutrition.

Language

The public health nurses' experiences with regard to and attempts to overcome language barriers is revealed here, followed by the public health nurses' experiences with using interpreters.

Language barriers

Breastfeeding and nutrition advice is mainly given verbally. Hence, not being able to communicate in the same language was perceived by all the public health nurses to be especially challenging. Language barriers were also the first topic stated by all public health nurses when they mentioned challenges. This was described as resulting in the use of fewer words when communicating with immigrants who speak limited Norwegian. When the public health nurses referred to this fewer-word communication, they would say that they use a 'simpler' language. Even though a simpler language is used, it was stated that this is not unproblematic. For example, the public health nurses double-check if their counselling is understood by probing and asking immigrant mothers to repeat what was said. It is perceived that immigrant mothers are often able to repeat and respond positively to the public health nurses' questions and, in addition, state that they understand. Upon meeting again at the following consultation, the public health nurses ask how things had worked out with regard to the previous counselling. The immigrant mothers' answers often make the public health nurses realize that their advice had not been completely understood. Some public health nurses, during a focus group, talked about communication with immigrant mothers who speak limited Norwegian, as illustrated in the quotes below:

> *"(...) you have to use simpler language without too many small words in-between and manage to be clear and distinct and assure that they have understood what you say."* (PHN1,2nd FGD)
>
> *"Ask some control-questions."* (PHN2, 2nd FGD)
>
> *"Yes, some (immigrants) also do that (control-question) and then you know; 'No, they have misunderstood' and then you have to explain one more time."* (PHN3, 2nd FGD)
>
> *"I have to speak pretty simple and clear and repeat many times and explain it in different ways (...)."* (PHN1, 2nd FGD)

The public health nurses agreed that, when immigrants speak limited Norwegian, it is perceived as an extra challenge for them during counselling. This challenge is predominantly noticeable with immigrant mothers who do not wish to use interpreters. One public health nurse explained:

> *"It is of very large significance (during counselling) when you know that the person sitting in front of you speaks limited Norwegian because you know that it will be difficult to go into deeper conversation (…), like she who was here. I felt she spoke limited Norwegian but she clearly stated that she did not want an interpreter. (…) then it is difficult. The communication gets very superficial and simple. Not any details.* (PHN, 2nd FGD)

Despite the public health nurses' resort to a simpler language for the sake of managing language barriers, they experience miscommunication. They perceive this as being especially unfortunate with regard to their breastfeeding and nutrition counselling. This is due to what the public health nurses perceive as valuable time that gets lost between consultations, when advice was not comprehended. For example, mothers who do not understand infant nutrition counselling cannot implement it in a timely order and, hence, the implementation becomes postponed until the next consultation or the time that the advice becomes understood.

Another challenge related to language barriers is family members who want to translate themselves rather than using an interpreter. The public health nurses explained that it is not uncommon for an immigrant man, who speaks some Norwegian and accompanies his wife and infant to the maternal and child health clinic, to want to be the translator. The public health nurses know that this is not recommended but perceive the situation as difficult and are uncertain of how to handle it. The reason for not using family or friends as translators is that the public health nurses then have minimal control over what is being said/translated. A friend or family member might not have the necessary language qualifications and/or know the fundamental interpreter rules. The public health nurses then describe this as being a dilemma and a risk. For example, a family member who speaks some Norwegian but does not have the full vocabulary to explain and translate everything that is being said might omit important information. Similarly, a friend of a family member could add information without the public health nurse having the opportunity to know so. This could possibly lead to language misunderstandings, misinterpretations and, even worse, that infants or children get insufficient care. Therefore, the public health nurses state their concern that immigrant mothers might not

get the total content of their counselling when a friend or family member is used as translator. Despite this, the public health nurses perceive it as difficult to go against the family member's wish. Consider the quotes below:

> *"Many are here on reunion and have a Norwegian man, or a Somali man who has lived a longer period of time here in Norway (...) then the mother and child comes (to the maternal and child health clinic) together with the dad and, then the daddy is interpreter. And then to kind of know: 'what is it that is being said here?' (...) 'What is it that is being translated and what is being understood here?' That is difficult."* (PHN, 3rd FGD)

> *"(...) often among Somalis, the daddy knows Norwegian (...) then the daddies often come and they do not always want interpreters. He wants to be the interpreter and then that makes it a bit difficult (...)* (PHN, 3rd interview)

In addition to family members who wish to translate, a few public health nurses also stated their concerns regarding *how* the family members translate in relation to their cultural knowledge and how this, in turn, can possibly affect the mothers' interpretation of the advice given. For example, the immigrant men who the public health nurses meet came to Norway and have lived here for quite some time before reuniting with their wives and families. Hence, the public health nurses reflected upon this and the possibility that the men/fathers have, during this time, picked up Norwegian attitudes and acclimated to Norwegian culture more so than their wives/children's mothers who arrived in Norway more recently and therefore possibly experience more of a culture chock. The public health nurses stated concern that, in such a situation, their counselling can possibly be further misinterpreted by immigrant mothers due to the potentially different pre-understandings between the immigrant father and mother due to their different length of stay in Norway.

PHNs attempts to overcome language barriers

In trying to overcome language barriers and secure that counselling is understood by immigrant mothers, the public health nurses stated that they have tried different solutions on their own. For example, all the public health nurses have found their own way of complimenting their verbal communication with immigrant mothers by using pictures and empty food boxes or by drawing. They perceived this complementation as being especially

important during infant and child nutrition counselling to immigrant mothers. This was based on the public health nurses' perception that, in addition to not having a common language, immigrant mothers often lacked familiarity with the types of food products they refer to. Thus, visual aids are perceived as being a very helpful compliment to verbal counselling, as one public health nurse explains:

> *"(...) when it becomes relevant with food variations, then I have to know what they (immigrant mothers) understand when I for example, talk about porridge. When I start talking about fruit, when I talk about vegetables and dinner, then I (...) take out pictures such that they can see and understand (...). We then go through and look concretely at what the products are, with pictures."* (PHN, 5th interview)

While the public health nurses use some form of visual aid that most of them have worked out on their own, a few public health nurses had participated in a research project in which they were provided with iPads. In addition, the iPads had a visual application program that included pictures of different foods. This was the SOMAH application. These public health nurses were particularly enthusiastic about this additional communication tool. They perceived it as being very helpful, since it was possible to show pictures of the food products that they talked about, thus reducing the risk of misunderstandings. Additionally, it was perceived as helpful for assisting the public health nurses to achieve an understanding of immigrant families' dietary habits. The public health nurses and immigrant mother could sit together, look at the pictures, find the food product that the immigrant mother used and then talk about its good and not so good nutritional aspects. A public health nurse explains it this way:

> *"(...) we think that the visual is very important (...) so we are very happy to have this program. (...). For me this (tool) is alpha and mega even if one speaks good Norwegian. Then we have suggestions here on what one can eat and we can show what is not so good (to eat). (...) I think this is a very very good aid."* (PHN, 6th interview)

The public health nurses found the SOMAH application equally helpful when they were giving infant and child nutrition advice to immigrant mothers who spoke Norwegian well, or when giving advice to Norwegian mothers.

Interpreter

All of the public health nurses have experience using interpreters, either interpreters who physically attend the consultations or via the telephone. Most of the public health nurses perceived themselves as being consistent in their use of interpreters when the mothers do not speak Norwegian or speak only limited Norwegian. They do however, as previously stated, have problems insisting on the use of interpreters when immigrant mothers state that they do not want this service or when a family member wants to translate. The public health nurses explained that it is their responsibility to contact and decide when to use interpreters, if not requested by the mothers. The public health nurses usually set off additional time when using an interpreter. For example, an hour for consultations including an interpreter, compared to a regular half hour consultation. The telephone interpreters are predominantly favored, as they are perceived as being more motivated to get more involved and perform better. It is further perceived as being easier to make arrangements with telephone interpreters, as one public health nurse stated:

> *"(...) it is easier to get hold of an interpreter (via telephone) instead of an interpreter that does not show up and then you sit there. If the interpreter has forgotten that he has an appointment, then you always have the telephone. (...) it works better. You do not have to deal with interpreters who are delayed or not finding the way."* (PHN, 4th interview)

In addition, the preference for using telephone interpreters was that some public health nurses found it distracting to have an extra person, the interpreter, with them during the consultations. Thus, the public health nurses do not view themselves as having 'normal' communication when the interpreter is present. This is due to their perception that they have to turn to the interpreter during communication, instead of to the mother. When telephone interpreters are used, the public health nurses turn on the telephone speaker at the beginning of a consultation and perceive themselves as having a more 'normal' conversation with immigrant mothers.

Even though interpreters are perceived as necessary when a common language is missing, the public health nurses stated that it was not the same, talking through an interpreter. When public health nurses talked about communication through an interpreter they would say, 'it's a lot of back and forth all the time'. Communication was, by a few public health nurses, perceived as not being good enough despite the use of an interpreter. They explained that there are still misunderstandings and that, sometimes, the interpreter misinterprets or

perceives things from his/her standpoint, i.e. what they are used to themselves. A few of the public health nurses have also experienced interpreters who *took over* and started to explain things on their own. The public health nurses would then have to stop the interpreter and state that it was their turn to talk. According to some public health nurses, it was difficult for them to know the qualifications of the interpreter. To know the quality of interpreter services was, by the public health nurses perceived as being of great importance as it would directly influence the quality of their own counselling given to immigrant mothers. As one public health nurse explained:

> *"It is difficult to know how good the interpreter is. (…) what is their (immigrant mothers) perception, what have they perceived of the conversation or the counselling we have given?"* (PHN, 3rd FGD)

The interpreters vary from time to time, and thus no working relationship is formed. Sometimes, a mother's reaction or body language is the first and only sign of incorrect interpretation, as described by a public health nurse in the quote below:

> *"(…) I have been sitting talking to adult people, where I think I say something absolutely unproblematic, when the other suddenly gets very angry and then it was the interpreter that had translated something wrong. Or (…) (an immigrant mother) got told he (her infant) had a small brain, but it was iron deficiency (…) so she (the mother) was totally desperate (…). We cannot control what they (interpreters) say, but of course we can sometimes see on the (mothers) reactions and then understand."* (PHN, 4th interview)

As has been seen, there are some challenges for the public health nurses when giving infant and child nutrition counselling to immigrant mothers. However, the public health nurses state suggestions on how to improve such services. They further state that they perceive themselves as being in a unique position to give counselling to immigrant mothers regarding infant and child nutrition. The public health nurses explain that the reason for this is that they meet immigrant mothers regularly at the maternal and child health clinic, at least once a month during the infants first year of life. In addition the public health nurses perceive that when people become parents, they are very receptive to make positive changes, for example regarding diet. According to the public health nurses, this is possibly because they then know that they have another individual to take care of and who they want to do the best for.

Chapter 5: Discussion of findings

What follows is a discussion of the findings obtained: they are not intended as universalizing or generalizing remarks on public health nurses or immigrant populations living in Norway, but rather as considerations of the experiences and perspectives of the public health nurses who participated in this project. It should be noted that Somali immigrants are frequently mentioned, and that this is a result of the fact that the public health nurses independently singled out this group. No intentions are made to generalize the findings to the whole Somali population in Norway.

Nutrition counseling
Breastfeeding advice

The public health nurses reported counselling all mothers, regardless of ethnicity, to exclusively breastfeed for the first six months of life. However, findings from this study showed that there were inconsistencies and variations in relation to the public health nurses' recommended duration of exclusive breastfeeding. The public health nurses were quick to explain that the Directorate of Health recommend introducing infants to solid food before the age of six months *if* the weight gain is insufficient, *if* the infant seems restless and hungry even after frequent breast meals or *if* there is a problem with breastfeeding (Health 2001). These findings are comparable to what researchers have shown before – that there are inherent problems with the definition of exclusive breastfeeding (The Department of Health 2012).

In addition, the public health nurses perceived exclusive breastfeeding counselling as challenging due to variation in expert opinions, as well as their knowledge of ongoing criticisms and questioning of the current exclusive breastfeeding recommendations (Health 2015). For example, a review by Kramer and Kakuma (2012) indicated that exclusive breastfeeding for six months has several advantages over exclusive breastfeeding for three to four months, followed by mixed breastfeeding (Kramer and Kakuma 2012). In contrast, other research has indicated that six months of exclusive breastfeeding does *not* give infants all the nutrients they need (Chantry, Howard et al. 2007, Jonsdottir, Thorsdottir et al. 2012, Torsvik, Markestad et al. 2012). As an example, Norwegian studies done by Torsvik et al. (2012) found an increased risk of anemia in infants exclusively breastfed for six months when compared with infants introduced to solid food at four to six months. This is in contrast to a study which found *no* cases of anemia in infants exclusively breastfed for more than six months (Pisacane, De Vizia et al. 1995). Other studies suggest that gluten should be gradually

introduced into the infant's diet after four months of age, while breastfeeding is continued, in order to reduce the risk of celiac disease (Ivarsson, Hernell et al. 2002, Norris, Barriga et al. 2005, Størdal, White et al. 2013). This is in contrast to a study indicating that early introduction, at 16 weeks of age, of small quantities of gluten does *not* reduce the risk of celiac disease (Vriezinga, Auricchio et al. 2014). Hence, the present study's findings suggest that the public health nurses' exclusive breastfeeding counselling is affected by this constantly evolving body of research and the disputes therein regarding the ideal exclusive breastfeeding duration. Likewise, it could be stated that the public health nurses followed the national guidelines and, as such. used the infant's weight development, sleep pattern and/or breastfeeding problems as indicators of appropriate duration of exclusive breastfeeding when giving advice.

When breastfeeding was well established, worked and the infant, in addition, had an even weight gain on breast milk only, *no* complimentary feedings were recommended by the public health nurses. Immigrant mothers who nonetheless introduced infant formula, often due to their perceived low milk supply, were encouraged by the public health nurses to try stimulating their breast milk production. The advice was to increase intake of liquid and/or engage in frequent nursing. However, the public health nurses found the task of trying to motivate immigrant mothers to be challenging, as they were perceived having low compliance. This correlates to other studies that describe mothers who introduce infant formula due to perceived low milk production (Gatti 2008, Li, Fein et al. 2008, Nguyen 2013, Lyngstad 2014). A study by Zhou et al. (2010) highlights the need to educate mothers on breastfeeding. They found that knowledge was strongly associated with practice. Hence, mothers who had learned and believed in the stimulation of breast milk production by frequent sucking were about three times more likely than their peers to breastfeed (Zhou, Younger et al. 2010). This study might indicate weaknesses in the public health nurses' counselling despite their perception of encouraging immigrant mothers to increase breast milk production. The public health nurses might not have been as supportive or educating as they perceived themselves to be. A literature review of mothers' and healthcare professionals' experiences and perceptions of breastfeeding support described the health professionals unfavorably (McInnes and Chambers 2008). It was found that the mothers wanted social support more so than health service support. The mothers complained about, among other things, the lack of professional guidance and the promotion of unhelpful practices. This might have been the case in this study as well. Not being able to motivate mothers to stimulate their

breast milk production might also have been due, at least in part, to a lack of comprehension of the public health nurses' advice among immigrant mothers. This correlates with findings from Lyngstad (2014), who suggests that immigrant mothers might not fully understand the reason *why* milk production should be stimulated. Hence, it is important to make public health nurses aware of this. Enabling immigrants to understand the underlying reasons for the advice given might also have the potential to affect their own practices and durations of exclusive breastfeeding.

Nutrition advice

The most noted information that the public health nurses described giving regarded the infant's digestive system and its ability to tolerate solid food from four months of age. This was considered *information only*. Lyngstad (2014) pointed out that a few immigrant mothers perceived such information as an invitation to start solid food introduction and, hence, disrupt exclusive breastfeeding. Whether this was due to language barriers or not was not investigated. However, Pak-Gorstein et al. (2009) suggest that the clinician is more likely to succeed in delaying a mother's introduction of solid feedings if this is addressed early, at the two-month counseling appoitment, rather than after solid food has already been introduced. This corresponds to how the public health nurses in this study described their approach to counselling immigrant mothers, i.e. by informing them about the introduction of solid food quite early. This might suggest that some immigrant mothers possibly misinterpreted this information as an invitation to or suggestions that they should introduce solid food early. Therefore, it is important that public health nurses are made aware of this when providing immigrant mothers with information regarding the introduction of solid food. Making sure that immigrant mothers understand the difference between information and advice is pertinent in order to prevent misunderstandings as well as to ensure maximal exclusive breastfeeding duration.

During nutrition counselling with immigrant mothers, the public health nurses often started by asking mothers what food they usually ate or what food they used to eat themselves when growing up. According to the public health nurses, this provided them with a better understanding of immigrant food use, which they hence perceived as providing them with a better means of providing guidance. Additionally, this was perceived as a good way of initiating communication about infant food and nutrition. This praxis was consistent with Pak-Gorstein et al. (2009) who stated that asking a mother a few culturally-based questions might

help clarify her perspective. Additionally, they suggested that gathering such information before counseling allows for the development of a trusting rapport with the mothers as well as the opportunity for shaping the clinician's advice (Pak-Gorstein, Haq et al. 2009). In this study, the public health nurses further focused on nutrition knowledge and food appearance, such that immigrant mothers would know the food types needed in order to provide their infants and children a well-balanced and nutritious diet.

It was implied that the public health nurses' nutrition advice is also summarized and elaborated upon in the Norwegian booklet 'Food for Infants'. The recommendations in the booklet are from the year 2001, when the State Council for nutrition and physical activity revised the infant and child nutrition recommendations in Norway, echoed by the WHO (Helsedirektoratet 2001, Häggkvist, Brantsæter et al. 2010). Since it was perceived that the 'Food for Infants' booklet addressed relevant breastfeeding and nutrition topics, while also providing concrete food suggestions, the booklet served as a foundation to the public health nurses' nutrition counselling. Hence, immigrant and Norwegian mothers alike were counselled to continue breastfeeding for at least one year and preferably longer, and to breastfeed first, before offering solid food to the infant, in order to maintain milk production. Hence, study findings indicate that this advice corresponds with current infant and child nutrition guidelines and recommendations (Helsedirektoratet 2001, organization 2003, Häggkvist, Brantsæter et al. 2010, Eidelman, Schanler et al. 2012).

Factors perceived as potentially influencing infant and child nutrition decisions

The public health nurses perceived immigrant mothers' desire to have larger, chubby infants as a predominant factor possibly affecting their exclusive breastfeeding patterns and leading to early introduction to infant formula. It was further perceived that the term *exclusive breastfeeding* was not fully understood, which is also supported by the findings of Nguyen (2013) and Lyngstad (2014). Since the trend toward childhood obesity starts as early as six months, it is important that families of affected infants receive adequate nutrition counselling (De Onis, Blössner et al. 2010). According to this study, the public health nurses perceived themselves as constantly counselling immigrant mothers that there is no need for introducing infant formula. Nguyen (2013) found that Somali mothers had a different perception of the public health nurses counselling and, particularly, that those, who introduced their infants to infant formula from the age of three months or earlier perceived the public health nurses to have a passive approach toward the topic. They wished that the public health nurses were

more active in providing infant feeding information. This indicates different perceptions of the nurses' approach and advice. Other research confirms that the belief that chubby infants and children are healthy is shared by many immigrants (Pak-Gorstein, Haq et al. 2009, Steinman, Doescher et al. 2010, Lyngstad 2014). Similarly, immigrant adults also relate overweight to good health, wealth and status (Mellin-Olsen and Wandel 2005). Hence, in this study, the public health nurse's perception correlates to other findings indicating that immigrants' desires for larger, chubby, infants might have an influence on their nutrition decisions and practices. However, this might not be the only reason that they choose to feed their infants as they do. Findings from studies in which immigrant mothers stated a wish for more infant feeding information, while also indicating that the mothers did not fully understand the term 'exclusive breastfeeding', might indicate that public health nurses are not always able to provide immigrant mothers with appropriate exclusive breastfeeding and nutrition counselling (Nguyen 2013, Lyngstad 2014). Hence, public health nurse should be made aware of immigrant mother's possible misinterpretation of counselling. Additionally, public health nurses should be made aware of their own communication patterns with immigrant mothers as to strengthen and ensure high quality and equal infant and child nutrition counselling. This might potentially have a positive effect on immigrant mother's exclusive breastfeeding durations.

Another factor initially stated by the public health nurses as potentially influencing immigrant mothers' decisions regarding infant and child nutrition was close family members. Other research supports these findings ((Pak-Gorstein, Haq et al. 2009, McFadden, Renfrew et al. 2013). However, the public health nurses of this study emphasized that this was a common phenomenon among new mothers and not necessarily culture bound. Half of the public health nurses perceived immigrant mothers, as well as Norwegian mothers, to be influenced by and take breastfeeding and nutrition advice from someone other than themselves, for example their mothers, grandmothers or mothers in-law.

Perceived challenges

Language

The public health nurses in this study mentioned *language* as the most challenging factor when giving advice to immigrant mothers who spoke limited or no Norwegian. Hence, language emerged as an important theme and will be further discussed towards the end of this chapter. The language challenge was predominantly perceived to be due to the loss of language nuances and the fact that the public health nurses perceive themselves as depending on nuances during counselling. Good command and use of a full vocabulary, i.e. being fluent in a language, allowed the public health nurses to find words they could elaborate on and compare things with. The elaboration of words was of high relevance for the public health nurses when giving infant and child nutrition advice. According to them, being able to elaborate on words would, in most instances, lead them to unravel precisely *what* a problem and/or challenge was about. When not able to use nuances in the language, it was perceived that the quality of counseling, to immigrant mothers decreased. Hence, the public health nurses perceived that immigrant mothers, at times, received inferior infant and child nutrition counseling compared with Norwegian mothers. This is equivalent to what researchers have shown before with regard to cross-cultural communication barriers in health care (Ulrey and Amason 2001, Bischoff and Hudelson 2010, Hanssen and Alpers 2010). A study by Hanssen and Alpers (2010) found that a mean of 54.5 percent of health professionals found some ethnic minority patients more difficult to cooperate with than others. One main issue, according to the health professionals in that study, was precisely the lack of a common language/linguistic problems.

The lack of a common language also affected the duration of the consultations with immigrant mothers. 'Everything took longer time', according to the public health nurses – something that sometimes led to time constraints. This caused a ripple effect, because the public health nurses had a manual stating what each consultation should contain. Therefore, counselling, at times, went a bit fast in order for them to follow their daily time schedule. This, in turn, led to misunderstandings between immigrant mothers and the public health nurses. Other studies that investigated intercultural communication indicated similar results. For example, health professionals stated that time restrictions, language and cultural barriers limited their engagement with immigrant patients (Pimmer 2013). This further correlates with findings from Lyngstad (2014) and Nguyen (2013) who study Somali mothers in Norway. Their results indicate that immigrant mothers find the atmosphere at maternal and child health

clinics to be stressful and feel that the public health nurses do not give them enough time during consultations. This might indicate the need for structural reorganization within the maternal and child health clinics in order to better support the public health nurses and allocate better time. Interesting for this study is that the public health nurses are aware of the effect the language barrier has on the time of the consultations. It was not further investigated if this challenge was brought to anyone's attention. The time constraints might have an impact on immigrant mother's breastfeeding duration and/or feeding praxis.

Food culture

When giving nutrition advice to immigrant mothers, the lack of a common understanding of food items challenged the public health nurses. It was perceived that if, in addition, a common language was missing, the challenge of reaching a mutual understanding of food items was even more difficult. Hence, this was perceived as having an impact on the quality of the public health nurses' infant and child nutrition counselling. Likewise, it should be noted that the public health nurses recognized that they too had limited knowledge of immigrant food culture, andt a food-type knowledge gap thus emerged for each party, immigrant mothers and public health nurses alike. Research by Fagerli et al. (2005) indicated the positive effect of having some knowledge of immigrant food culture. They studied role dilemmas among Norwegian health workers in cross-cultural patient encounters around dietary advice. These health workers stated that the best way to be patient-centered towards patients of Pakistani background was to meet them with knowledge of their Pakistani food culture. The reason given was that this affected the patient in a positive way. They opened up and became more talkative, as well as happy and confident, when they realized the health worker had heard of 'their' food (Fagerli, Lien et al. 2005). In addition, lack of a common understanding of food was also discussed by Garnweidner et al. (2012). They evaluated the perceptions of the host country's food culture among female immigrants from Africa and Asia. That study revealed that the participants tended to have an unclear picture of what was considered typical Norwegian food. As a result, when the public health nurses referred to a certain type of traditional Norwegian food, immigrant mothers did not always know what this food was. This suggests, in this study, that the public health nurses' lack of pre-knowledge regarding immigrant food culture might impact their counselling to immigrant mothers. Based on these findings, it is suggested that the public health nurses would benefit from cultural food education. By having some knowledge of immigrant's food, the public health nurses might be able to provide them with better nutrition counselling.

Overweight

The public health nurses in this study perceived immigrant mothers, and Somali mothers in particular, as having a different norm with regard to infant weight and that which is considered as being overweight. Similar findings are reported by Lyngstad (2014) and Nguyen (2013). It was further perceived by the public health nurses as challenging to 'disappoint' the mothers by informing them that their chubby infants are considered unhealthy, and that research indicates that childhood obesity might increases the risk for type 2 diabetes, hypertension and cardiovascular disease (Hesketh, Wake et al. 2004, Vos and Welsh 2010, Holmboe-Ottesen and Wandel 2012).

In a study by Steinman et al. (2010), Somali mothers living in the United States were asked to describe their ideal infant weight. They identified 'average' as being ideal and further defined average as 'just the right plump'. The mothers' positive attitudes towards overweight infants stemmed from traditions in which "a fat child was considered healthy, while a skinny child was considered sick". Hence, mothers worried about their infants' weight and believed that they were more susceptible to sickness and poor health if not at an ideal, i.e. plump, weight (Steinman, Doescher et al. 2010). Plumpness was hence linked to health, strength and beauty (Steinman, Doescher et al. 2010), which indicates that the public health nurses' perception, in the present study, correlates with immigrant mothers' possibly different norm with regard to ideal infant weight. This further indicates the need for public health nurses to educate immigrant mothers in regards to what is considered normal and healthy body weight for infants and children.

The public health nurses also stated that part of their perceived challenge when giving nutrition counselling to immigrants was the way they answered the public health nurses' nutrition/food questions. It was perceived that immigrants, at times, responded to the public health nurses questions by stating healthy food options that, according to them, was what their child ate, for example fish and vegetables. However, according to the public health nurses, the weight charts unquestionably indicate that the child was overweight. Whether dishonest answers were intentional was not further investigated.

Infant formula

The public health nurses stated that mothers often introduced infant formula on their own, without seeking guidance from them. In addition, most of the time, there were no indications, according to the public health nurses, that the infant needed a breast milk supplement. It was

indeed mentioned that Norwegian mothers sometimes supplement breast milk with infant formula as well. However, this was predominantly observed among immigrant mothers, and particularly Somali mothers. These findings are consistent with other studies (Lyngstad ,2014; Nguyen, 2013; Pak-Gorstein et.al. 2009). Likewise, a study by Steinman et al. (2010) found that complementing breastfeeding with infant formula was perceived to be common praxis among Somali mothers. Pak-Gorstein et al. (2009) confirms this as well, suggesting that this praxis stems from cultural and past experiences with fears regarding infant under-nutrition. Hence, so strong are these fears that Somali mothers have revealed community and family pressure to supplement human milk with formula to keep their infants chubby.

Cow milk

The public health nurses perceived children's overconsumption of cow milk to be a common general challenge. Considerable amounts of time were spent discussing this overconsumption during consultations. According to the public health nurses, too many children filled up on cow milk and, hence, when they were offered solid food, they were not hungry or interested. Despite the public health nurses' perceived continued nutrition counselling with emphasis on not giving children more than maximum five to six deciliters of cow milk per day, and especially not during the first year of life, they perceived their counselling as not being followed. This also became evident when immigrant children came for their one year consultation and blood tests taken at that time often revealed low levels of hemoglobin, a possible contribution to iron-deficiency. This correspond to other studies indicating that children might be at higher risk for iron deficiency, due to high volume of milk intake and lack of iron-rich solid foods (Brotanek, Halterman et al. 2005, Maguire, Lebovic et al. 2013, Powers and Buchanan 2014).

In addition, prolonged bottle feeding, after 24 months of age with cow milk has been reported (Kaste and Gift 1995, Lampe and Velez 1997), and more often among certain ethnic groups (Brotanek, Halterman et al. 2005, Pak-Gorstein, Haq et al. 2009). Interestingly, the public health nurses in this study perceived immigrant mothers in particular to 'solve everything with a bottle of milk'. According to Pak-Gorstein et al. (2009), this might be due to a child-raising philosophy that involves reluctance to upset the child, hence leading to frequent and prolonged bottle-feedings. However, when the public health nurses stated immigrant children's overconsumption of milk during interviews and focus groups, they did not mention bottle feeding. The child nutrition recommendations from the Directorate of Health

(Helsedirektoratet 2001), WHO and UNICEF (2003) state that children can start drinking from a cup at six months of age or, if they are not capable, from a bottle. Pak-Gorstein (2009), in addition, states that bottle-fed infants should be weaned by 15 to18 months of age to prevent bottle caries, iron deficiency anemia, poor weight gain and obesity. It might be possible that the public health nurses in the present study, in giving nutrition advice to immigrant mothers, discussed bottle feeding and gave counselling accordingly, without mentioning it in interviews or focus groups. This was not further investigated, though a suggestion might be to further investigate the public health nurses' interpretations and perceptions of the connection between immigrant children's excessive milk consumption, length of bottle use and their own counselling regarding bottle feeding.

Sweets

During home-visits to immigrant families, the public health nurses stated that they often saw sweets, such as candy, sugar, soft drinks and honey, lying around and, hence, easily available for children to take and eat at any time. Most of the public health nurses had also attended group meetings in which mothers, Norwegian and immigrant, made food together. At that time, the public health nurses also became aware of immigrant mothers' excessive use of oil and sugar in their cooking. This corresponds to a study of Pakistani women who stated that they increased their use of butter and margarine after moving to Norway and used generous amounts of oil when cooking (Mellin-Olsen and Wandel 2005). Hence, the public health nurses in this study perceived immigrant mothers to over consume these items, which also correspond with other studies (Popkin and Gordon-Larsen 2004, Gilbert and Khokhar 2008, Holmboe-Ottesen and Wandel 2012, Popovic-Lipovac and Strasser 2013). The consumption of sweets further challenged the public health nurses during nutrition counselling because immigrant mothers were perceived as overlooking and not mentioning it to the public health nurses.

Not mentioning their children's consumption of sweets might stem from the immigrants' own traditional beliefs and practices related to food and nutrition. This is stated as being due to the fact that food and food preferences are components of cultural identity (Bhugra 2004). There are various characteristics that predict the degree to which immigrants may change their attitudes and beliefs about food. The observations made by the public health nurses in this study regarding the consumption of sweets and oil by immigrants correlates with the dietary

acculturation model created by Koctürk (1991). She stated that taste has a priority when new foods are incorporated into the diet. Hence, sweets, fruit, snacks and drinks are usually adopted first, which corresponds with the finidngs of this study. In addition, immigrants might encounter increased availability of such food in the host country.

Additionally, it was found that they ways in which immigrant mothers incorporated or used these products were far from the Norwegian diet and the public health nurses' own infant and child feeding knowledge. For example, mixing sugar with vegetables or giving infants/children a bedtime bottle of tea with sugar, were food combinations that the public health nurses often did not even think to ask about during nutrition counselling. Hence, the public health nurses perceived immigrant children's overconsumption of sweets as unfortunate, since not knowing an approximate intake of sweets might result in misconceptions that could possibly impact their nutrition advice. This is also of concern since it has been found that some minority groups are at higher risk than the host population of contracting nutrition-related diseases such as Type 2 Diabetes and cardiovascular disease, as well as becoming obese (Fagerli, Lien et al. 2005, Gilbert and Khokhar 2008, Dekker, Snijder et al. 2011, Holmboe-Ottesen and Wandel 2012). In addition, incorrect feeding practices, for example the addition of sweetened solids to milk, the bottle feeding of sweetened beverages and the practice of sweetening pacifiers with honey or jam, are strongly associated with the development of nursing caries (Organization and Unicef 2003). Thus, the public health nurses' nutrition counselling is important and pertinent. Hence, it is strongly suggested in this study that public health nurses get appropriate information and education on different food cultures and changes in food patterns after migration. A study by Fagerli et al. (2005) stated that health personnel report having limited knowledge of immigrant diets and the dietary changes that might have occurred after migration. This matches the findings from this study and the public health nurses' own perception of insufficient knowledge about immigrant diets.

Proposed solutions

Inspiring to note was that the public health nurses not only propose solutions based on their perceived challenges encountered when providing services to immigrant mothers, but they looked upon themselves and saw their own shortcomings regarding cultural knowledge. These findings are especially joyful considering that health personnel tend to view the immigrant population as a particularly challenging group (Hussain-Gambles, Leese et al. 2004).

Half of the public health nurses in this study described wishing to learn more about providing cross-cultural services, as well as a desire to learn more about different ethnic groups and their beliefs and practices. They stated that their professional education had not contained any of this and, hence, emphasized its need. This relates to a study by Mangelssen (2012) and her research on cultural competency in nursing education. Her findings indicated that Norwegian nursing students received no skill training relevant for migration, health or equal health services at most colleges.

The public health nurses further perceived themselves as having nutrition knowledge and and understanding of how to convey it, but as lacking culturally conditioned pre-understanding regarding nutrition and food traditions in the different cultures they encountered. They explained that increased cultural knowledge would enable them to better communicate infant and child nutrition advice to immigrant mothers. This suggestion is supported by others, for example Popovic-Lipovac et al. (2013) who concludes that dietary interventions among immigrants have to be done as a part of complete health care, which can only be accomplished if physicians (and other health professionals) are sensitive to cultural origin, values, attitudes, behaviors, feelings and preferences. Similarly, Fagerli et al. (2005) suggested that health workers would benefit from taking the time to expand their knowledge of ethnic minority food-cultures in order to apply that knowledge in their patient-encounters.

Apart from the public health nurses' proposition to increase their own cultural knowledge, a commonly mentioned finding, in this study, was the public health nurses' proposed solution of arranging group meetings for immigrant- and Norwegian mothers alike. Additionally, providing such meetings may potentially lead mothers to support each other, for example, with regard to breastfeeding (Dennis, Hodnett et al. 2002). Other research also suggested breastfeeding support groups as a possibility for empowering mothers (Paoli 2004). Hence, group meetings/support groups might have the potential to empower immigrant mothers in Norway as well, just as suggested by the public health nurses in this study. The public health nurses that had experience from such meetings stated that the response from immigrant mothers that had attended themselves was overwhelmingly positive. In fact, when meetings could no longer be carried out, often due to a lack of funds, mothers frequently requested them and asked the public health nurses when these meetings would start up again. The public health nurses perceived group meetings as providing an informal setting that encouraged positive interactions between both mothers and public health nurses, hence acting as a bridge-

builder between all parties and strengthening their relationships. Similarly, when Wathne et al. (2013) explored the social aspects of childhood and adolescent obesity among Pakistani youngsters in Norway, the research arena consisted of a leisure activity of the participant's choice and often, as stated, it was bowling. The researchers concluded that conversation in this informal setting seemed to demystify participation for the youth involved, proved helpful for breaking the ice and opened up for communication. In addition, they stated that this form for interaction might have prolonged participation and made it more attractive.

Experiences from group meetings, in this study, also made the public health nurses notice that Norwegian and immigrant mothers were curious about each other and, when provided with an opportunity to interact, often did. This was an important finding in relation to immigrant mothers since it is a promising step in the direction of integration. When the public health nurses additionally focused on health education and gave the mothers appropriate infant and child nutrition information, the value of such meetings, as proposed by the public health nurses, should not be underestimated. The variations of health topics being brought up during group meetings might be countless. For example, in relation to the public health nurses conveying nutrition advice to immigrant mothers, they had experience from group meetings in which they prepared food together and discussed nutrition value. According to the public health nurses, immigrant mothers were able to better understand their nutrition advice after such events. This might indicate that immigrant mothers, prior to attending the 'food' group meetings as stated by the public health nurses, did not know how to prepare healthy food. This corresponds with what Garnweidner et al. (2012) found when studying the perceptions of the host country's food culture among female immigrants from Africa and Asia. Participants in that study seemed interested in learning how to prepare Norwegian dishes, though a possible lack of necessary skills was observed. Likewise, other studies found that some parents did not know what healthier options were and others stated they did not know how to make food healthier (Slusser, Prelip et al. 2011). Almost all of the parents in that study expressed willingness to participate in group meetings about nutrition education. Interestingly, they also stated that they were most interested in participating in interactive activities rather than just learning specific facts. Specifically, they wanted to learn how to cook and how to cook healthier food. This corresponds to the present study and the public health nurses perception of successful group meetings together with immigrant and Norwegian mothers preparing and communicating healthy food choices. These findings indicated that public health nurses proposed solutions possibly have the potential of

expanding their health promotion to immigrants by participant interactions at group meetings, thus making learning more attractive (Wathne, Mburu et al. 2012, Telle-Hjellset, Kjøllesdal et al. 2013). Further, targeting parents to improve their children's dietary behaviors is necessary for preventing childhood obesity. Thus, it is considered a feasible strategy, given that parents are mostly responsible for food choices and can influence the eating patterns of their children, especially during childhood (Vos and Welsh 2010, Slusser, Prelip et al. 2011). Waiting for school programs to influence children's eating patterns is probably too late (De Onis, Blössner et al. 2010). Additionally, without practicing how to make nutritious food, it is difficult to learn. The latter point is supported by Nutbeam (2000). He suggests that structural interventions sometimes lead to health promotion that is done 'on' or 'to' people rather than 'by' or 'with' people (Nutbeam 2000).

Perceived value of the information material provided

It was found that the public health nurses perceived the information booklets 'Food for Infants' as a foundation and compliment to their advice and recommendations and hence, also, to serve as a mother's infant and child nutrition guide. These booklets were given to all mothers in Norway and, according to the public health nurses, had long been requested to be translated. To whom this request was made and in what way was not explained or further investigated. However, the public health nurses expressed dissatisfaction and found it startling that the Directorate of Health gave out such important nutrition information in Norwegian only, especially considering that immigration is not new to Norway. In fact it has been on a steady rise since the 1970s (Norway 2014).

The public health nurses had, however, some translated information material that they could give to immigrant mothers in the form of hand-outs, for example on cod liver oil. Since the public health nurses experienced very good compliance by immigrant mothers giving this to their children, they perceived that verbal advice was better comprehended when it was complemented by written information in their native language. However, a few of the public health nurses stated the importance of not only translating written information material but, in addition, making it culturally appropriate. They referred to the effect that culture has on people's interpretation of health information and, hence, the need to make advice compatible with cultural values. A study by Madar et al. (2009) investigated the effect of providing immigrant mothers in Norway with translated information on vitamin D. The intervention group, in that study, received brochures written in their native language, providing information about how to improve their vitamin D status. They were later compared with a control group that received oral information only. The results indicated that written information in the native language alone was insufficient in order to improve the mother's vitamin D status (Madar, Stene et al. 2009). This might indicate that, despite the fact that the public health nurses in this study perceived good compliance in regards to immigrant mothers giving cod liver oil to their children, they also correctly indicated that translating information alone would not necessarily be of help to all immigrant mothers.

Kreuter et al. (1999) explains that, when developing health education materials, the content and presentation of targeted information should be guided by an understanding of the unique needs of the population's members. Hence, the more information available about the intended recipient and their cultural values, the better able one is to create materials individualized to their specific needs (Kreuter, Strecher et al. 1999). Health promotion literature also suggests

that “tailoring” health messages to individual populations is better than “targeting” them with general announcements, as tailored health messages conform to the needs, characteristics and cultural beliefs of a subpopulation (Stampino 2007). The results from this study show that the public health nurses identified the need for both translating *and* tailoring written information in order to possibly increase the contents value for immigrant mothers. This is also in line with current health promotion strategies (Kreuter, Strecher et al. 1999, Stampino 2007, Garnweidner, Terragni et al. 2012).

Just as stated by the public health nurses in this study, it is pertinent that the booklet ‘Food for Infants’ is re-worked in order to make it culturally adapted for immigrant mothers as well. A suggestion, when tailoring nutrition information, would be to closely collaborate with public health nurses and immigrant mothers in order to avoid cultural stereotypes as well as for the sake of getting specific suggestions, for example on improved phrasing. In addition, written educational information could be provided in bilingual versions as a means for them to learn Norwegian. Likewise, public health nurses could benefit from learning common phrases in immigrant languages and, for example, the names of some of their most common food items. An alternative might be to have translated versions of the booklets available in multiple languages, for example on the internet, such that public health nurses or immigrant mothers themselves could print them out in the appropriate languages. It should be noted that the public health nurses were, from experience, aware that not all immigrants would be capable of utilizing written material regardless of whether or not it was translated, due to illiteracy. However, having translated and re-worked written infant and child nutrition material and making it easily available would possibly contribute to developing and strengthening a trusting immigrant/public health nurse relationship by signalizing interest and cultural curiosity.

Language

Language barriers

Not being able to communicate in the same language was perceived by all the public health nurses to be challenging when giving breastfeeding and nutrition advice to immigrant mothers who spoke limited or no Norwegian. Language barriers were also the first and main topic stated by all public health nurses when they mentioned challenges. This is not surprising, as the language barrier is the primary challenge for meeting the health care needs of the immigrant population (Kale and Syed 2010, Kale and Kumar 2012). Consequences of language barriers in intercultural health care communication are well documented (Ulrey and Amason 2001, Schyve 2007, Côté 2013, Pimmer 2013). Hence, the findings of this study correlate with earlier research.

Public health nurses in this study stated that the language barrier resulted in them using fewer words when communicating with immigrant mothers who were not fluent in Norwegian. Despite the fewer-word communication, the public health nurses experienced miscommunication. At times, this miscommunication led to a delay in immigrant mothers' implementation of the public health nurses' infant and nutrition advice. This was due to the fact that immigrant mothers, at times, acknowledged to the public health nurses that their advice were indeed understood. However, at later consultations, the public health nurses realized that this was not the case as it became evident that the advice had been misunderstood. Hence, implementation of nutrition advice became postponed. It was interesting to note that a communication study of language barriers by Kale et al. (2009) identified similar challenges. They stated that healthcare providers usually have limited or no training in how to evaluate patient's language abilities. In addition, they stated, that healthcare providers often have no clear procedures for how to follow up after facing language barriers and, hence, often seem to be left alone to make the decisions themselves (Kale, Ahlberg et al. 2010). This seems to correlate to the experiences of public health nurses in the present study, as they experienced a lack of clear follow-up procedures after facing language barriers. This also became evident after the public health nurses themselves stated that the way in which they solved this situation was by repeating and giving immigrant mothers the same advice numerous times until it became understood. Schyve (2007) argues that effective health communication is communication that is comprehended by both participants and enables participants, i.e. healthcare providers and patients, to clarify the intended message. When communication is not effective, the provision of health care either ends or proceeds with poor

quality (Schyve 2007). The findings from the present study indicate that this was indeed experienced by the public health nurses. They stated that, due to the language barrier, their advice was not fully understood by immigrant mothers and hence, involuntarily to them, affected the health care quality.

The public health nurses further perceived language barriers as being extra challenging when immigrants who spoke limited Norwegian stated that they wanted to use family members as translators instead of professional interpreters. The public health nurses perceived this to be common. They explained that, often, the family members wanting to translate were immigrant men accompanying their wife and infant to the maternal and child health clinic. The men usually had lived for a longer period of time in Norway before reuniting with their wives and family, and therefore spoke *some* Norwegian. The men seldom comprehended themselves to have language difficulties and speaking some Norwegian was inadequate according to the public health nurses. In addition, the public health nurses did not always know how to convey to immigrants that they perceived otherwise, i.e. the need for using an interpreter. It was generally perceived as difficult to go against the family member's wish and the public health nurses stated, for example, that they had experienced immigrants getting offended by their suggestion to use professional interpreters. In addition, when family members wanted to translate themselves, the public health nurses mentioned uncertainty about how their advice was conveyed, regarding what was actually being said or 'not said'. Interestingly, this correlates with findings reported by Pimmer et al. (2013) who, through an exploratory, cross-cultural study, examined intercultural communication and associated challenges between patients and health professionals in three European countries: Sweden, Germany and Switzerland. They found that participants working in pediatric and neonatal care reported that immigrant fathers often took the leading role in the interaction with health professionals. This was reported as being due to the fact that the father often had been residing longer in the country and, accordingly, had stronger language skills, or possibly because of his dominant role in the culture. Accordingly, it was found to be challenging for health care professionals, in that study, to establish and maintain communication with mothers. Overall, it was found to be problematic to have fathers serve as translators since it was not transparent to healthcare professionals if they objectively and comprehensively translated the information to their wives/partners (Pimmer et al. 2013). Other possible reasons as to why immigrants in this study had a wish for using family members as translators instead of getting interpreter assistance were not further discussed with the public health nurses. According to Hanssen and

Alpers (2010), not wanting interpreters can also be due to immigrants mistrusting them. They might worry that an interpreter will break their oath of secrecy by 'talking', i.e. gossip and stigma.

Findings from the present study indicate that public health nurses are seemingly left to themselves without clear guidelines for how to relate to immigrants who, despite limited proficiency in the host country's language, want to translate health-related advice and information. This indicates the need to provide and empower the public health nurses at maternal and child health clinics with clear routines for facilitating the use of professional interpreters through information and training (Bischoff and Hudelson 2010).

Public health nurses' attempts to overcome language barriers

This study found that all the public health nurses had developed their own ways of trying to secure that their nutrition advice was understood by immigrant mothers. This was done by complimenting their verbal communication by the use of pictures of food, empty food boxes or by drawing. The public health nurses perceived the visual to be a very important supplement to their infant and child nutrition counseling, especially when trying to reach a common understanding of the types of food that the public health nurses were referring to. Similar recommendations, such as supplementing verbal advice with pictures, come from Pak-Gorstein et.al. (2009). They state that immigrant mothers achieve a better understanding of a problem or advice when health care professionals give a clear explanation together with pictures. Likewise, the use of pictures assisted researchers during the InnBaKost pilot study, when assessing dietary intake of toddlers of Somali- and Iraqi-born mothers living in Norway (Grewal, Mosdøl et al. 2014). In order to help the mothers and the field workers identify the correct foods given to the child, they developed a library with pictures of food items commonly eaten by children in Norway. In addition, pictures of food items identified as eaten by Somali and Iraqi children were also included. From that study, both the mothers and the field workers found the visual tools to be useful (Grewal, Mosdøl et al. 2014). Pictures were also used during the InnvaDiab-DE-PLAN study, which was a culturally adapted education program to improve the risk profile for type 2 diabetes in Pakistani immigrant women (Telle-Hjellset, Kjøllesdal et al. 2013). In that study, one particular goal was that participants should obtain the necessary knowledge about how to influence their blood glucose level in everyday life. Since many participants had low literacy levels, mainly culturally adapted pictures and figures were used during the education sessions. This seems to suggest that the use of pictures becomes a natural supplement to verbal advice when a common language is missing, thus

indicating that, by using pictures, the public health nurses in this study did their utmost to convey nutrition advice to immigrant mothers who spoke limited or no Norwegian.

Interestingly, and by coincidence for this study, a few of the public health nurses had participated in a research project named SOMAH, in which they were provided with iPads that had a visual application program with pictures of food. Hence, they used this during nutrition consultations with immigrant mothers. These public health nurses were particularly enthusiastic about this additional communication tool, which they referred to as being alpha and mega. Actually, this tool was perceived as being so helpful that the public health nurses stated that they could not imagine providing nutrition counseling without it. These public health nurses had, previous to participating in the SOMAH research project, used their own complimentary communication strategies, as the other public health nurses in this study previously mentioned. Hence, they were able to compare both methods, their own (self-made) against the SOMAH food application, which was considered superior. It was described as being very positive to be able to sit together, using the SOMAH food application, and look at food pictures that the public health nurses were referring to. In addition, this communication tool made it easier to find the food products that the immigrant mothers used and, hence, also made it easier to give examples of healthy eating. The application worked as an aid to further nutrition conversation and, as stated by the public health nurses, this was perceived as equally helpful when communicating with Norwegian mothers. It was further perceived that the risk of misunderstanding was drastically reduced. Considering the extremely positive feedback from public health nurses who were using the SOMAH application, in addition to research findings, it is strongly recommended that all public health nurses are made aware of the applications' existence. Preferably, all public health nurses should be supplied with handheld iPads, since that is what the application is designed for and, hence, makes it usable anywhere.

Interpreter

Lack of communication is frustrating for public health nurses and patients alike. All of the public health nurses in this study had experience using interpreters, either via the telephone or physical attendance. Most of the public health nurses also perceived themselves as being consistent in their use of interpreters when immigrant mothers did not speak Norwegian or limited Norwegian. It was further stated that it was easier to arrange telephone interpreters because the public health nurses perceived them as being more motivated, geting more

involved and performing better. The public health nurses also perceived that, by using a telephone interpreter, the communication became more 'normal' compared with having interpreters present. It was stated that, when interpreters were present, the public health nurses perceived that they had to turn to the interpreter during communication instead of to the mother. Hence, the interpreter got more focus. Interestingly, another study using Spanish interpreters pointed out that health professionals were more satisfied than patients with telephone interpreters (Kuo and Fagan 1999). On the other hand, Le (2013), found that patients perceived telephone interpreters as a good solution when interpreters were not able to meet in person. The informants in that study also mentioned that they preferred telephone interpreters for special situations, like acute admissions, when themes discussed were perceived as being difficult or topics requiring anonymity (Le, 2013).

Even though interpreters were perceived as necessary when a common language was missing, it was stated as not being unproblematic. The public health nurses still experienced misunderstandings and a few of the public health nurses perceived communication as not good enough when giving nutrition advice, despite the use of an interpreter. This is not uncommon according to Hanssen and Alpers (2010). They stated that knowledge gaps might exist between health professionals and patients in intercultural health care setting, since words translated lexically correct may create no meaning in the receiving party. Hence, a word-by-word translation makes it possible to converse without ever realizing that one's words do not create any meaning in the other party, even when communicating through an interpreter (Hanssen and Alpers 2010). Additionally, one may, at the same time, bring the cultural aspect into cross-cultural interpretation, as perception is influenced both by language and culture (Hanssen and Alpers, 2010). The public health nurses in this study acknowledge miscommunication challenges as described by Hanssen et al. (2010). In addition, the challenges of not knowing the qualification of the interpreter service and not being able to form a working relationship with interpreters were perceived as directly influencing the quality of their service. Hence, this study sees the importance of providing public health nurses with appropriate education on how to use professional interpreters in order to secure quality communication. This is further documented and supported by Le (2013), among others, as well as providing proposed implementation strategies in order to possibly strengthen cross-cultural communication (Le 2013). This corresponds with the recommendations of other authors as well (Dahl 2001, Ulrey and Amason 2001, Hanssen and Alpers 2010, Kale and Syed 2010).

It should be noted, before concluding this discussion, that all of the public health nurses in this study described positive aspects of their encounters and experiences with immigrant mothers. This was an unexpected and especially joyful finding since there were no research questions or other indications prompting such statements. In addition, these positive statements were originally overlooked. They did not emerge until several months had passed and the transcribed and coded interviews and focus groups discussions had been continuously read, re-read and evaluated many times using different approaches. The first time that I became aware of such a positive statement, I systematically started looking to see if I could find others that were similar. To my surprise, I not only found others, but I found such positive statements from all the public health nurses. Just as it was exciting to find these, and it certainly gave me extra work inspiration, it was equally embarrassing to realize that I had overlooked asking the public health nurses for perceived advantages from their encounters with immigrant mothers. Some positive reflections shared and stated by the public health nurses are: immigrants are such a grateful group to work with; home-visits with immigrants are exciting because there is so much to learn; it is exciting to share experiences; we learn from each other; we admire some of the immigrant mothers; some immigrant mothers are so eager to learn; they are so thankful for our help.

Chapter: 6 Conclusion and future implications

The purpose of this study was to explore how public health nurses experience cross-cultural service provision and communication regarding infant and child nutrition in Norway. Through interviews and focus group discussions, a total of 24 public health nurses openly shared their experiences and opinions.

The results indicate that, despite Norway's steady rise in immigration, the public health nurses have received limited education on how to meet the needs of a multicultural society. Nevertheless, the public health nurses in this study enthusiastically and independently mentioned the joy of providing infant and child nutrition advice to immigrant mothers. They defined the challenges of cross-cultural service provision and proposed some solutions. The public health nurses also perceived that when people get another individual to take care of, i.e. a child, they are extra receptive and interested in learning to providing them with the best care possible. This is particularly noticeable during the infant's first year, according to the public health nurses, and thereafter the routines usually are set during this period (Wathne, Mburu et al. 2012, Telle-Hjellset, Kjøllesdal et al. 2013). Therefore, the public health nurses are in a prime position to give nutrition counselling to immigrant mothers (and to Norwegian mothers as well). Their experience from cross-cultural service provision should be respected and taken into account in policy matters. The National strategy on immigrant health, and its plan for 'good health for all', suggests a need for more cultural competence in the health and care sector. This matches the public health nurses perceptions. Further, targeting immigrant mothers, in particular, to improve their children's dietary behaviors is necessary for preventing childhood obesity and is considered a feasible strategy, given that parents are mostly responsible for food choices and can influence the eating pattern of their children, especially during childhood (Slusser et.al. 2011; Vos and Welsh 2015). This opportunity should not get lost.

Based on the results of this study, the following recommendations are made;

º Provide public health nurses with education regarding different cultures.

º Provide public health nurses with clear interpreter guidelines, as well as proper use of professional interpreters.

º Provide public health nurses with visual aids, the SOMAH application, as well as iPads which the application is made for.

º Support and/or give economic aid for arranging group meetings for immigrant and Norwegian mothers, in which health and nutrition are the subjects addressed.

º Translate and re-work the booklet 'Food for Infants', possibly making a translated version of the booklet available in multiple languages and easily accessible, for example on the internet.

Summary

The public health nurses' exclusive breastfeeding counselling is affected by the ongoing review of existing recommendations. Thus, exclusive breastfeeding counselling fluctuates between four and six months. National and international feeding guidelines are thereafter followed. Language was predominantly perceived to challenge nutrition counselling with immigrant mothers who spoke limited or no Norwegian. This was, to a large degree, perceived as being due to the loss of nuances in the language, thus further limiting the vocabulary.

Additionally, different food culture, lack of a common understanding of food items, different norms regarding what is considered normal body weight, family members' influence on mothers' decisions regarding infant and child nutrition, and excessive use of cow milk, sweets and oil were all perceived challenges to the public health nurses' cross-cultural service provision. Hence, the public health nurses acknowledge their limited cultural pre-understanding and lack of knowledge about different cultures and their foods.

When a common language was missing, the public health nurses independently utilized pictures as means of complementing their verbal nutrition advice. Coincidently, a few public health nurses had participated in a previous research project in which they were provided with iPads that had a visual application program that included pictures of different foods. This was the SOMAH application, which was perceived as being particularly helpful during nutrition counselling with immigrant and Norwegian mothers alike.

Interestingly when the public health nurses proposed solutions for the perceived challenges, they independently recommended group meetings and highlighted the 'need for more time'. Group meetings might create supportive environments for immigrant mothers and thus open for opportunities for the public health nurse's nutrition counseling and health promotion. In addition, it was perceived pertinent to translate the booklet 'Food for Infants' into other languages and make it culturally appropriate in order to include, as well as provide, immigrant mothers with equal infant and child nutrition information.

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Appendix 1: Interview guide

Intervjuguide med helsesøstre

Velkommen. Introduksjon av forskeren selv, forklaring av prosjektet, konfidensialitet av informasjon og rett til og stille spørsmål til forsker.

Denne veiledende intervjuguiden skisserer noen grunnleggende åpne spørsmål om kultursensitiv kommunikasjon og rådgivning ifht amming, barnemat og ernæring på helsestasjonen. Spørsmålens formulering så som angitt her er ment som guidespørsmål og kan eller kan ikke reflekterer måtene spørsmålene blir stilt på i intervjuene.

Temaene vil omfatte følgende:

- Helsesøstrenes erfaring med rådgivning ifht. amming/barnemat/ernæring med Irakiske og Somaliske innvandrerkvinner.
- Helsesøstrenes oppfatning og erfaring med faktorer som påvirker kvinnenes valg ifht. amming/barnemat/ernæring.
- Helsesøstrenes utfordringer med å formidle råd om amming,barnemat og ernæring.

RÅDGIVNING

•Hva er din generelle erfaring med rådgivning til familier med små barn? Hvilke råd gir du?

•Kan du fortelle om din erfaring med rådgivning ifht. amming/barnemat/ernæring til Irakiske og Somaliske innvandrerkvinner?

• Hvem er inkludert i rådgivningen (far, bestemor, svigerforeldrer)? Hvorfor/Hvorfor ikke ?

•Hvordan formidles rådene? (dialog med kvinnene eller skriflig informasjon etc).

•Hva synes du fungerer bra ifht rådgivning med somaliske og irakiske innvandrerkvinner?

•Hvor mange har behov for tolk og hvordan oppleves dette?

•Hvilke råd gir du i forhold til amming, fullamming og avvenning?

• Hvordan forklarer du fullamming?

•Hvilke råd gir du i forhold til introduksjon av fast føde til spedbarn?

• Hvordan og når forteller du kvinnene og stoppe amming?

•Er selve formidlingsformen forskjellig når du gir råd til Irakiske og Somaliske mødrer, sammenlignet med Norske?

• Hvilke råd gir du til kvinner som oppfatter at de ikke har nok brystmelk?

• Har du en måte å forebygge at amming opphører for tidlig?

•Er det noen kurs om barnemat/ernæring som helsestasjonen tilbyr mødrer/forelder? Om så, fremmøte av mødrer fra Irak og Somalia?

•Kan du fortelle hva det er kvinnene spør om?

Tillegg:
•Hvor mange ulike innvandrer grupper kommer til helsestasjonen?
•Hvordan lærer eller vet du brukernes etnisitet?
•Er det noen forbedringer som kunne gjøres ifht formiddling av kostråd? Hvorfor/Hvorfor ikke?
•Er det noen helseproblemer spesielt relatert til innvandrer familiers kosthold?
•Hvordan forholder du deg til nye retningslinjer som kommer ifht amming?

OPPFATNING/ERFARING

•Er det noen utfordringer i ditt arbeide med innvandrerfamilier - med spesiell fokus på familier fra Irak og Somalia? Om så, har du forslag til hva kan forbedres og hvordan?

•Hvordan oppfatter du mødrenes villighet, motivasjon og/eller barrierer for å følge rådene du gir?

•Hva er din oppfatning og erfaring ifht om rådene du gir blir tatt i bruk av mødrene?

•Kan du fortelle om din oppfatning av innvandrermødres forståelse av de råd du gir?

• Hve er din oppfattning om kvinnenes forforståelse ifht fullamming?

•Hva er din oppfatning av faktorer som påvirker innvandrermødres valg og lengd av amming?

• Hvilken rolle spiller språk og kultur ifht motivasjon og amming?

• Har du noen erfaring/tanker ifht ‘lubbne’ barn?

• Er det noen helseproblemer som du ser relatert til innvandrerfamiliers kosthold?

Tillegg:
•Hvordan reflekterer du på informasjonsmateriell dere gir ut og verdien av dette materiell for foreldrene?
•Reflekterer du som helsesøstrer på begrepet kultur gjennom ditt arbeide? Om så, på hvilken måte?

UTFORDRINGER

•Hva er de største utfordringene i helsesøstrenes arbeid med å formidle råd om amming,barnemat og ernæring til Irakiske og Somaliske innvandrerkvinner?

• Opplever du at du har nok kunnskap om kulturelle spedbarnsernærings tradisjoner?

•Hvordan føler du at du mestrer den rollen som formidlere av disse råd?

•Hvis du opplever og ikke mestre den rollen så godt som ønskelig: Hvilke tiltak kunne da være til nytte/hjelp?

TIL SLUTT

•Spørsmål?
•Tema som ikke er nevnt?
•Noe du opplever i møte med disse mødrene som kan være viktig kunnskap og føre videre?

Appendix 2: Ethical approval for InnBaKost

REK
REGIONALE KOMITEER FOR MEDISINSK OG HELSEFAGLIG FORSKNINGSETIKK

Region:	Saksbehandler:	Telefon:	Vår dato:	Vår referanse:
REK sør-øst sør-øst A	Katrine Ore	22845517	28.06.2012	2012/957/REK

Deres dato:	Deres referanse:
22.05.2012	

Vår referanse må oppgis ved alle henvendelser

Liv Elin Torheim
Pb 2947 Tøyen

2012/957 Ernæring og helse blant barn med innvandringsbakgrunn

Forskningsansvarlig: Fafo ved øverste ledelse
Prosjektleder: Liv Elin Torheim

Vi viser til søknad om forhåndsgodkjenning av ovennevnte forskningsprosjekt. Søknaden ble behandlet av Regional komité for medisinsk og helsefaglig forskningsetikk (REK sør-øst) i møtet 14.06.2012. Vurderingen er gjort med hjemmel i helseforskningsloven § 10, jf. forskningsetikklovens § 4.

Prosjektomtale
Denne studien er en del av et større forskningsprosjekt som heter InnBaKost– Kosthold og ernæring blant barn med innvandringsbakgrunn. Formålet med InnBaKost-prosjektet er å øke kunnskapen om kosthold og ammepraksis blant barn med innvandringsbakgrunn fra Somalia og Irak (mors fødested). Studiens resultater forventes å kunne benyttes til å utvikle verktøy og strategier for å forbedre ernærings- og helsesituasjonen blant denne målgruppen. Studien skal gjennomføres som intervju samt spørreskjemaer og "24-timers kostintervju" av kvinner med 6 måneder gamle barn. Barna vil bli fulgt opp når de er 1 og 2 år gamle. Inklusjonskriteriet er at barnet er friskt og ikke har en sykdom/tilstand som krever at barnet går på et spesielt kosthold.Studien er samtykkebasert og alle som deltar i hele undersøkelsen vil få fem flaxlodd. Prosjektets forskningsfil vil bli lagret avidentifisert og alle opplysninger som er samlet inn i prosjektperioden vil bli slettet i 2016.

Vurdering

Komiteen vurderer prosjektet som viktig forskning på barns helse.

Komiteen ber om at informasjonsskrivet som har tittelen "Invitasjon til å delta i en undersøkelse av kostholdet blant spedbarn med innvandringsbakgrunn" endres til forespørsel om å delta.. I samme informasjonsskriv bør det fremgå at det er mors fødested som er utgangspunktet for forespørsel om deltakelse. Komiteen ber også om at det ikke legges press på eventuelle deltakere til å være med i prosjektet fordi det vil gi best forskning. Forskningsdeltakere kan trekke seg når som helst fra en studie uten hensyn til prosjektets vitenskapelige verdi.

Vedtak
Komiteen godkjenner prosjektet på vilkår som beskrevet ovenfor, med hjemmel i helseforskningsloven § 9 jf. § 33. Revidert informasjonsskriv sendes komiteen til orientering.

Godkjenningen er gitt under forutsetning av at prosjektet gjennomføres slik det er beskrevet isøknaden, og i samsvar med de bestemmelser som følger av helseforskningsloven med forskrift.

Godkjenningen gjelder til 01.08.2015.

Forskningsprosjektets data skal oppbevares forsvarlig, se personopplysningsforskriften kapittel 2, og Helsedirektoratets veileder for «Personvern og informasjonssikkerhet i forskningsprosjekter innenfor helse- og omsorgssektoren».

Dersom det skal gjøres endringer i prosjektet i forhold til de opplysninger som er gitt i søknaden, må prosjektleder sende endringsmelding til REK.

Prosjektet skal sende sluttmelding på eget skjema, se helseforskningsloven § 12, senest et halvt år etter prosjektslutt.

Komiteens vedtak kan påklages til Den nasjonale forskningsetiske komité for medisin og helsefag, jf. helseforskningsloven § 10, 3 ledd og forvaltningsloven § 28. En eventuell klage sendes til REK Sørøst A. Klagefristen er tre uker fra mottak av dette brevet, jf. forvaltningsloven § 29.

Komiteens avgjørelse var enstemmig.

Med vennlig hilsen

Gunnar Nicolaysen
Professor

Kopi til: may-len.skilbrei@fafo.no
Katrine Ore
Rådgiver

Appendix 3: Nurses – A brief historical background

Norwegian public health nurses are nurses with a specialist qualification in public health. Large variety in the nursing responsibilities has caused constant changes to their profession throughout history.

During the 18th century nursing became a profession and occupation. Florence Nightingale, born 1820 in England, is seen as a nurse pioneer of world format (Glavin and Kvarme 2003). She had a clear public health perspective in regards to her 'nurse thinking' and claimed that preventative health work was one of the most important tasks for a nurse. Nightingale wished that most women should be informed as to how they and their families could stay healthy, so that the general public health could improve (Nightingale 1859). She emphasized the nurse responsibility as to protect the family's health and ensure good living conditions by clean surroundings, fresh air and proper nutrition (Nightingale 1859, Glavin and Kvarme 2003).

In 1860 Florence Nightingale started a nursing school at St. Thomas Hospital in London (Glavin and Kvarme 2003). In addition she also worked on educating midwifes and establishing a system of 'health visitors'. The health visitors' responsibility was to visit women and children in their home. The child and the mothers' health should be in focus. In this way Florence Nightingale contributed by laying the foundation for the establishment of health nurses (Kirkevold 2001, Glavin and Kvarme 2003).

The health act of 1860 (*Sundhetsloven*) had an essential impact on the development of the Norwegian healthcare system and its guidelines for medical practice in the municipalities (Glavin and Kvarme 2003). The Parliament decided at that time to create Health commissions (*sunnhetskommisjoner*) in all the municipalities in the country (Schiøtz 2003). The intention was to change the populations' attitudes and habits by spreading health related knowledge. Further, the health act included the first measures for improving children's health by treating the high rate of infant mortality. New understanding of infectious diseases and how they spread also made preventative health care promotion urgent. Hence, this became an important part of the nurse profession, but lack of structure caused the different measures to be random (Glavin and Kvarme 2003).

The first nursing school in Norway was started 1868 at Diakonissehuset in Oslo by nurse and deaconess Cathinka Guldberg (Ebbell 1940).She had received her nurse education from Germany and hence used the German diaconal education as a tutoring model (Glavin and Kvarme 2003). Eventually other nursing schools followed, as an example The Norwegian Red

Cross started to educate nurses after Florence Nightingales model in 1895 and Ullevål hospital started the first municipal nursing school year 1900 (Glavin and Kvarme 2003).

The Norwegian Nursing Association took in 1925 initiative to start continued education for nurses with courses in 'social work'. The same year the term 'public health nurse' was introduced for the first time (Glavin and Kvarme 2003).

The Nordic and international authorities also started to show interest for the education of PHNs. Between 1925 and 1929 the International Council of Nurses prepared international guidelines for nurses and their practice, the so called ICN-report (Hvalvik 2006). The ICN-report described norms for their education and by doing so painted a picture that contributed to the public perception of the nursing profession and at the same time delineated it from other disciplines (Hvalvik 2006). Nursing should extend to the 'whole person' and among other things include prevention of disease and healthcare to the individual, families and municipalities. The nurses saw the preventative health work as a possibility to develop an independent nursing role and strengthen their position as professional practitioners (Hvalvik 2006).

A five year plan for the improvement of public health in Norway was created in 1945 by the Minister for Health, Karl Evang (Schiøtz 2003). He saw the importance of public health nursing and the role it could play in building up public health services. At this time, after the Second World War, Norwegian nurse Borghild Kessel, got a Rockefeller scholarship from the Health Directorate with the intention to obtain qualifications to start a public health school for nurses in Norway (Glavin and Kvarme 2003).

Borghild Kessel went on to study public health nursing in the United States and Canada. Upon returning to Norway she took in use the nursing models she had learned and subsequently established the first Norwegian public health nursing school in Oslo in 1947 (Glavin and Kvarme 2003, Schiøtz 2003). Her wish was to educate nurses to work with health promotion and increase public health in the municipalities. On the question of what was demanded of the public health nurses, Kessel responded:

> *«She should be the doctor's assistant and work together with the regular nurses. She should work with health promotion – and educate both adults and children in the art of staying healthy. She should be able to run a health station for mother and child.*

In fact, several such health stations will be created around the country» (Morgenbladet 21.09.1946)[8]

The newly educated public health nurses got a key position in reconstructing 'public health' and realizing the health policy objectives. Their position «close to the people» was unique (Schiøtz 2003). In 1957 the public health nurse school celebrated its tenth anniversary. The public health nurses were then well established and had shown that the society had need for their profession (Glavin and Kvarme 2003).

The law on public health nursing (helsesøsterloven) from 1957 came to have a major impact on the nurses. It was then determined that the public health nurses practice should be tied to the county municipal (Andrews and Wærness 2004). The law further stated that the public health nurses should assist and work close with a physician. Though their work was aimed at the whole population, the main focus continued to be on children and women's health. The public health nurses practice stayed this way until 1984. The municipal law (kommunehelseloven) came 1984 and it was at this time the public health nurses responsibility became tied to maternal and child health clinics like we have today (Andrews and Wærness 2004). This caused alterations of the public health nurses role and their responsibility shifted from previously being in close partnership with doctors towards work at maternal and child health clinics and collaboration with other health professionals, for example psychologists, occupational therapist and dental hygienists (Andrews and Wærness 2004).

The first International Conference on Health Promotion, held in Ottawa, Canada 1986 defined health promotion as the process of enabling people to increase control over, and to improve, their health. This process was named empowerment (Organization 1986).In line with this understanding the public health nurses were now to practice based on this, empowerment ideology. Today's public health nurses still have the same focus and ideology, while building enabling networks, supervising and helping people make independent choices in regards to their health and lifestyle (Dahl, Andrews et al. 2014). In addition they monitor children's growth and development and carry out the vaccination program at maternal and child health clinics in Norway.

[8] Glavin, K. and L. G. Kvarme (2003). Helsesøstertjenesten: fra menighetssykepleie til folkehelsevitenskap, Akribe Forlag. Pg.46.

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