



University of Eastern Africa Baraton, Kenya



Master's Degree in Global Health Care

Immigrant parents' perceptions about childhood immunization

Master's Thesis

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Abstract

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The purpose of this thesis is to describe immigrant parents' perceptions about childhood immunization. The main focus is on immigrants who are parents and make decisions regarding their children's immunizations. The aim of this research is through literature to find out and present what kind of knowledge and perceptions immigrant parents have for childhood vaccinations and immunization in general.

This thesis is a descriptive qualitative literature review, and it is based on the research question. Literature search was conducted, and ten (10) researches and research articles were chosen for the analysis. The results were analysed with content analysis and according to the analysis four categories were found: 1) fear and (mis)trust, 2) social and environmental influence, 3) insufficient vaccination knowledge and advise and 4) financial and geographical access.

The study may help health care professionals to recognize the attitudes and prejudices behind childhood immunization and possible vaccination refusal among immigrant parents. Based on the results of this research, immigrant parents' perceptions should be taken into consideration better within the health care system. Health care professionals can use the results and the offered information as a support for guidance in their work.

Key words: immunization, immigrant families, perceptions, childhood immunization

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List of Abbreviations and Symbols

| Ex. | Example |
|-------|--|
| GVAP | Global Vaccine Action Plan |
| THL | The National Institute for Health and Welfare, Finland |
| UN | United Nations |
| UDHR | Universal Declaration of Human Rights |
| WHO | World Health Organization |
| NESRI | National Economic & Social Rights Initiative |
| MMR | Measles-Mumps-Rubella |
| HPV | Human Papillomavirus |

1 INTRODUCTION

Immunization is proven tool for preventing and eliminating life-threatening infectious diseases and is estimated to avert between 2 and 3 million deaths each year. Immunization means the process whereby a person is made immune or resistant to a communicable disease. Immunizing typically happens through oral or injected vaccine giving. The body's own immune system is stimulated by vaccines to protect the person against infections or diseases. Immunization is one of the most cost-effective health investments, and it has proven strategies that make immunization accessible to even the most hard-to-reach and vulnerable populations. (WHO, 2017)

The percentage of foreigners in Finland has been increasing slowly due to the low amount of immigration. (Väestöliitto, 2018) In 2016 there was about 364 000 foreign nationalities in Finland, which is about 6,6% of its population. Foreigners are people whose both parents, or their only known parent has been born abroad. (Tilastokeskus, 2017) In 2012 there were over 90 000 families where either one or both parents were foreign language speakers, and out of all families with children 9,1% were partially or completely other than official language speakers. (Väestöliitto, 2018)

Child immunizing is significantly related to their parents opinions, perceptions and beliefs about immunization. Parents are advocates for their children when they are small and cannot make decisions related to their health themselves yet. According to Ryyänen (2015) the parents of small children are relating to childhood vaccinations more carefully and selectively than previously. Need of vaccination is questioned and concern about the injurious effects has increased among children's parents. As the diseases for which the vaccinations are given have become rare and obscure, many may feel that vaccinating against them is unnecessary. (Ryyänen, 2015)

The amount of people moving from country to another is increasing yearly. The statistics of Finland's immigration and emigration show that they are growing trends. Since the year 1994 both the numbers of immigrants and emigrants have increased; immigration from 1994 to 2016 from about 12 000 up to about 35 000 and emigration

from about 9 000 to about 18 000 people. (Väestöliitto, 2018; Tilastokeskus, 2017) This trend is not only seen in Finland, but worldwide. Castaneda et al. (2017) also predict that the amount of foreigners will increase rapidly within the next decades.

In Finland those infectious diseases declared to the Register of Infectious Diseases occur more among migrants with foreign background than the native habitants. That is why they are a risk group - especially those who are visiting their home country. This is because they usually stay there for long periods of time and are in close contact with the local people, so the risk of getting infections and returning to Finland with them increases. The challenge is that the migrants with foreign background are not usually in touch with health care professionals before going for a visit to their home countries, and that is why they might miss the necessary vaccinations, prophylaxis medicines, health information and advice. (Castaneda et al., 2017)

There are many important facts about global health in general and rapidly globalizing world. This is why the aim of this thesis is through literature review to find out and present what kind of knowledge and perceptions immigrant parents have about childhood vaccinations and immunization in general. The purpose of this thesis is to provide more knowledge about parent's perceptions about childhood immunization for health care personnel. The main focus will be on immigrant parents, who are making decisions for their children's immunizations.

2 IMMUNIZATION IN PUBLIC HEALTH PROMOTION

2.1 Public health intervention

Immunization is a matter of public health. It is a public health intervention, and the goal is to eliminate and control many different diseases. Vaccinations prevent infectious diseases both directly by protecting the individual and indirectly by reducing the spread of pathogens in the population. When the disease is not present in the environment and there are only a few who are susceptible to the disease, the potential for pathogens to spread reduces. Vaccinated persons indirectly protect those who have not been vaccinated, for example due to age or contraindications. They also protect those who are particularly susceptible to illness due to the basis of the disease or its treatment. Also the person's own protection is enhanced by this so-called herd protection. (THL, 2016)

Immunizations are one of the most important health interventions of the 20th century, yet in many areas of the world people do not receive adequate immunizations and the rate of immunizations are low. Three million people worldwide die every year from vaccine-preventable diseases, and about half of those deaths are young children and infants. (Macintosh, Eden, Luthy & Schouten, 2017) These vaccine-preventable diseases are for example measles, polio, diphtheria, tetanus, pertussis, pneumonia due to *Haemophilus influenzae* type B and *Streptococcus pneumoniae* and diarrhoea due to rotavirus. Vaccines can protect children from illness and death. (WHO, 2017, 2)

According to World Health Organization immunization is recognized as a core component of the human right to health and it is also an individual, communal and governmental responsibility. Immunized children get to have the opportunity to thrive and they also get a better chance to realize their full potential, when they are protected from the threat of vaccine-preventable diseases. These advantages are further increased by vaccination in adolescence and adulthood. Vaccines and immunization are an essential investment in a country's future as part of a comprehensive package of interventions of disease prevention and control. (WHO, 2013, 12)

Vaccination is the process of administering a vaccine, a biological substance intended to stimulate a recipient's immune system to produce antibodies or to undergo other changes that provide future protection against specific infectious diseases. Immunization is the stimulation of changes in the immune system through which the protection occurs. These two concepts differ slightly in that administration of a vaccine may not always result in satisfactory immunization and that immunization may sometimes occur as a result of processes other than administration of a vaccine. (Nieburg & McLaren, 2011, 2)

Vaccination can completely prevent getting sick by the disease it is made to prevent and protect from. It cannot completely prevent infection every time, but it can protect against the most serious forms of illness. Individual vaccination coverage is emphasized when the vaccine prevents the disease being a serious one but does not prevent infection itself and when the vaccine combats disease that does not spread from one person to another, such as tetanus. Vaccination does not necessarily give complete protection, although often very long-lasting resistance can be achieved. Individual protection provided by vaccination depends on many factors. Among other things, the pathogen, the vaccine and its properties are affecting the individual protection the vaccine provides. Sometimes the vaccinated person might become infected despite the vaccination, but the symptoms are usually less severe. (THL, 2016)

A comprehensive vaccine program reduces infections and epidemics among populations. High immunization coverage provides shelter for those who have not been vaccinated. This will benefit for example newborns and infants whose own resistance is not as good as healthy adults'. With the most successful vaccinations, the disease can be eradicated in a region or the whole world. Several infectious diseases have been completely or almost completely eradicated from Finland by immunization, for example diphtheria, polio, measles, rubella and mumps. At the same time, complications of these diseases have been eliminated, such as paralysis caused by polio, meningitis associated with measles and deafness caused by mumps. (THL, 2016)

2.2 Global Vaccine Action Plan

World Health Organization has published Global Vaccine Action Plan for the years 2011-2020. Global Vaccine Action Plan is a strategy of WHO for reaching their goal of delivering universal access to immunization. The mission of the *Decade of Vaccines* (2011-2020) is to extend the full benefit of immunization to all people, no matter where they are born, who they are or where they live. (WHO, 2013, 13)

The Global Vaccine Action Plan proposes six strategic objectives and the actions that will support their achievement. These are applicable universally and also relevant to each of the Decade of Vaccines' goals. The goals are:

- Achieve a world free of poliomyelitis
- Meet vaccination coverage targets in every region, country and community
- Exceed the Millennium Development Goal 4 target for reducing child mortality
- Meet global and regional elimination targets, and
- Develop and introduce new and improved vaccines and technologies.

Hundreds of millions of cases and millions of future deaths will be prevented by the end of the decade, if these above-mentioned immunization-specific goals are achieved. Billions of dollars' worth in productivity will be gained, and immunization will contribute to exceeding the Millennium Development Goal 4 target for reducing child mortality. (WHO, 2013, 22-23, 28)

2.3 Childhood vaccination

According to WHO (2013), during the last ten years great advances have been made in developing and introducing new vaccines and expanding the reach of immunization programmes. The access and use of vaccines by other age groups than infants is expanding, and more people than ever before are being vaccinated. The annual number of deaths among children under the age of five declined from an estimated 9,6 million in 2000 to 7,6 million in 2010, although there was an increase in the number of children born each year. This is a result of immunization combined with other health care and development interventions, including improved access to clean water and sanitation, better hygiene and education. (WHO, 2013, 14)

Vaccinations against eleven diseases, their sequela and their long-term complications are available to all children and adolescents in Finland. Vaccinations under the national vaccination programme are free of charge. The National Institute for Health and Welfare is the one keeping record of Finland's vaccination coverage, which is excellent under the vaccination programme. Families very rarely refuse childhood vaccinations. If a child has not received a particular vaccination at a child care clinic, this can be remedied in school health care or student health care. (THL, 2017) Most vaccines for the vaccine-preventable diseases are given for children under the age of five.

2.4 Disease prevention and control through immunization

Disease *control* is defined as a reduction of disease incidence, prevalence, morbidity, or mortality to a locally acceptable level achieved through deliberate efforts. Disease *elimination* is a more specific degree of disease control defined as the reduction of the incidence or occurrence of a specific disease within a defined geographic area as a result of deliberate programmatic efforts to zero. Disease *eradication* has been defined as the reduction of the worldwide incidence or occurrence of a specific diseases as a result of deliberate programmatic efforts to zero. Up to this date, only two infectious diseases, smallpox and rinderpest, have been eradicated successfully, both through strategic use of vaccines. (Nieburg & McLaren, 2011, 2) These days also global travelling is more common, which can make diseases, that were once localized, appear in communities around the world. (Macintosh et al, 2017)

Vaccines can be divided into two main types: vaccines containing live attenuated pathogens and vaccines that do not contain live pathogens. (THL, 2017, 2) In Finland the vaccination coverage of the national vaccination program is excellent. Families rarely refuse childhood vaccinations. During the first year of life vaccination program covers vaccinations against rotavirus diarrhea, meningitis, pneumonia, sepsis and ear infections, diphtheria, tetanus, pertussis, polio and Hib-diseases. Also by following the national vaccination program a child gets vaccinations against measles, mumps, rubella, influenza (recommended to be taken yearly), chicken pox and cervical cancer within his/her childhood. (THL, 2017, 3)

3 IMMIGRATION IN FINLAND

3.1 Definition of immigration

Immigration means that a person moves away from their own country of origin to stay in a new country. Reasons for immigration can be for example employment, studying, or family reasons. Asylum seekers and refugees are also immigrants, but on a different status. Rätty (2002, 11) states that any person, who is not in their own country, is a *non-resident*. According to Rätty (2002) non-residents are for example tourists temporarily staying in another country or foreign students. For different reasons non-residents can settle down in a new country.

In Finland, *an immigrant*, has settled as the term for every non-resident person who are permanently staying in Finland. An immigrant may come to Finland looking for a job, because of marriage, as a refugee or as a remigrant. Voluntarily from a country to another moving people are called *emigrants*. A *refugee* is a person who has had to escape from their own country for political or other reasons, and who has come to stay in a new country for those reasons. *Asylum seekers* become refugees when their applications for residence permit have been dealt with. A *remigrant* is a person who has had country's citizenship before, or have family roots in the country, and has come back to stay in that country. (Rätty, 2002, 11) Finnish Immigration Service is responsible for dealing with residence permit applications and other issues among immigrants in Finland.

3.2 Immigrants' right to health care

Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care and necessary social services, and the right to security in the event of unemployment, sickness, disability, widowhood, old age or other lack of livelihood in circumstances beyond his control. (UN, 1948) This is defined in the Universal Declaration of Human Rights' article 25 by the United Nations. With this declaration being valid for every human being also immigrant's right to health and well-being is justified.

Ministry of the Interior in Finland has defined an act in the Finnish law on the integration of immigrants and reception of asylum seekers. In the section 19 of chapter 4 it is said that the reception of asylum seekers and beneficiaries of temporary protection includes accommodation, social assistance, essential social and health care services, interpretation services and fulfilment of all other basic needs. (Sisäasiainministeriö, 2009)

According to National Institute for Health and Welfare (THL, 2018) in Finland there are significant differences within the use of health care services among immigrant groups. It is important that the services are targeted right and that immigrants get enough information about the provided services. Basic services, that are targeted the right way, reduce the need for special services. Like for everyone else, high-quality health care services need to be guaranteed also for immigrants. Individuality and continuity of services, multiprofessional co-operation and longer reception times required by the interpretation should be ensured with the services. (THL, 2018)

In Finland the right to use health services varies according to the status of migration. An immigrant with a municipality seat has the same rights for health services as a local person has. Asylum seekers have rights for the first check up in the reception center, for urgent and necessary treatment and maternity and child clinics. For example school health care and antenatal care are provided. Undocumented migrants' right to health services is very limited in Finland; urgent treatment is costly and they don't have the rights that municipality seat brings along. Volunteers are organizing some health services, such as maternal and child health care, for undocumented migrants in Finland. (THL, 2018) Global Clinic is known for providing health care services for undocumented migrants in Finland, and the workers are all volunteers.

Even though the right for health and well-being is defined in the UDHR (UN, 1948), according to National Economic & Social Rights Initiative (2010) in the United States immigrants are three times more likely to be uninsured than U.S. citizens, and therefore they face greater difficulties in accessing health care and obtain less care than U.S. citizens. Immigrants have a human right to get the health care they need, and no one should be discriminated against on the basis of income, health status, gender, race, age, immigration status or other factors. (NESRI, 2010)

Jackson (1998, 61) claims that the most pervasive need of non-English speaking immigrants and refugees is the interpretation for every English transaction, especially in health care. Jackson states that the costs can be enormous if medical interpretation is unavailable or mismanaged, because either the tests and scans are ordered unnecessarily or not ordered when physicians are unsure of the true nature of the complaint when they suspect the patient is not able to provide a clear medical history. In Finland it is defined by law that the health care professional must provide statements so that the patient understands its contents sufficiently, and if the health care professional does not know the language used by the patient, or the patient cannot be understood because of hearing or speech disability, the interpretation needs to be taken care of wherever possible. (Finlex, 2017)

4 PURPOSE, AIM AND RESEARCH QUESTION

The purpose of this study is to describe parents' perceptions about childhood immunization. The main focus will be in immigrant parents, who make decisions concerning their children's immunization. The aim is by using the literature review to find out and present what kind of perceptions immigrant parents have for childhood vaccinations and immunization in general. The aim is that through this thesis health care professionals understand and are able to recognize the perceptions behind childhood immunization among immigrant parents, and use the offered information as a support for guidance in their work. The research question in this thesis is:

- 1) What kind of perceptions immigrant parents have about childhood immunization?

5 DESCRIPTION OF LITERATURE SEARCH

The literature research for this thesis has been made based on the research question. Three different databases were used: Cinahl, EBSCO Academic Search Premier and Pubmed. An advanced search option was used in the databases. As limitations for searched material years 2010-2017, English language and academic jour-

nals with peer reviewed articles were used. Also manual search was used in Google and Google Scholar. The literature search was made during August and September in the year 2017. The help of an information search specialist librarian was used. By the recommendation of the information search specialist librarian, for this topic the databases CINAHL, EBSCO Academic Search Premier and PubMed were chosen (see Table 1.) because of their inclusion of health research material.

Table 1. Literature search

| Used databases | Search terms | Hits | After limitations | Hits |
|----------------------------------|---|-------------|---|-------------|
| CINAHL | immunization AND (immigrants OR refugees OR undocumented OR "asylum seekers") AND (perception OR attitude OR belief) | 53 | Academic journals AND years 2010-2017 | 21 |
| EBSCO Academic Search Premier | immunization AND (immigrants OR refugees OR undocumented OR "asylum seekers") AND (perception OR attitude OR belief) AND parent* | 417 | Academic journals AND years 2010-2017 | 391 |
| PubMed | immunization AND immigrant* | 282 | 10 years (2007-2017) | 185 |
| Total number | | 752 | | 597 |

The first phase included searching for relevant articles published between 2010 and 2017 in English or in Finnish language. The research question was split into search terms and MESH-terms were used during the literature research. The search terms were used in three relevant academic databases (see Table 1.) and after limiting the publishing years and source type to academic journals the total number of hits was 597. The 597 articles were gone through by the title and keywords and inclusion criterias and exclusion criterias of articles was done. Inclusion criterias and exclusion criterias in each phase of the searching process are presented in Table 2. After excluding by title and keyterms, by abstract and by full text, the total number of articles left is 13.

Table 2. Inclusion and exclusion in the searching process

| TITLE AND KEYWORDS | Inclusion | Exclusion | Hits left after ex-/inclusion |
|--|---|---|--------------------------------------|
| CINAHL 21 EBSCO 391 PubMed 185 | -immunization in childhood mentioned -mother's, caregiver's or parental attitude mentioned -attitude to vaccines -no clear picture about the subject in the title | -no mention about search terms in the title or in keywords -immunization related to other things than searched -subject is about someone else than searched -subject is about other things related to immigrants -subject related to other groups than immigrants or parents -not related to the research question | CINAHL 13 EBSCO 29 PubMed 11 |
| ABSTRACTS | Inclusion | Exclusion | Hits left after ex-/inclusion |
| CINAHL 13 EBSCO 29 PubMed 11 | -followed mentioned: mother's/caregiver's view of daughters vaccinations, caregiver's perception of immunization, vaccine acceptability, parental resistance in vaccine uptake, children of migrants -abstract describes native-born/immigrant families preventive health and perceptions -abstract answers the research question from every point of view except immunization (want to check the full text) -abstract somehow answers the research question -no abstract available | -not related to the research question -no mention about search terms related to the topic of the research -no mention about perceptions -only statistical comparison about native-born and immigrants somehow related to the research question -about adult vaccination coverage -comparison of ethnicity or religion in vaccinations (not immigrants) -about vaccine-related autism -duplicates | CINAHL 11 EBSCO 13 PubMed 4 |
| FULL TEXTS | Inclusion | Exclusion | Hits left after ex-/inclusion |
| CINAHL 11 EBSCO 13 PubMed 4 | -full text is related to the research question -full text answers the research question | -full text does not answer or is not related to the research question -not related to immunization -full text reveals only information needs of parents, not perceptions -no article available without extra expenses -article written in Spanish | CINAHL 3 EBSCO 2 PubMed 2 |
| Manual Search: Google Google Scholar | -abstract or full text answers to the research question | -published before 2010 -available only with extra costs | 3 |
| Total number | | | 10 |

On top of this searching process also a manual search was done. In the manual literature research in Google and Google Scholar the title of this thesis “Immigrant parents’ perceptions about childhood immunizations” was used as a search term. Articles and researches that have been published before year 2010 were excluded. Also the articles which were available only with extra costs were excluded. One more article and two Master’s Thesis were included to the research because according to the title, abstract and full text they answered the research question. After this the total number of articles and researches used in this study became 10. The results of the literature research are shown in Appendix 1.

6 ANALYSIS OF THE LITERATURE DATA

Qualitative research is the most appropriate methodology for exploring people’s understandings and perceptions in depth, (Canavati, Nosten, Plugge, Sombatrungja-roen & Suwanjatuporn, 2011) and content analysis is commonly used in qualitative studies as a method of analysis. (Elo, Kanste, Kyngäs, Kääriäinen & Pölkki, 2011) Elo et al. (2011) write that content analysis is defined generally as a procedure that can be used to analyse documents systematically or objectively. Content analysis is used to describe the phenomenon which is researched. With content analysis categories, concepts, systems, maps and models describing the phenomenon can be formed. (Elo et al., 2011)

In this research the included 10 studies were analyzed with content analysis, which had three phases: preparation, organizing and reporting. The first phase, preparation, included data gathering, which was made by using inclusion and exclusion criterias (Table 2.). Content analysis was made by using the formed research question as a basis for the process. After the searching and the selection of the data, the chosen data was read through several times, and notes and headings based on the research aim were written down from each chosen research or article.

In the second phase, notes and headings were organized and grouped by meanings and similarities (Appendix 2.). At first all the mentioned perceptions were written down separately ja categorized by similarities and meanings. Similar perceptions,

which were mentioned in more than one research, were combined. The categories were organized and the organized perceptions were named as subcategories. Similar subcategories were formed into four main categories which are the main results of this study. As Elo et al. (2011) also direct, the information given by the notes and headings were categorized by combining the same contents into the same subcategories. The main categories were formed based on the subcategories:

- Fear and (mis)trust
- Social and environmental influence
- Insufficient vaccination knowledge and advise
- Financial and geographical access

Qualitative research made in the form of literature review requires a very critical review of the searched and used data. (Tuomi & Sarajärvi, 2013) The searched and used data has been critically evaluated.

7 RESULTS

These ten chosen studies were from eight different countries: Thailand, China, United Kingdom, Canada, Finland, Sweden, two from the Netherlands and two from the United States. All studies had similar findings. In all of the studies many perceptions of participants concerning about childhood immunizing and vaccinating their own children were mentioned, whereas most of the studies findings also point out the importance of immunization information. With many participants the language barrier had a huge impact on the acceptance of vaccinations.

All participants were immigrants in different countries and in different communities. Generally they all regarded that vaccinating their children and immunization with all the benefits was a good thing. Different barriers and difficulties were still faced when immunizing their children, even if the process was seen as important and beneficial. One participant believed that when children get vaccinated they become strong and cannot get any diseases.

7.1 Fear and (mis)trust

The participants generally had a positive attitude towards childhood immunization. Even though in every research participants regarded immunization as important for their children's health and as "a good thing", different fears towards vaccinations arised strongly. Different side effects of vaccinations creates fear among immigrant parents. The most feared side effects were high fever and the fear of permanent disability or death. In all the results, high fever was mentioned as daunting, but still understood as a common side effect.

In most cases fear for side effects did not affect the parents' vaccination decision making. In two studies (Redwood & Tomlinson, 2013; Bos et al., 2015) a clear distinction between MMR vaccine and all other childhood immunizatons was made among the participants. This was primarily due to anxiety about the MMR vaccine's link with autism. Majority of the studies participants were not worried about the MMR vaccine, but some specific immigrant groups seemed to be more concerned about that than others. Some immigrant parents felt guilt after immunizing their children for MMR, and the possible blame on themselves occurred to be one barrier for immunizing their children in the future.

The benefits of immunizations were somehow recognized, but the details of the benefits and the disease prevention immunization gives were not easy to identify by the participants, mostly because the lack of information. Only in some of the studies participants considered childhood immunization beneficial for the future, and thought that the children don't get ill when immunized. Also they trusted the vaccines not to cause illness.

In most of the studies immigrant parents had trust in vaccinations and in health care professionals. However, also mistrust, especially of health care professionals and their motivation, and suspicion of vaccine efficacy, mainly regarding optional vaccines, were relevant concerns. Vaccines were considered as trustworthy if they were recommended by the government, or for some immigrants by doctors who were in these cases seen as a very reliable source. Mistrust towards vaccinations and towards health care professionals was still a true factor in vaccine acceptance and

vaccine decision-making. Especially uncertainty was up-risen concerning relatively new vaccines, which are mostly optional and not part of the national immunization program.

According to immigrant parents' previous experiences in some studies they considered vaccinations unnecessary, because even they themselves haven't received any vaccinations in childhood in their origin countries and they have been staying healthy and had no harm due not being vaccinated. One barrier mentioned in about half of the studies was the fear of injection, as it's seen as a painful procedure and the parents didn't want to cause this torment for their children.

7.2 Social and environmental influence

Immigrant participants in the studies were first-generation immigrants and migrants staying or working illegally in another country. Some of the participants were second-generation immigrants, which means they are children or grandchildren of first-generation immigrants, who has been immigrated to a new country and naturalized (getting the citizenship or nationality as a non-citizen of that country). None of the studies had exclusively second-generation immigrants as participants.

Social and environmental factors had a substantial impact on vaccination decision-making among some immigrant parents. In one study (Adorador, Fitzpatrick, Hart & McNulty, 2011) parents' own busy schedule was mentioned and seen as a barrier to get their children vaccinated. Also as mentioned earlier, according to immigrant parents' previous experiences in some studies they regarded vaccinations unnecessary, because they have been staying healthy and had no harm due not being vaccinated. Their relatives and friends' experiences and opinions had an impact on their own decisions regarding vaccinating their children. If something bad had happened to someone they know after vaccination, or if the side effects have been significant for the vaccinated child, it reduces the willingness to vaccinate their own children and makes parents question and doubt the need for vaccinations.

In some studies religion had an impact on vaccination decision-making for participants. In these studies the religion which is being dealt with is Islam. According to

the Muslim immigrants in the religion of Islam prevention of illness is highly valued, and therefore immunization as a manner of disease prevention is considered very important. It was further mentioned by several muslim participants in one research that God's will is considered as the most important act of fate, and immunizing or not does not matter if God has planned something for someone. When it comes to the vaccine itself, the refusal rate of MMR vaccine among Muslim immigrants is high because of the gelatine, a pig-based product forbidden in Islam, which is used as an ingredient in the MMR vaccine. Therefore some parents resort to alternative and traditional medicine rather than vaccinating their children.

Participants in three of the studies (Canavati, Nosten, Plugge, Sombatrungjaroen & Suwanatuporn, 2011; Adorador et al., 2011; Ramirez, 2014) were illegal or undocumented migrants, who considered immunization important, but the fear of arrest and continuing migration were significant barriers for immunizing their children. Migrants cannot go to health care clinics, because they might get caught for not having correct identification papers and other important documents. That's why they mentioned different ways of keeping their children healthy, for example: they avoid seeking care for minor complaints and use homemade herbal remedies instead, they teach the children good hygiene and prevent them from playing with water and get wet, and in addition to these they pray for their children. The true meaning of immunization and the importance of vaccination schedule seems to be lost among illegal and undocumented migrants.

The largest factor in the vaccination decision making among immigrant parents is the social obligation they feel they have. For example some felt that vaccinating their children is what needs to be done because the government and the health care professionals say it's good for your child's health, and they are lacking their own opinion on the subject. Also other people's opinions matter, because almost all of the immigrant parents participating in the studies had talked to their relatives and friends and made the same decision as their peer parents. In two studies (Fielding, Lam, Liao, Wang & Wu, 2014; Beaujean, Bults, Richardus, Steenbergen & Voeten, 2011) some parents worried about their child's education in the future, because in some countries precondition for the child to get into a school is that the child is immunized.

Parents from one of the immigrant groups regarded the developed country they were immigrating in as a potential threat for their children, because in their opinion the country is overpopulated, dirty and cold, which increases children's vulnerability to get diseases. That is why they felt it is important to vaccinate their children for preventing the diseases. They also felt that if they were staying in their origin country, they wouldn't immunize their children, because in their opinion the threat of illness is not prevalent there. (Redwood & Tomlinson, 2013)

7.3 Insufficient vaccination knowledge and advice

Insufficient vaccination knowledge and knowledge of childhood diseases in general appeared to be prevalent in the studies. This was mostly due to the lack of information and advice from health care professionals. Language barrier and the difficulties in communication between the immigrant and the health care professional had a huge impact on this issue. In most of the studies the immigrant participants wished to get information about immunization in their own language, if not from the health care professional, at least in the form of a booklet.

According to one study (Bubela, Jardine & Kowal, 2015) understandings and perceptions are shaped by personal experience and social interactions, not by biomedical knowledge, when it comes to immigrant parents.

In general the knowledge about the diseases and vaccinations among immigrant parents was low and insufficient. In few studies limited time at the health care clinics was mentioned by the immigrant parents as a reason for the low uptake. They felt they don't have enough time and therefore they're not getting enough information and answers to the questions in their minds, which seemed to shape the fear towards vaccinations. Some participants felt they got comprehensive information from health care facilities and from health care professionals, but some felt it was not enough. Other sources of information were the media, friends and the social network. Especially the social network of the immigrant parents had a huge impact on shaping their opinions about immunization either way.

In majority of the studies the participants thought their children were up-to-date with their vaccinations, but in most cases they were not. This is due to the illusion created by the low level of knowledge and getting the insufficient information and advice from the health care facilities. In addition, difficulties in communication and language seemed to be accountable on this.

7.4 Financial and geographical access

The last of the four categories is the financial and geographical access, which has an effect on how immigrant parents immunize their children. In three studies (Canavati et al., 2011; Adorador, McNulty, Hart & Fitzpatrick, 2011; Ramirez, 2014) the participants were illegal or undocumented migrants, and in most of the studies majority of the participants were living below the poverty line. The migrant participants recounted that their children are lacking insurance, which was the reason for not immunizing them, even though in most countries national immunization programs are free of charge for children and some of the migrants were aware of that.

Affordability was a major factor influencing on immunizing children among immigrant parents in all of the studies. This affected especially optional vaccines outside the national immunization programs, such as seasonal flu vaccines or HPV vaccines for prevention of cervical cancer. In addition the lack of money for transportation in cases where the health care clinic is located far off was present among participants with low income. In few studies the participants disclosed that they sometimes missed the immunization appointments because of work, childcare problems or because of forgetting them. Continuing migration was a major factor for not keeping the child immunizations up-to-date, missing the appointments and not being aware of creating new connections in the new habitation area.

8 DISCUSSION

8.1 Discussion of the results

The results in all of the studies point out the importance of relevant and sufficient information when it comes to immigrant parents' perceptions about childhood immun-

ization. The results in all of the studies were alike and, regarding the four main categories the results were divided into, they supported each other with similar kinds of findings.

The main categories affecting immigrant parents' perceptions about childhood immunization were (1) fear and (mis)trust, (2) social and environmental influence, (3) insufficient vaccination knowledge and advice, and (4) financial and geographical access. Language barrier proved to have a huge impact in all of these areas on acceptance of vaccinations. Generally the participants in the studies regarded that vaccinating their children and immunization with all the benefits was a good thing.

The lack of information had a major influence in the perceptions of the participants. It proved to be the major factor affecting every area. In the main category "Fear and (mis)trust" immunizations were seen as important and "a good thing" for children, but side effects of vaccinations and the link with other diseases were frightening parents and making them blame themselves for causing harm for their offspring. Mistrust and suspicion of vaccine efficacy, regarding mostly optional vaccines, were present in the results.

Language barrier is affecting the information given by the health care professionals and also the understanding of the given information by the immigrant customer. That is something that should be paid attention to in health care facilities in general. Immigrants are a group of people whose share in communities is rising in the future, and they need relevant information regarding their health issues, provided the way they understand it, either by using an interpreter or some other way of providing the info in their native, or other understandable language. This is significant factor affecting immigrant parents' perceptions about childhood immunization. By overcoming the language barrier health care professionals could provide relevant information about immunization with an easy access for immigrant parents, and this way give them the possibility to ask freely about unclear issues. Fears and mistrusts could be defeated by these means.

As it was pointed out in the results, in most of the studies the immigrant participants wished to get the information about immunization in their own language, if not from

the health care professional, at least in the form of a booklet. This could be significant when it comes to the vaccination decision-making of immigrant parents. Jackson's (1998, 61) statements also advocate the meaning of interpretation in health care. According to one of the studies (Bubela et al., 2015) understandings and perceptions are shaped by personal experience and social interactions, and not by biomedical knowledge, when it comes to immigrant parents. Also for this reason getting the needed information about immunization and about the diseases they prevent from in one's own language is substantial.

8.2 Ethics and validity of the study

Choosing the topic for a research needs to be taken into an ethical consideration by itself. It is an ethical choice. Also Tuomi & Sarajärvi (2013) state the same – in the ethical thinking and consideration of the topic it needs to be clarified on whose terms the topic is chosen and why this research will be made. These ethical commitments will come up willingly or unwillingly, when the purpose of the research is declared and when the research questions are formulated. When choosing the topic one needs to think of the many different aspects of the chosen area, and take for example ethical codes and principles and protection of human rights into consideration.

As immunization is a “hot potato” in western countries nowadays, the ethical issues needed to be considered by the researcher. For example the way to present the results and discussion need to be thought through, so that the researcher's own opinions about the issue don't show through the text.

There are three particularly important ethical issues when undertaking qualitative research: anonymity, confidentiality and informed consent. (Pope & Mays, 2006) In this study these three are not as valid as they are in another type of study, because this study is a literature review and no individuals were interviewed.

According to Goodwin (Pope & Mays, 2006) the main problem for qualitative researchers lies in specifying in advance which data will be collected and how it will be used. For example during interviews the potential uses of the data are not always clear as the very nature of qualitative research means that unexpected themes may

rise up during the analysis. Also in this study there were many expected outcomes in the results, but also unexpected issues rose up while going through the data.

Examining the confidentiality of qualitative research, questions about truthfulness and objective information arise quickly. The views on the nature of the truth have effect on how the questions about truthfulness in the research are regarded. Reliability and validity are usually discussed when authenticity of research methods are being dealt with. (Tuomi & Sarajärvi, 2013) Qualitative research made in the form of literature review requires very critical review of the searched and used data.

In the United Kingdom the Economic and Social Research Council (ESRC, 2015) has declared six key principles of ethical research which are expected to be addressed whenever applicable while working on a research. These six principles are extremely good and clearly stated, and anyone who follows these ethical principles whilst working on their research, will have the ethical consideration well done.

In this study the ethical validity have been gone through by the key principles of ethical research. The validity of the study is increased because of the search made with guidance and the help of information search specialist librarian. The given results were reported and the critical evaluation of the literature was made.

8.3 Limitation of this literature review

The amount of studies is the major limitation of this literature review. There are only ten (10) chosen studies for this study, which is quite limited, because the biggest validity is reached when there are from 20 to 30 chosen studies. Nine out the ten studies are international studies, which, in my opinion, is a good amount of international material. Only one research was made in Finland. References in the studies were used diversely and seemed to have a good quality.

9 CONCLUSIONS

Health care personnel dealing with immigrant families should take these results into serious consideration, because as it is a human right to have access to health care, also immigrants have that right to have specific information offered to them the way they understand it. With this the language barrier is a huge factor, and that is something that could be taken care of, one way or another.

The difficulty of language barrier between an immigrant and a health care professional was the major result that was found out in this study. It had an effect on each of the formed categories of the results. By focusing on providing information in immigrants' own language, health care personnel could help creating a trustworthy relationship with their immigrant customers and this way ensure the continuity of the customer relationship. Also the fears about the effects and side effects of the vaccinations were highly elevated. Health care professionals could reduce the fears by providing reliable information about immunization to immigrant families.

The results of this study can be used for developing the work culture and working methods. The results are useful for health care workers who are working among immigrant families, and especially within maternal and child healthcare, where decision making concerning immunization is a timely issue.

Working on this study has developed my own professional knowledge and taught me a lot about different cultural factors behind these perceptions. I work among infants and their families and I can make use of the information provided in the study in my own work. If I would change something in this process, I would schedule the work that needs to be done. Also the change of subject along the way was a factor affecting the scheduling. This process has taught me about reading a scientific literature and articles and about the research process in general.

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APPENDICES

Appendix 1. The results of the literature research

| The topic of the study | Study type | Study objective | Principle results | Conclusions |
|---|--|---|---|--|
| <p>Adorador, A., Fitzpatrick, J., Hart, D. & McNulty, R. (2011)</p> <p>Perceived barriers to immunizations as identified by Latino mothers</p> | Qualitative study; descriptive survey | <p>The study aimed to identify low-income Latino mothers' perceived barriers to immunizations.</p> <p>The survey was conducted in Southern California.</p> | The reported barriers to immunization by participants were lack of insurance, lack of transportation, affordability, language and childcare. Also many additional potential barriers were mentioned. Most participants thought their children were up-to-date on their immunizations, but most were not. | Latino mothers' perception of immunizations and knowledge of up-to-date status greatly influenced their children's immunization status. Despite the government efforts to provide vaccines to healthcare providers at no cost to assist low-income children, Latino children had low immunization rates and encountered more barriers to immunizations than children in other population groups. |
| <p>Barton, B., Blanco, J., Hazan, G., Joseph, T., Kobetz, E., Kornfeld, J., Koru-Sengul, T., Menard, J. & Nissan, J. (2011)</p> <p>Perceptions of HPV and cervical cancer among Haitian immigrant women: Implications for vaccine acceptability</p> | Qualitative study; focus group discussions | The aim was to examine Haitian women's perceptions and barriers to HPV vaccination, which is essential for incoming future intervention for the burden of cervical cancer morbidity and mortality. | Participants had misconceptions about virus transmission and they didn't understand the role of HPV in the cervical cancer development. Vaccines were supported and thought as beneficial for health, but HPV vaccination was seen less appropriate for adolescent girls who are presumed as not sexually active. | Lack of education information in Haitian language about HPV and cervical cancer exists. This makes opportunities to promote disease prevention through vaccination and regular screening wanted. Addressing this issue is essential for achieving health equity among Haitian immigrant and other similarly underserved women. |
| <p>Beaujean, D., Bults, M., Richardus, J., Steenbergen, J. & Voeten, H. (2011)</p> <p>Pandemic influenza A (H1N1) vaccination in The Netherlands: Parental reasoning underlying child vaccination choices</p> | Quantitative and qualitative study; Questionnaires and in-depth interviews | The aim was to examine reasons for acceptance and non-acceptance of the vaccine, risk perception, feelings of doubt and regret, influence of the social network, and information-seeking behavior of parents who accepted or declined H1N1 vaccination. | The most reported reasons for both accepters and decliners were identified. Immigrant accepters and decliners had feelings of doubt and regret about the vaccination decision more often, and they sought advice more often from their social network, and they were more often influenced by advices compared to native Dutch parents. | Health authorities should provide more information on vaccine benefits and possible risks. This information should be tailored to specific risk groups. Health authorities should also invest in the development and implementation of effective vaccine risk/benefit communication tools. |
| <p>Bos, H., de Melker, H., Harmsen, I., Kok, G., Mollema, L., Paulussen, T. & Ruiter, R. (2015)</p> <p>Vaccination decision-making of immigrant parents in the Netherlands; a focus group study</p> | Qualitative study; focus group discussions | The aim was to explore factors that influence decision-making among parents with different ethnic backgrounds in the Netherlands. | Participants had a positive attitude towards childhood vaccinations. High confidence in the advices of Child Vaccine Providers was also seen. Vaccinating their children was perceived as self-evident and important by the participants. Few barriers were also noted. | Information should be tailored to immigrant parents' needs and provided like that, because it's important to sustain high vaccination participation. With this acceptance of future vaccinations is ensured. For example information about targeted diseases and benefits and drawbacks of the NIP should be provided. |
| <p>Bubela, T., Jardine, C. & Kowal, S. (2015)</p> <p>"If they tell me to get it, I'll get it. If they</p> | Qualitative study; semi-structured individual interviews | The aim was to understand information-gathering and decision-making | Three main findings on information gathering and use in vaccination decision were discovered. Participants | The area's current vaccination communication strategies in reaching immigrant women are limited, and this limits their ability to make informed |

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|---|---|---|---|--|--|
| don't...": Immunization decision-making processes of immigrant mothers | | processes of immigrant mothers for scheduled childhood vaccines, vaccination during pregnancy, seasonal flu and pandemic vaccination. | demonstrated universal trust in vaccines, but immunization information was only passively received, primarily from social networks in origin countries. | vaccination decisions for themselves and their children. According to the study, immigrant women would likely follow recommendations on vaccines, if they receive the vaccination information. | |
| Canavati, S., Nosten, F., Plugge, E., Sombatrungjaroen, S. & Suwanjatuporn, S. (2011) Barriers to immunization among children of migrant workers from Myanmar living in Tak province, Thailand | Qualitative study; focus group discussions | The study aimed to identify barriers to the successful implementation of migrant immunization programmes in Tak province, Thailand. | Participants regarded that vaccinating their children was a good thing. Despite the positive view of immunization, the participants identified several difficulties they faced when immunizing their children. The main barriers were listed. | Involving the migrant parents in the development of the immunization programme in this area was important as they are the key to deciding whether to immunize their children. Identifying perceived barriers identifies opportunities for developing an acceptable and accessible immunization programme. | |
| Evdokimova, Y. (2013) Perception of BCG vaccination; study on immigrant parents in Eastern Finland | Quantitative study; questionnaire | The aim was to reveal possible factors that influence on the perception of BCG vaccination and tuberculosis among mothers for whose children (from immigrant families) the vaccination was recommended. | Positive attitude towards BCG vaccination was recognized among mothers, especially among those with average level of income and higher level of education. Only one child of the participants didn't receive the BCG vaccination because of medical contraindication, but will receive it in the future. | In order to avoid misunderstanding and dissatisfaction on communication with medical personnel, the information about the vaccine should be provided in the language the parents know better. Also some information about the disease and its treatment should be provided in order to diminish the level of negative attitude towards TB patients among parents. | |
| Fielding, R., Lam, W., Liao, Q., Wang, L. & Wu, J. (2014) Chinese immigrant parents' vaccination decision making for children: a qualitative analysis | Qualitative study; semi-structured in-depth individual interviews | The aim was to explore how immigrant mothers from China make decisions on various childhood and adolescent vaccines for their offspring. Identifying key influences affecting the participants' decision making was also the aim. | Five underlying themes influencing parents' vaccination decision-making were revealed. The role of social norms and many others were mentioned and construed as barriers and issues affecting their decision-making. | Social norms play a key role influencing parental vaccination decision-making. Results of this study will help to inform healthcare providers in vaccination communication and the policymakers in future vaccination programme. | |
| Ramirez, K. (2014) Views, attitudes and experiences about childhood vaccination among undocumented migrants in Sweden – a qualitative study | Qualitative study; exploration and individual interviews | The aim was to explore the perceptions, experiences, attitudes, and views of undocumented immigrants regarding childhood immunization, and to examine their access to vaccinations and healthcare. | Frequent mobility limits access, because vaccinations require several healthcare visits. Also fear of being asked for immigration documents was expressed. Undocumented parents indicated their mistrust towards healthcare providers, and avoid health facilities, further delaying children's access to healthcare, including vaccination services. | Undocumented immigrant parents are aware that every child is entitled to health services in Sweden, and show high compliance with childhood vaccinations. Fear of revealing their illegal status overrides their willingness to vaccinate their child. Improving access for undocumented immigrants requires additional and specific efforts to restore trust in the health care system. | |
| Redwood, S. & Tomlinson, N. (2013) Health beliefs about preschool immunisations: an exploration of the views of Somali women resident in the UK | Qualitative study; semi-structured individual interviews | The aim was to explore the health beliefs of Somali women resident in the UK in order to assist healthcare providers to deliver services in a manner sensitive | Attitudes towards preschool immunisations were mainly positive. Beliefs were affected by social and cultural interpretations of Islam and practices associated with them, mothers' personal experiences of preschool vaccinations, | Women's understanding and perception of risk shape their decision making. Appropriate information addressing anxieties and suspicions, as well as a closer relationship between the local Somali community and healthcare professionals, will be vital for future vaccination services to | |

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| | | to Somali culture. | and perceptions of their child's susceptibility to infection. | ensure adequate uptake. | |
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Appendix 2. Content analysis

| Perception | Subcategories | Main category |
|--|------------------------------------|------------------------------------|
| fear of side-effects | Fear and doubt towards vaccination | Fear and (mis)trust |
| quality and safety of vaccines is suspicious | | |
| risks associated with vaccination | | |
| fear of permanent side effects --> MMR link with autism | | |
| doubt | | |
| low confidence in the ability to avert diseases | | |
| never got it done, never had any harm | | |
| perceived low efficacy of vaccines | | |
| anxiety about the disease perceived uncontrollable | Fear towards the disease | |
| seriousness of diseases justified vaccination | | |
| fear for the vaccine-targeted disease | | |
| anxiety reduction after vaccination | | |
| risks associated with non-vaccination | | |
| high trust towards vaccinations | Trust towards vaccination | |
| vaccines recommended by healthcare professionals | | |
| vaccine benefits | | |
| explicit schedule for routine vaccinations is important | Vaccination timing | |
| timing of optional vaccines is more fluid and uncertain | | |
| fear of causing harm to the child | Vaccination procedure | |
| vaccination is a painful procedure | | |
| trust towards healthcare professionals recommendations | Thoughts about healthcare workers | |
| mistrust towards healthcare providers | | |
| healthcare professionals don't consider individual needs | | |
| vaccines offered by private doctors are suspicious | | |
| public healthcare settings are more reliable | | |
| not remembering immunization appointments | Self-influence | Social and environmental influence |
| confusions about timing | | |
| personal experience of vaccination practices | | |
| busy schedule | | |
| opinions from family members, friends, healthcare workers | Community influence | |
| greater disease threat if someone known was affected | | |
| social interactions shaped the understanding of immunization | | |
| observing peers' choice | | |
| social obligation | | |
| fear for MMR vaccine in the whole community | | |
| immunization not important because we never had that home | | |
| ignorance for new optional vaccines | | |
| lack of confidence in making the right decision | | |

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|---|--|---|------------------------|--|
| according to religion forbidden product in the ingredients of vaccine | Religious influence | | | |
| vaccination doesn't help our child, God does | | | | |
| if religion recommends it, we do it | | | | |
| fellow parents as a source of informal information | Information influence | | | |
| formal sources of information were not encouraging | | | | |
| internet used as a major source of information | | | | |
| mistrust followed by the H1N1 vaccination | | | | |
| media gives contradictory messages | | | | |
| communication barrier with healthcare professionals | | | | |
| language barrier | | | | |
| current environment is threat for children | Society influence | | | |
| vaccinations mandated for school entry | | | | |
| vaccinations mandated by the government | | | | |
| fear of arrest (illegal and undocumented migrants) | | | | |
| vaccinations have benefits | Vaccination and immunization knowledge | Insufficient vaccination knowledge and advise | | |
| misconceptions, ignorance | | | | |
| procedural uncertainties | | | | |
| low level of knowledge about immunization | | | | |
| poor knowledge about vaccine preventable diseases | | | | |
| poor knowledge on how vaccines work | | | | |
| poor knowledge on vaccines' administration | | | | |
| ignorance for new optional vaccines | | | | |
| unaware about vaccines availability for common childhood diseases | | | | |
| vaccine preventable diseases are easily controlled | | | | |
| vaccine preventable diseases are not so serious | | | | |
| vaccine safety information was unclear | | | | |
| believing in alternative medicine | | | | |
| perception about being up-to-date with vaccinations, but are not | | | | |
| child should acquire a natural immunity | | | | |
| only important when child starts school due to acquiring infections | | | | |
| back home only tb-vaccination is important | | | | |
| poor provision of information | | | Information and advise | |
| no provided information about immunization in own language | | | | |
| passive in information gathering | | | | |
| information received from healthcare professionals | | | | |
| getting information was easier in the native country | | | | |
| language of information as a barrier | | | | |
| additional information gathering seen as unnecessary | | | | |
| use of informal sources | | | | |
| lack of vaccination advise from healthcare professionals | | | | |
| healthcare professionals most important source of information | | | | |
| low trust in optional vaccines advise from healthcare professionals | | | | |
| insufficient information | | | | |
| provided information was complete and clear | | | | |

| | | |
|---|------------------|-----------------------------------|
| limited time at the clinic | | |
| healthcare professionals discouraging parents | | |
| affordability | Financial access | Financial and geographical access |
| childcare problems | | |
| the necessity of work | | |
| monetary costs with optional vaccines | | |
| disadvantaged families reject all optional vaccines due to expense | | |
| high costs of optional vaccines | | |
| free provision of mandatory vaccinations --> high immunization compliance | | |
| lack of insurance | | |
| lack of transportation | | |
| difficulty finding the clinic | | |
| not missing any vaccination because of transition to another country | | |
| continuing migration bothers the access | | |
| distance to immunization services | | |