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The meaning of vaccination. How do parents in India justify a choice no to vaccinate their children?

Preface

This Master thesis was conducted as a part of the Master in Social Welfare and Health Policy in OsloMet Metropolitan University. First and Foremost, I would like to thank all my Professors, friends and my family who supported me throughout the journey of this Master program.
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Summary

Even though the government emphasize on the importance of immunization in India, the vaccine preventable diseases are still prevailing in the country. The perception of parents regarding vaccines vary according to different situations. This affects their choice regarding vaccines, whether to accept, decline or delay vaccines. Moreover, there are many factors that affect the vaccination uptake and many methods are suggested to improve vaccine coverage. Identifying the perceptions of parents, factors that hinders the process and the methods adopted to overcome the problem are important to improve the immunization coverage. A literature review was done based on the previous studies on the topic. A qualitative research leads the researchers to understand the views and expressions of the research participants and this helps in developing an understanding of how the people interpret their experiences(Jane Sutton 2015). A qualitative research method using semi-structured interviews with a pre-planned interview guide was applied. Parents of children under five years were interviewed. 10 participants were selected from each of the three different states -Kerala, Karnataka, and Tamil Nadu. A pilot study was conducted before the main study. After the interviews were conducted, the data was transcribed, and analyzed. The data was compared with the theoretical perspectives and the previous studies found in the literature review.

Levesque, Harris & Russels (2013) framework of access to health-care is the main theoretical perspective used in this study. However, this framework was supplemented with other models relevant in the study of health care utilization, like the Ajzen & Fishbein's (1980) theory of Reasoned Action (TRA), Hochbaum, Rosenstock, and Kegels the Health Belief Model (HBM)(1952), and Rogers' (2003) diffusion of innovation theory. The findings were discussed with reference to these theoretical frameworks. The interview was done in a rural area in three Indian states. Both higher-class people and lower class people were interviewed.

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Abbreviations

BCG - Bacillus Calmette–Guerin.

DPT - Diphtheria-Tetanus-Pertussis.

WHO – World Health Organization.

EPI – Expanded Programme of Immunization.

OPV – Oral Polio Vaccine.

UIP – Universal Immunization Programme.

NRHM - National Rural Health Mission.

AEFI - Adverse Events Following Immunization.

UNICEF – United Nations International Children's Emergency Fund.

VPD - Vaccine Preventable Diseases.

GIVS - Global Immunization Vision and Strategy.

GDP – Gross Domestic Product.

SDG - Sustainable Development Goal.

GVAP - Global Vaccine Action Plan.

GAVI - Global Alliance for Vaccines and Immunizations.

CARE - Cooperative for Assistance and Relief Everywhere.

DFID - Department for International Development.

MMR – Measles, Mumps and Rubella.

EPI – Expanded Programme of Immunization.

AIDS - Acute Immune -Deficiency Syndrome.

TT - Tetanus Toxoid.

MDG - Millennium Development Goal.

SAGE - The Strategic Advisory Group of Experts.

COMMVAC - Communicate to Vaccinate.

IIS - Immunization information systems.

GP - General Practitioners.

TRA - Theory of Reasoned Action.

HBM - Health Belief Model.

NSD - Norwegian Centre for Research Data.

NFHS -National Family Health Survey.

DLHS - District-Level Household Surveys.

Introduction

Immunity against the diseases caused by the micro-organisms can be achieved in in different ways. If micro-organisms enter our body, a local defense mechanism is enhanced. With the help of these defenses, our body is able to remove the antigenic materials such as bacteria or virus that are considered as foreign bodies. One is considered as immune when he has "specific protective antibodies or cellular immunity as a result of previous infection or immunization, or is so conditioned by such previous experience as to respond adequately to prevent infection and or clinical illness following exposure to a specific infectious agent" (Park 2015).

Active immunity is referred to as immunity achieved by an individual due to infection or immunization. Usually the antibodies or cells that have particular action on the concerned microorganism cause the specific infectious diseases. The person remains immune to the infection that is caused by the same organism for a period of time depending upon the disease caused. If the majority of the population gets vaccinated against a particular disease, it also provides protection to the unvaccinated individuals and thus herd immunity is achieved. Herd immunity act as an immunological barrier (Park 2015).

For understanding the terminology of vaccine, it can be described as an immune-biological substance developed to produce protection against a particular disease. The vaccine is developed from a live modified organism (BCG, measles, oral polio), or from an inactivated or killed organism (cholera vaccine).It can also be derived from extracted cellular fractions toxoids (diphtheria) or combination (DPT) of both. For the storage and transport of these vaccines, a ´cold chain system´ is developed(Park 2015).

The World Health Organization has introduced certain guidelines to ensure the safety, storage and distribution of the vaccines. Vaccine-vial monitor (VVM) is a visual indication for registering the temperature to ensure that the potency of the vaccine is preserved. The vaccine vial monitored label attached to the vaccine vial which changes its color when the vaccine is not stored properly and gives a warning whether it can be used further or not. This safeguards the integrity of cold chain, which includes their storage till they reach the distribution point (Eriksson et al. 2017).

Immunity is also developed passively by administration of immune globulin or antiserum. For example, maternal transfer of antibodies takes place across placenta to the fetus and thereafter from breast milk to the baby during feeding(Park 2015).

In this study, I will be discussing the perception of Indian parents of children below five years towards vaccination, factors that hinders the take-up of vaccines, and methods to overcome low take-up. The attitude of the parents towards vaccination, their understanding on the safety of the vaccines and the seriousness of diseases are important for improving the uptake of vaccine. There are several factors which may interpret or influence the parent`s decision in participating in a vaccination programme, and identifying such factors is the main point of this study. Briefly stated, the research question in this thesis is to understand the perception of mothers towards vaccination and the factors that hinders the vaccination uptake, and to discuss methods to overcome the problem. The study focuses on India, since India is home to almost one-third of the world's unimmunized children. It is approximated that only 44 percent of the children are fully immunized (Laxminarayan 2011). Considering the immunization programme at global level, India´s immunization programme is the largest with annual cohorts of around 26.7 million infants and 30 million pregnant women. As per the 2016 report, it is estimated that 38% of children failed to receive all basic vaccines in the first year of life (Gurnani et al. 2018).

The puzzlingly large lack of immunization in India is the main reason I have chosen to investigate India in this thesis. An added reason is that I was born and raised in India. India is known for its diverse culture and traditions. Being a native, I am familiar with some of the cultural practices and a few of the languages of the country. Hence, I am well placed to carry out an investigation in this country. I selected three different states from India. The justification based on my selection is discussed below.

Based on the National Family Health Survey(NFHS) 1992–93, for analyzing the socio-economic, gender, urban-rural and regional inequalities in immunization in India , it was observed that the southern states of India showed better immunization status and comparatively reduced inequalities related to immunization when comparing with other states in India(Pande and Yazbeck 2003) . In general the North Indians have a concept that all the South Indians are Tamilians / call them ´madrasis´. Even though southern region shows a diversity in culture, there are few similarities in tradition and culture of these states for example, language origin, food (staple food is rice), religion and beliefs(Hindus ,Muslims and Christians) (Junghare 2015). Besides these similarities, the people in the three states have different standards of living, clothing pattern, housing patterns and road & infrastructural facilities .Therefore I chose Kerala ,Tamil Nadu and Karnataka for my study as they are neighboring states and all the three states are geographically connected to each other(Appendix:11.5). I chose rural areas in each state in

order to compare sites where parents live in, and face, roughly similar socioeconomic contexts in all three states. These differences can provide us with robust information from the parents who has different cultures and traditions.

Moreover, I observed the existence of vaccine preventable diseases in Kerala, where the state was considered to have followed the immunization programmes almost from the implementation of the immunization programme. In turn, it was noted in Kerala that there was a decrease in full vaccination coverage from 80 percent in NFHS-2 to 75 percent in NFHS-3. Along with this, it also showed a decrease in coverage of almost all the vaccines which resulted in child deaths due to vaccine preventable diseases(Deaton 2015).Therefore I chose Kerala state as a part of my study.

During 1998-2010, 77-91 per cent of children aged 12-23 months in Tamil Nadu state were fully vaccinated as per the National Family Health Surveys (NFHS), District-Level Household Surveys (DLHS) and Coverage Evaluation Survey. Moreover, the findings of the DLHS-4 survey indicated that during 2012-2013, only 56 per cent of the children aged 12-23 months in the State were fully vaccinated. This shows a steady decline in vaccination in the state. As a result I chose Tamil Nadu state to understand the common factors affecting the vaccination (Murhekar et al. 2017).

I decided to focus more on South India and therefore took the neighboring state, Karnataka also as a part of my study where I understood that there is a wide gap with regard to immunization in some parts of the state, for example in some districts the children who were fully immunized were less than 85 per cent , and on the other hand the fully immunized rate for some districts were as low as 25 per cent according to the United Nations Children's Fund (UNICEF) 2002 report (Angadi et al. 2013).

1.1 Background

1.1.1 A brief history of vaccination

The history of vaccination starts with the fruitful works of Dr. Edward Jenner who performed the world`s first vaccine in 1796. Jenner inoculated the pus collected from a cowpox lesion of a milkmaid`s hand to an eight-year-old boy James Phipps. After about six weeks, Jenner

variolated Phipps arm with smallpox on two sites. It was found that the boy remains unaffected even after consequent exposures. On the basis of twelve such experiments and sixteen other case studies since 1770, he published a text with his own expense: *Inquiry into the Causes and Effects of the Variolae Vaccine.* His statement, assertion "that the cow-pox protects the human constitution from the infection of smallpox" laid the foundation for modern vaccinology (Stern 2005).

In 1885, Louis Pasteur developed the rabies vaccine. Before this invention, the vaccines referred to only cowpox inoculation for smallpox. Pasteur developed the rabies antitoxin that acted as a post-infection antidote because of the long incubation period of the rabies germs. The definition of vaccine by Louis Pasteur is still of great significance today. According to Pasteur, vaccine is defined as a "suspension of live (usually attenuated) or inactivated microorganisms (e.g., bacteria or viruses) or fractions thereof administered to induce immunity and prevent infectious disease or its sequelae." (Stern 2005).

1.1.2. Lack of vaccination coverage in the world: an overview

There is a world-wide significant progress in decreasing mortality rate among children, which includes under-five age children, children aged 5-9,and adolescents aged 10-14 years (Lucia Hug 2018).The vaccination programmes have played a significant role in the wellbeing of the global health to a great extent. However, in some of the South Asian countries, including India, one of the major reasons behind under-five mortality is due to vaccine preventable diseases(VPD).The introduction of Routine Immunization (RI) programme has showed some gradual progress in the recent immunization coverage, but still in some states or areas the coverage is quite low.(Vashishtha 2012).

Even though the world achieved substantial progress in reducing the mortality among children under age 5 to 9 and adolescents aged 10 to 14. In 2017, alone about 6.3 million children died mostly due to preventive causes. It constituted about 5.4 million children under the age of 5, with 2.5 million died in the first month of life, 1.6 million at 1 to 11 months aged and 1.3 million at 1to 4 years of age, 0,9 million died at 5 to 14 years of age. It can be pointed out that the death rate was at the peak during the first month of life, showing an estimated 18 deaths per thousand live births at global level at 2017. Before the age of one approximated death rate was 12 per 1000 live births and those before 5 years of age was 10 per 1000 livebirths.

Many advancements have been made which focus on the survival of the under -five children. As a result, the mortality rate was reduced by around 60% from 2000 to 2017. To be more specific,

the neonatal mortality decreased by 41%, while the mortality among 1-11 months and post neonatal period reduced by 51% (Lucia Hug 2018).

Sub-Saharan Africa was reported to have the peak mortality rate at global level. In 2017, it is estimated that the region had an average of 76 deaths per 1000 livebirths. If the global situation does not get controlled properly, it is predicted that around 56 million children under the age of 5 years of age are expected to die between 2018-2030, mostly the new born. The United Nations adopted the Sustainable Development Goals (SDG) in 2015 with the objective of promoting healthy living and wellbeing by to reduce under five deaths occurring due to preventive causes by 2030. The aim of the program is to reduce new born mortality to 12 per 1000 live births at a global level and reduce under five mortality to 25 per 1000 live births at global level. In 2017, about 118 countries achieved under five mortality rates below the SDG target that is 25 deaths per 1000 live births. The studies reveal that under five deaths are mainly due preterm birth complication, preventable diseases, pneumonia and diarrhoea. Vaccines are available for preventing some of the infectious diseases occurring during childhood such as measles, polio, diphtheria, tetanus, pertussis and pneumonia due to Haemophilus influenzae type B (HIB) and streptococcus pneumonia and diarrhoea due to rota-virus. Vaccine aids to protect the children against illness and death. (Lucia Hug 2018)

The global vaccination coverage still remains at 85% with no progressive change during the past few years. In 2017, around 85% of all infants at the global level (116.2 million infants) received three doses of the diphtheria-tetanus-pertussis (DTP-3) vaccine, which prevent life-threatening infectious diseases. The uptake of new and under-used vaccines is growing. It is estimated that 1.5 million death can be avoided by improving the global immunization coverage (WHO) 2018).

An overview of global vaccination coverage in 2017 according to the World Health Organization (WHO), is discussed below. Haemophilus influenzae type B (HIB) causes meningitis and pneumonia. The HIB vaccine was introduced in 191 countries by 2017. The global coverage with 3 doses of HIB vaccine is approximated to be 72%. It varies according to region. In the WHO region of Americas, coverage is about 91%, while in the WHO western pacific region it is around 28%. The coverage increased from 80% in 2016 to 86% in 2017 in the WHO South-East Asian region (WHO) 2018).

Another viral infection that affect the liver is Hepatitis B. By the end of 2017, Hepatitis B vaccine for infants was established nation-wide in 187 countries. Those receiving three doses

of Hepatitis B vaccine is about 84% at global level and is as high as 93% in the Western Pacific. The first dose of Hepatitis B is administered during the first 24-hours of life. The global coverage attained is estimated to be 48% (WHO 2018).

Measles is another infectious disease caused by virus leading to high fever and rash, blindness, encephalitis or even death. It is estimated that around 85% of children have received the first dose of measles by 2 years and 167 countries have included a 2nd dose as a part of routine immunization in accordance to 2017 report ((WHO) 2018). 67% of children received 2 doses of measles vaccine according to National Immunization Schedule (NIS).

One of the deadly infectious- diseases causing brain damage is meningitis A (WHO 2018). It was evident that even after 7 years of the introduction of the vaccine against this deadly infection, by the end of 2017 around 280 million people were affected and those affected were provided with MenAfriVac, a revolutionary vaccine developed by WHO. MenAfriVac became the first vaccine to gain approval to travel outside the cold chain and can be stored for 4 days in room temperature up to 40 degree Celsius. Ghana and Sudan were the first two countries to include MenAfriVac in their Routine Immunization schedule in 2016, followed by Burkina Faro, Central African Republic, Chad, Mali and Niger in 2017. Mumps is another common disease occurring in children where the swelling of the parotid glands occur followed by fever, head ache and muscle aches. The vaccine again mumps were distributed in 122 countries nationwide as per the 2017 report ((WHO) 2018). Pneumococcal diseases include the following: pneumonia, meningitis, bacteraemia, otitis media, sinusitis and bronchitis. As per the 2017 report, the pneumococcal vaccine was made available in around 135 countries with global coverage of 44%. However, nation-wide coverage could not be attained in around 5 countries (WHO 2018).

Polio is another viral infectious disease which can lead to irreversible paralysis. Polio was successfully eradicated but still some cases are reported in Afghanistan, Pakistan and Nigeria. Another important disease that increased under -five mortality rate was the diarrhoeal disease caused by rotavirus. Rota virus vaccine was made available in around 91 countries but still global coverage is not attained and is only around 28%. Yellow fever is acute viral-haemorrhagic, and the causative organism is infected mosquitoes. In around 36 countries, Africa and America, the vaccine against yellow fever has been introduced. The vaccine coverage is around 43% .((WHO) 2018)

A main challenge is to understand why around 19.9 million infants at global level are not receiving the DTP3 vaccination as per the Routine Immunization programme. 60 % of the affected children are from the following countries: Afghanistan, India, The Democratic Republic of Congo, Ethiopia, Indonesia, Iraq, Nigeria, Pakistan, South Africa and Angola. It is difficult to monitor data and emphasize immunization in some of these countries at subnational levels. WHO therefore works very hard to improve the global vaccination coverage and has adopted many initiatives through the World Health Assembly in May 2012((WHO) 2018)

1.1.3 Vaccination history in India

As stated above, vaccination is one of the most cost- effective method for protecting infants, children and the pregnant woman. They are considered as high-risk groups against the harmful vaccine preventable diseases (Lahariya 2014). The outstanding effectiveness of vaccines can by understood from the eradication of smallpox. In May 1980, during the 33rd World Health Assembly of the World Health Organization, the global eradication of small pox was approved (Breman and Arita 1980). Another great achievement of India was eradication of polio on February 25, 2012. The World Health Organization revised the list and erased India from the group of polio endemic countries.

The eradication of small pox was a legacy of better health care delivery on a global scale. Because of this, the experts decided to use this opportunity to improve the training for vaccinators globally. This helps to ensure better health and reduce the deaths due to other vaccine preventable diseases. Immediately after being declared a small pox free country in 1977, India established the National Immunization programme called the Expanded Programme of immunization (EPI) in 1978 with the introduction of BCG, OPV, DPT and typhoid-paratyphoid vaccines. The main objective of EPI was to attain 80% vaccination coverage in infancy. In 1983, Tetanus toxoid vaccine for pregnant women was included in EPI. Thereafter the measles vaccine was also included. In addition, in 1985, the Universal Immunization Programme (UIP) was introduced. The expansion of UIP was achieved by introducing the second dose of Measles, Hepatitis B and Pentavalent vaccine. This emphasized not only improving the immunization coverage but on also decreasing the mortality and morbidity due to six vaccine preventable diseases namely tuberculosis, poliomyelitis, diphtheria, tetanus,

pertussis and measles. Other objectives are to improve the quality of service, introduce a reliable cold chain system, systematic implementation in all districts, and establishment of monitoring and evaluation at district level. Thus, in 1985, the UIP began in 31 districts with the aim of development also in other districts. The targeted population was pregnant mothers .Later with the growth of the programme in 1990-1991, 100 % vaccination coverage of infants was the aim (Lahariya 2014).The Universal Immunization Programme (UIP) in India is considered to be one of the biggest programmes in the world .This is based on the amount of vaccine used, the number of recipients, the number of immunization programmes conducted and the geographical area covered (Lahariya 2014).

Immunization division is a division of the RCH program under the National Rural Health Mission (NRHM) and is located in the Ministry of Health and Family Welfare, Nirman Bhawan New Delhi. They provide all supports for the Universal Immunization Programme (UIP). In addition, they monitor the implementation plans and make sure the standards and norms related to the UIP are followed. The main function of this division includes routine immunization, organizing campaigns, observing Adverse Events Following Immunization (AEFI), cold chain management, and provision of training related to the immunization programme.

Despite the UPI, India is habitant to almost one-third of the world`s unimmunized children. It is approximated that only 44 percent of the children are fully immunized (Laxminarayan 2011). "Vaccination is widely recognized as one of the most powerful and cost-effective public health tools. Often immunization is a child's first - sometimes only - contact with the health system." — UNICEF Executive Director, Carol Bellamy (UNICEF 2005). It is considered that more than 30 million children are unimmunized.

A study conducted by Vashishtha argues that the vaccine preventable diseases are still accountable for majority of under-five mortality (Vashishtha 2012).In the Global Immunization Vision and Strategy (GIVS) from 2005, the World Health Organization and the United Nations Children's Fund (UNICEF) placed an objective for all countries so as to achieve 90% national vaccination coverage and 80% coverage in all districts by 2010.The UIP failed to achieve these targets. In India, it was reported that in 2007 only 53.5% of children were fully vaccinated. The immunization coverage varied throughout the countries. However, it is notable that the immunization coverage has been improved. But still the Immunization coverage remains lower than 70% in urban areas and below 60% in rural areas in the country (Megiddo et al. 2014).

Being the seventh largest country in the world and with population crossing one billion, India has the fastest growing economy in world market today. Despite the growing economy, the government fails take actions to protect children against vaccine preventable diseases. 80 percent immunization coverage in the country is not attained yet. There is a need to assess the causes for not vaccinating from the grass root level. Moreover, India´s immunization programme is one the largest immunization programme in the world. But still vaccine preventable diseases are prevalent in the country. This in turn shows that the vaccination uptake in the country is a slow process. This is evident from a study conducted by Vashishta (2012) that argues vaccine preventable diseases are the leading cause of under-five mortality in India. As mentioned in the introduction, the puzzlingly large lack of immunization in India is the main reason I have chosen to investigate India in this thesis.

1.2 Relevance and justification

The main objective of immunization programmes is the sustainable control of vaccine preventable diseases. Besides the general explanations for why vaccination is beneficial for the individual, the importance of vaccination can be explained in terms of herd immunity, since the vaccine not only protects the individual to whom the vaccine is administered, but also is beneficial for the population ((APIC) 2015). However, herd immunity occurs only if a strong majority of the population is vaccinated against the disease. Herd immunity is defined as "the indirect protection of unvaccinated persons, whereby an increase in the prevalence of vaccine immunity prevents circulation of infectious agents in unvaccinated susceptible populations"(Kim, Johnstone, and Loeb 2011). The significance of herd immunity can be understood by taking the example of smallpox, where the main goal was to immunize 80% of the population to achieve the herd effect (Kim, Johnstone, and Loeb 2011).

Interestingly, given the relatively low level of vaccine coverage in India, India is considered as one of the chief producers and exporter of vaccines. The Serum Institute of India, which is under the ownership of Cyrus Poonawalla, plays an important role in the world market This Indian vaccine industry is a major supplier for the World Health Organization, UNICEF and the World Bank. They also export vaccine to 150 countries. Despite India´s large production in the vaccine industry, the capability to accomplish the public health targets within the country remains a challenging task. Lack of public demand for immunization might be one reason for the vaccine deficit. Other reasons might be reduced financing for health care by the government

along with poor external investment. The health care expenses by the government is very low. It is reported as low as 1.2 percent of GDP, which equals to only $39 per year to each Indian citizen. As a result, the public health facility is very limited (Hodkinson 2016).

My motivation of writing this thesis is to contribute to an understanding of why immunization coverage is still inadequate in India.

2. Literature Review

2.1 Searching and selecting the literature

In order to understand the reasons for inadequate vaccination coverage in India and the methods to overcome the problem, the first step is to conduct a review of previous research on the topic. A systematic literature review is a method of gathering, closely evaluating, assimilating and displaying the results from different research studies on a research question or on a selected topic of interest. It is considered as systematic as it uses a clear, stable and moreover a broadly accepted methodology. An organized and systematic literature review helps to assess and evaluate how the results and outputs of the conducted research. The relevance of using reviews is becoming more common and gaining more importance especially in the health sector (Pati and Lorusso 2018).

The aim of this study is to understand the perception of parents towards vaccination, and the factors that hinders the parents from vaccinating their children. In order to accomplish this goal, we have to understand the parents´ attitudes towards vaccination, their knowledge regarding the vaccine preventable diseases (VPDs) and their beliefs regarding vaccination. In addition to this, there is a need to identify the factors that leads them to make a choice either to accept, decline, delay or reject the vaccination. Moreover, the study also focuses on identifying the methods to overcome the problem and thereby helps in providing suggestions to improve the vaccination coverage.

I used google-scholar and e-books directly downloaded from google to find relevant literature in the beginning. Later, the searching option was shifted to databases. I have used databases where a number of related studies could be found by snowballing. It also added the advantage of storing the correct references in the Endnote. The databases that contributed to the source of data were Cinahl, Cochrane library, EBSCOhost, Elsevier (ScienceDirect) , Medline (via

EBSCOhost), Medline (Pubmed), Oria, Sage, ScienceDirect , Social Sciences Citation Index and Web of Science(Cochrane database of systematic reviews).Previous studies were reviewed during the mid of September 2018 to the first week of November 2018.

Searching the Indian government websites and documents also added to the source of data. Key words like ´factors influencing parents decision in vaccinating their children- at global level, and in India´, ´parents beliefs regarding vaccination programmes in India´, ´social science researches based on Immunization´ ,´cultural and religious factors influencing vaccination, theories related to vaccines´, ´Immunization status in different states in India´, ´previous studies related to immunization´ ´vaccine hesitancy´, ´vaccine resistance´, ´controversial theories related to vaccines´, ´anti-vaccination programs', 'misconceptions towards immunization´, ´natural immunity´, ´methods to improve immunization programme- WHO recommendations, and the measures adopted by the Indian government´. Were the main search words commonly used for finding the literature? Instead of reading the entire study, which is time-consuming and a difficult task. I chose to read the abstracts of the studies that thus emerged, to ensure that they were relevant for my study and thereby helps in adding more literature to the study.

2.2 Review of literature

2.2.1 Review of studies concerning factors influencing parents´ decisions to vaccinate their children or not.

Nilanjan Patra conducted a study on Indian Universal Immunization Programme (UIP), in which the effects of socioeconomic and demographic variables on immunization against six vaccine preventable diseases are revealed. Patra found that both social, economic and cultural factors hinder the access of public health services to women. Patra`s findings were: a) Children of high order births are often vaccinated. b) Mothers who are educated and those exposed to mass media are more aware of immunization. c) Based on religious factors, people in Christian communities are more likely to be immunized than people in Muslim communities. d) Lower caste children are less likely to be immunized (Patra 2006). Nitcher (1995) relatedly found that the order of birth, gender of the child and when the vaccination was received is predictors of vaccination acceptance.

A study conducted by Mathew (2012) regarding the inequities of immunization programmes in India identifies some factors that are associated with inequities in routine vaccination.

According to him, the main factors that affect immunization are based on the individual level (gender, order of birth), on place of living, on socio-economic factors, on educational factors, on religious factors, on demographic factors and on accessibility to health care. On the contrast, he assumes that high birth order infants are less likely to be immunized, boys are better immunized than girls and illiteracy of parents further adds to the reasons for lack of coverage (Mathew 2012).

In their studies Dube et al.(2013) also reveal that the family and non-family members can affect the decisions made by a mother, getting her child vaccinated. In addition to the role of a mother, she is a wife, daughter-in-law, doing all household works, working in the agricultural fields, an individual in a community, a good neighbor, a moral citizen of the country, and moreover a woman. The factors around her are responsible for shaping her decisions. Streefland and collaborators use the expression "local vaccination cultures" to characterize how "shared beliefs about disease aetiology, ideas about the potency and efficacy of modern medicine and views on the need for preventive measures" as well as "local health services experiences and vaccination settings" influence the individual decision about vaccination (Dube et al. 2013).

2.2.2 Vaccine hesitancy

Several authors emphasize that vaccine acceptance is not an either-or, but rather a continuum. Vaccine hesitancy describes this in-between state. The World Health Organization defines vaccine hesitancy as

> A behavior, influenced by a number of factors including issues of confidence (do not trust vaccine or provider), complacency (do not perceive a need for or do not value the vaccine), and convenience (access). Vaccine-hesitant individuals are a heterogeneous group who hold varying degrees of indecision about specific vaccines or vaccination in general (Ames, Glenton, and Lewin 2017).

The Strategic Advisory Group of Experts (SAGE) on immunization is a group formed by the WHO. The group further defines vaccine hesitancy "to delay in acceptance or refusal of vaccines despite availability of vaccination services. Vaccine hesitancy includes factors such as complacency, convenience and confidence" (Juhani Eskola 2014).

Nitcher similarly points out that there are degrees of acceptance of vaccines. Nitcher (1995) defines the demand for vaccines and the acceptance of vaccines as follows: "*Active* demand

entails adherence to vaccine programs by an informed public which perceives the benefits of and the need for specific vaccinations. *Passive* acceptance denotes compliance, passive acceptance of vaccination by the public which yields to the recommendations and social pressure, if not prodding of health workers and community leaders".

The factors that influence the individual with regard to vaccine hesitancy are background influences which includes social, cultural and health system factors; influence of the group or individual which includes the individual perceptions of vaccines; and individual and group influences, including those arising from personal perceptions of a vaccine; and the problems related to vaccines or vaccination which includes the individuals´ evaluation of the risks and advantages and how the administration of vaccine is accomplished (Nitcher 1995). By getting an idea about these factors and their influence in various settings can contribute to the decision making about the interventions to be chosen.

2.2.3 A closer look at religious and cultural factors in making decisions regarding vaccines

The literature shows that trust and cultural factors can be more influential than attitude and knowledge factors towards immunization. In 2003, some of the political and religious leaders in three Nigerian states stayed away from the WHO polio vaccination campaign stating that the vaccine has resulted in sterility and even Acute Immune -Deficiency Syndrome (AIDS). Another example is a case reported in India, where Hindus and Muslim religious leaders considered vaccination as a method of family planning (Jheeta 2008) .

In Netherlands, the Orthodox Protestants followed their religious conviction and did not accept vaccines. Another category called the New age followers resisted, based on their religious ideas that "if we fall ill, then it is the will of God"(Nitcher 1995).

Even though not an epidemic, an outbreak of measles in Unites States was associated with individuals and groups who rejected vaccination for cultural, philosophical and religious reasons. In May and June of 2005, there occurred an outbreak of measles in a church in Indiana. The source of the outbreak in the church congregation was a 17 year old female, who was not vaccinated against measles, who came back after the charitable work in Romania. Based on this, a study was conducted to understand the beliefs and attitudes of the people in the church with regard to vaccination, the experiences of the outbreak, and the reasons for the uptake and

refusal(Kennedy and Gust 2008). Most of them stated that they preferred to delay vaccines until their child gets older, and to take the vaccine only if there is a "need"(Kennedy and Gust 2008).

2.2.4 Controversial theories related to vaccination

One factor that deters vaccination coverage is related to conspiracy theories that are usually spread by anti-vaccine movements. Most conspiracy theories connected to vaccines are related to concerns like false information and that risk of vaccines are hidden from the people such that the medicine companies earn money and makes huge profits(Jolley and Douglas 2014). Some conspiracy theories related to specific vaccines are referred below.

Hib controversy

Multi-drug resistance by Haemophilus influenza (Hib) is a challenge in India. If the third generation cephalosporins are not administered on time, then death rates due to meningitis may go up to 100%. The advantage of the Hib vaccine is clear from the studies conducted, as it is safe, and it could attain 99% reduction in 2-3 years with mass vaccination(Shah 2003a).

In middle-income countries like India, there are many controversies related to the Haemophilus influenza (Hib) vaccine, which comprises the problems of the disease, and the effectiveness of the Hib vaccine when it is combined with other vaccines. There are many mythologies associated with the Hib vaccine. As a result there are many controversies (Shah 2003a).

There is absence of proper data regarding the Hib burden in India. Therefore, most people believe Hib is not common in India. However, it is known that the common cause of pneumonitis and meningitis in children under five years of age is Hib.

Pertussis controversy

Pertussis, also known as whooping cough, is a bacterial infection caused by the gram-negative bacillus, Bordetella pertussis and it affects the respiratory tract. Cough that last for many weeks is the primary feature of the disease. It is reported that pertussis is one of the reasons for many deaths among children at global level. Around 60 million cases of pertussis and more than half a million deaths are reported on yearly basis. In 1948, whole cell pertussis vaccine was merged with diphtheria and tetanus toxoids and together are known as the Diphtheria Tetanus Pertussis (DTP) vaccine. Even though it helped to reduce the child death rates, the adverse effects of the whole cell pertussis vaccine became very remarkable. There emerged different controversies in various countries on the whole cell pertussis as they lead to many neurological problems and even deaths followed by the vaccination(Shah 2003b).

Mercury controversy

One of the controversies regarding vaccines is their association with mercury. Usually the multi-dose vials of vaccines are stored and preserved by using thimerosal, which contains mercury. Mercury affects the neurological system and therefore it was speculated an association between vaccines and autism. Even though there is no clear evidence regarding higher risk for neurological problems associated with the use of these multi-dose vials, still in some countries it is considered an issue. Due to these prevailing concerns, a study shows that the routine vaccines in Canada is produced now in single vials and therefore contain only a little thimerosal by replacing the multi dose vials, which are still used in many developing countries(Robinson 2007).

Tetanus controversy

The Tetanus Toxoid (TT) vaccine administration for adult women were believed to be part of family planning in Philippines during 1995. In India, similar conspiracy theories aroused among both conservative Muslim and Hindu groups. Some Hindus believe that Muslims produce many children to gain votes. While some Muslims fear the vaccination programme was introduced by the Hindu majority to covertly introduce family planning. Nitcher refers to a Hindu leader in a South Indian state who argued that the Christian cross and hypodermic needle are visually similar. For that reason, he claimed that the injections and vaccinations were introduced by

foreign Christian countries and co-related this with the Christian missionaries who came to India to convert Hindus and reward the population with schools and hospital aids. He believed that the vaccination programme also belonged to the same category and is an attempt to force this population to adopt foreign Christian cultures and values (Nitcher 1995).

Measles controversy

Childhood vaccination gained attention during the recent outbreak of measles and other vaccine preventable diseases in the US and Europe. An incident took place California Disneyland in 2014, where there was measles outbreak, and a later survey showed that 667 cases were reported in 27 US states. (Barbieri and Couto 2015) In 2016, 35 deaths were report in Europe due to measles outbreak. The reason behind the outbreaks is believed to be vaccine hesitancy or refusal which stems from the anti-vaccination movement. The anti-vaccine movement includes the social-media ´ant vaccine Facebook group´. Findings reveals that, the parental data is searched and then is shared with some solitary, emotionalized information, which creates an effect over the scientific research and the numerical data. As they shared the core beliefs and purpose of vaccines, the group members used cognitive authority even though the lack of proficiency or support in their postings(Barbieri and Couto 2015).

Controversies associated with vaccines and autism is a topic of discussion in the media .Studies reflect that there is no association between vaccines and autism. Still, there are some others who claims for their association. United States and United Kingdom reported the controversy by interpreting the points for and against the association in a ´balanced fashion´. The spread of controversies regarding vaccines through the news media influenced the public to rethink about their choice of vaccination. However, the vaccination coverage was reduced as a result. A study mentioned that the` falsely balanced` statements about a suspected or unproved association between autism-vaccine association, can lead readers to not vaccinate their children(Dixon and Clarke 2013). Paul A. Offit´s Autism's False Prophets blames the media for not being interested in the truth, leading to misrepresentations and controversies(Geschwind 2009).

In 1998 there was an article published in *The Lancet* by gastroenterologist Dr. Andrew Wakefield and colleagues who falsely connected the MMR vaccine to autism. The authors of the publication were charged with moral defilement and misleading readers. However, the publicity led to reduced vaccine coverage and new MMR outbreaks in many countries(Ma and Stahl 2017). There was no evidence of an association between the MMR vaccine and autism:

Wakefield presented false evidence. However, the Lancet article lead to an increased anti-vaccine movement in Europe, the United States, Canada, Japan, Australia, and other countries, which utilizes websites and blogs to further its agenda(Barbieri and Couto 2015).
Social media forums were used by the anti-vaccination communities. Apart from the Facebook, anti-vaccinators also used traditional methods of campaigning through local newspapers.

2.2.5 Belief in natural immunity over vaccination

Some vaccine decliners believe in natural immunity and a naturally acquired immunity. They believe that childhood diseases are a natural way to boost the immune system and thus acquire natural immunity. They considered vaccination as an artificial intervention that enters the human body in an unnatural way (Bystrom et al. 2014)

2.2.6 Other conceptions

Studies in India and Sri Lanka shows that there is little public understanding about vaccination, and the different vaccine preventable diseases. Some mothers perceive that all vaccines are the same, and therefore believed that the uptake of a single vaccine can prevent all the acute and chronic illnesses. Some of them also believe that vaccines improve the baby weight and aids for their growth and even purifies their blood and intestines (Nitcher 1995). This is a conception that may increase vaccination uptake, but for wrong (false) reasons.
Leach & Fairhead (quoted in McKnight and Holt) further mention that some mothers believe that vaccines can cure diseases besides preventing them. They evaluate the assumed efficacy of the vaccines through the weight, size, and vitality effect on their child before and after immunization. Some mothers also believe that vaccines are the soldiers against diseases and that after vaccination, the child feels discomforts like pain, fever or diarrhea as a result of the power of the vaccine in the body that destroys the disease that the body was exposed to (McKnight and Holt 2014). Again, these are beliefs that may increase vaccination uptake, but for wrong (false) reasons.

2.3. Summing up the literature review

Previous studies of take-up of vaccines emphasis a large number of factors that may influence how parents view vaccinations.
In order to further systematize the factors that may influence vaccination uptake further, I will bring in some influential theoretical frameworks that have been developed to synthesize factors

that influence utilization of health care services more generally. The next chapter presents these general frameworks.

To provide a vaccine is to provide a health service, hence these overarching theoretical frameworks have relevance when studying vaccine utilization. In chapter 3 and 4 these theoretical frameworks, related to the literature study, provides the framework for my interview guide and subsequent qualitative interviews with 30 mothers in three Indian states.

3 Theoretical perspectives

As stated in the introduction, the aim of this study is to understand the perception of mothers towards vaccination, the factors that hinders the vaccination uptake, and possible methods adopted to overcome the problem. In chapter 2, a reading of the previous studies related to the topic was done to generate ideas of data generation and analysis. In addition, a number of theoretical concepts were identified from this reading, which provides the basis for finding a general theoretical framework for the study.

According to Silvermann (2000), "Any scientific finding is usually to be assessed in relation to the theoretical perspective from which it derives and to which it may contribute" (De Benetti).Social research interrelates the theory and the empirical data. Theories interconnect different thoughts and principles. Constructing and evaluating theory is a key objective of social science (Chambliss and Schutt 2012).

Supply and demand factors influencing immunization uptake was discussed in the literature review. In the following, I will present Levesque et.al.´s framework for studying utilization of health-care.

3.1 Levesque´s access to health-care framework

Levesque´s access to health care framework is a way to conceptualize access and subsequent utilization. Since vaccination in a public health service, the framework represents a way to order the various factors that the literature review revealed as influencing take-up of vaccination. This framework incorporates the demand- and supply-side factors, and allows operationalization of health care access, including achieving care and gaining from the health services provided.

In this framework, access is referred as the ability to perceive and understand the need of health-care, to seek services related to health-care, to reach, pay and engage with health care personnel, as well as the stability of health care providers (the supply side) to be approachable, to be

acceptable to the users, and to offer affordable services that are appropriate. This relates to Mooney (1983), who consider access as the function of both supply and demand factors.
Access to health is referred as the outcome of supply factors like area, obtainability, price and the relevance of the services related to health. The demand factors are the results of burden of disease, perceptions, beliefs and attitudes, and efficiency and individual practices (Levesque, Harris, and Russell 2013). A previous referred study related to vaccination conducted by Jheeta (2008) similarly emphasize also the significance of supply and provider related factors, which directs the health care workers and the parents in performing their task so as to improve the vaccination coverage. Similarly, Nitcher (1995) points out many of the same factors affecting vaccination uptake in the literature review.

In short, the five supply dimensions includes approachability, acceptability, availability and accommodation, affordability, and appropriateness. The five equivalent demand factors influencing populations to access and utilize health services include the ability to perceive health care needs, ability to seek, ability to reach, ability to pay, and ability to engage health care personnel. These dimensions (Figure.1) represents a general framework for studying access and utilization of health care, including vaccines(Levesque, Harris, and Russell 2013).

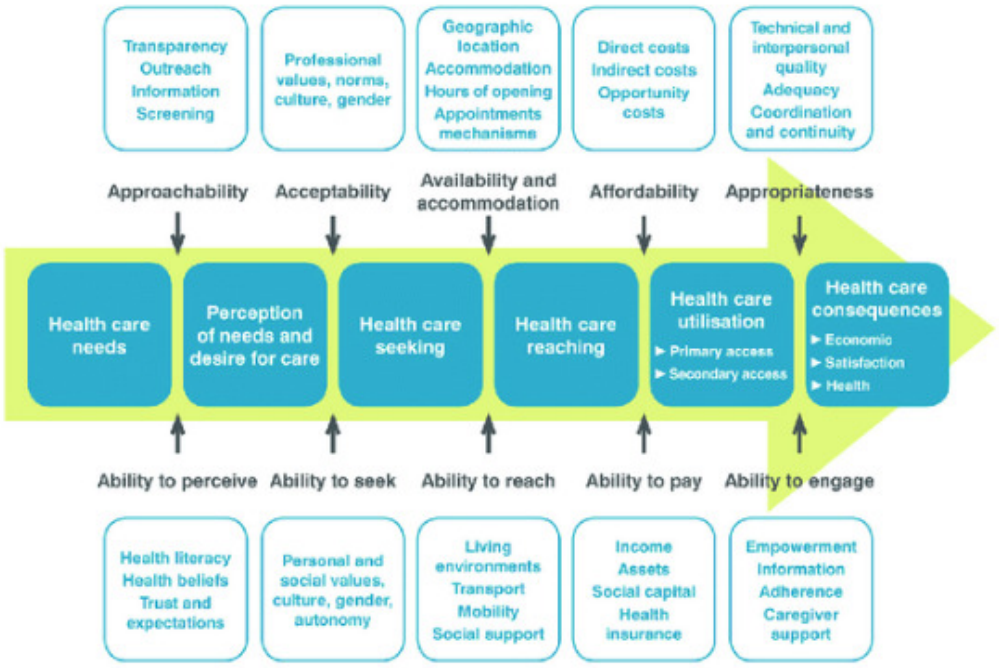

Figure.1: Dimension of Levesque´s access to health-care

A further spelling-out of the supply side and demand side of Levesque et.als (2013) general theoretical framework:

Approachability means that those people who are in need of health services can benefit from them by understanding the services available, approachability and its impact on the health of the person. These services help themselves known within a society or different areas they belong to. The factors such as transparency, outreach information and screening help to make the services more or less approachable. (Levesque, Harris, and Russell 2013).

Acceptability is related to social and cultural factors that regulates the choice for the people to expect the services that made available and the appropriateness evaluated by the individuals to seek health care refers to individual autonomy and once capacity to make choice to seek health care, their knowledge about the facilities related to health care and personal right that helps them to express their purpose to get health care(Levesque, Harris, and Russell 2013).

Availability and Accommodation means making the service reachable in a physical and timely manner. The availability includes the presence of productive services. Facilities may include the geographical location, accommodation, opening hour and appointment mechanisms. If the resources are distributed unequally, then there the access is said to be restricted. (Levesque, Harris, and Russell 2013).

Affordability refers to individual´s financial capability to use resources and time to utilize appropriate services. In turn, it is related to direct and indirect cost and opportunity cost. It includes the cost of care, time and cost required for travelling. (Levesque, Harris, and Russell 2013).

Appropriateness refers to suitability between clients need and services available. The services provided, the method of their provision and their nature is related to appropriateness or adequacy of the services provided. (Levesque, Harris, and Russell 2013).

To overcome the potential barriers to access the health care, the users should have the following abilities: ability to perceive, ability to seek, ability to reach, ability to pay and ability to engage. The *ability to perceive a need for health care* is determined by factors such as health literacy, knowledge about the health care and beliefs related to health and sickness. The *ability to seek*

for health care relates to the concepts of personal autonomy and capacity to choose to seek care, knowledge about health care options and individual rights that would determine expressing the intention to obtain care. The *ability to reach health care* relates to the notion of personal mobility and availability of transportation, occupational flexibility, and knowledge about services that would enable a person to physically reach service providers. The *ability to pay for health care* describes the capacity to generate economic resources to pay for health care services, in case of care costs that are not covered by the health insurance, without catastrophic expenditure of resources required for basic necessities. *The ability to engage in health care* relates to the participation and involvement of the client in decision-making and treatment decisions (Levesque, Harris, and Russell 2013).

The competence of the health care professionals in providing adequate information to the parents regarding the vaccination, the coordinated effort of different organizations and their follow ups are very much emphasized as a part of improving the vaccine uptake.
These dimensions that are discussed above are not fully independent. That means, they influence each other in different situations of care and illness. For example, the availability of services can be linked with the affordability of transportation in affecting the accessibility of health care. This shows they are related to each other(Levesque, Harris, and Russell 2013).The factors that influence the parents´ choice to vaccinate or not to vaccinate their children are based on the dimension of abilities of populations to access health services. On the other hand, the role of health workers and the services provided are discussed through the dimensions of accessibility.

In the literature review, Streefland (1999) as well as others emphasized the influence of the familial, social and cultural surroundings of the mother (assuming her to be the primary decision maker) with regard to understanding vaccination take-up. These factors are rather implicit in Levesque et.al.'s framework (captured only to some extent in the bracket "ability to perceive" and "ability to seek"). To supplement Levesque et.al.s framework, including with a stronger focus on the familial and social context of the mothers, I have chosen to bring in three additional theoretical frameworks, beginning with Ajzen & Fishbein's Theory of Reasoned Action. These three models are complex in their own right, but in this thesis I would only highlight those aspects of the models that supplements Levesque's model.

3.2 Supplementing Levesque et.al.'s framework: The Theory of Reasoned Action

According to the Theory of Reasoned Action (TRA),

> Human beings are reasonable and make organized use of available information. Fishbein and Ajzen (1980, 2010) propose that human behavior can best be predicted from a person's intentions, and that these intentions are determined by the person's attitudes toward the behavior, perceived norms regarding the behavior, and perceptions of control regarding the behavior" (Ajzen and Fishbein 1980).

Intentions are based on the attitude of the individual and subjective norms.

The attitude and subjective norms of the individuals are based on the person´s belief that the behavior leads to certain outcome and his evaluation of these outcomes, and on the person's belief that specific individuals or groups think he should not perform the behavior, and his motivation to comply with the specific referents (Figure.2) (Ajzen and Fishbein 1980).

According to this theory" the immediate important determinant of behavior is behavioral intention. The direct determinants of people's behavioral intentions are their attitudes towards performing the behavior and the subjective norm associated with the behavior." (Ajzen and Fishbein 1980).

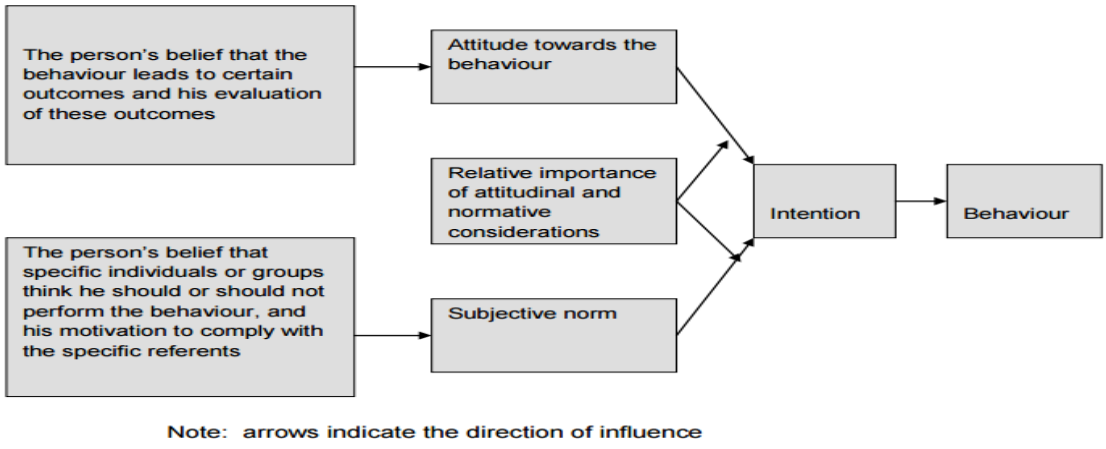

Figure.2: Factors determining a person's behavior.

One of the factors that determines a person´s behavior as stated by Ajzen and Fishbein is a person's belief that specific individuals or groups think he/she should or should not perform the behavior, and his motivation to comply with the specific referents. This can be interpreted that the vaccination choice is also influenced by the peer, friends and family. This is the main added point of this model, as compared to Levesque et.al.'s theoretical framework. It can be seen as an elaboration of "ability to perceive" and "ability to seek", bringing in how other people

(significant others) can influence the mothers' perception of vaccination as something needed, or not needed. In the following chapters, the perceptions of Indian parents towards vaccination will be discussed based in interviews, along with their perceptions of mothers, hindering factors and of method to improve the vaccination in the country.

Heggenhougen and Clements(1987) proposes application of more general social science theories for improving the vaccination coverage, and how it varies on the basis of place and groups involved(Streefland P 1999). Such a general theory is the so-called health belief model.

3.3 Supplementing Levesque et.al.'s framework: Health belief model

The Health belief model (HBM) was first introduced by the three social psychologists - Godfrey Hochbaum, Stephen Kegels and Irwin Rosenstock. It was initiated in 1952 and is considered as the starting point for an organized and systematic theory-based research in health behavior. This model is developed for explaining and predicting preventive health seeking behavior. The main focus lays on the understanding the association of health behavior, practices and usage of health services. Later, the HBM has been modified such that it also includes general health motivation. (Hochbaum, Rosenstock, and Kegels 1952). Among the four domains of this model in Figure 3, the "expectations", and in particular perceived barriers to action (here: immunization) is the focus in this study. Perceived barriers relate to the individual´s concerns, or negative beliefs, about a health behavior. In this study, the reasons for non-acceptance of the vaccine and the parental beliefs and concerns related to these reasons are a main focus of the study. Perceived barriers to health actions constitutes physical and psychological factors, accessibility factors, and other hindrances that occurs during the preventive behavior (Coe, Gatewood, and Moczygemba 2012). The health belief model can be perceived as providing a micro foundation for investigating "what goes on" with regard to cognitive processes when potential and actual health care users perceive their health care needs, including how they perceive the approachability etc. of health personnel, in Levesque et.al's general framework of barriers to health care access.

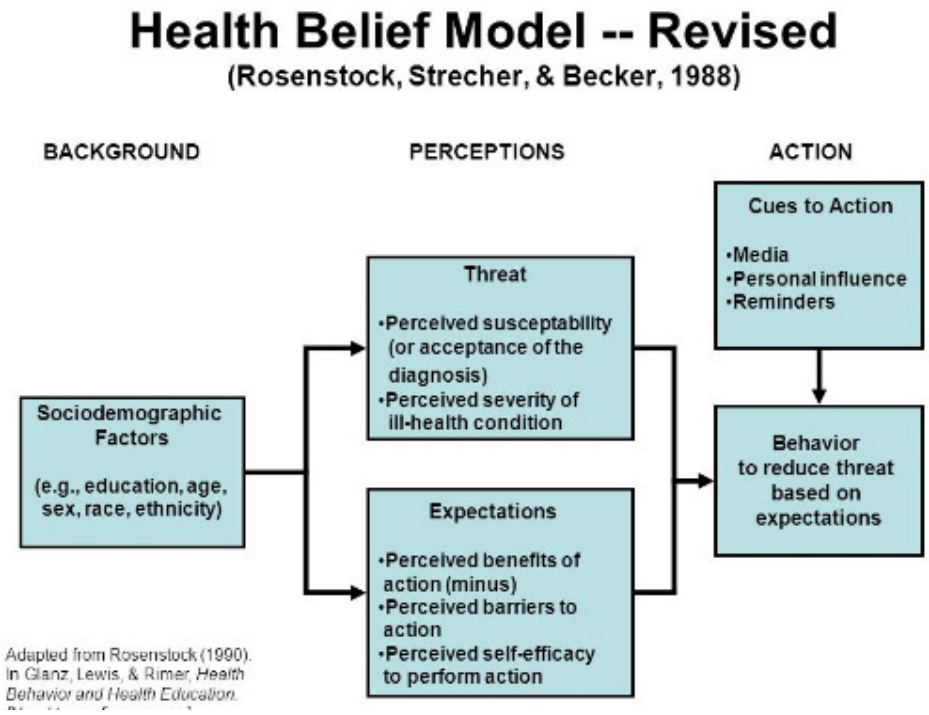

Figure.3: Health Belief Model.

The HBM model emphasis that there are risks ("threats") involved in making health decisions – also the decision to accept vaccination. For example, there might be a perceived risk that needles are contaminated (if vaccines are given as injections), or a perceived risk that the vaccine makes you sterile (if people believe in some of the conspiracy theories of vaccination that were illustrated in the literature review). The emphasis on perceived threats can be regarded as a further elaboration of the "ability to perceive" factor in Levesque, and hence a justification for bringing in this model in addition to Levesque.

The studies discussed in the literature review indicate the importance of parental beliefs in making decisions regarding vaccination. It also pointed to many conspiracy theories that implies a negative impact on the vaccination. Behavior aimed at reducing threats based on the expectation, refers to handling the perceived risk of the vaccines, and thus supplement to Levesque´s framework.

3.4 A third supplementary perspective: Diffusion of innovation theory

3.4.1 The innovation- decision process

A final theoretical framework I want to bring in as supplement to Levesque's theoretical framework is the portrayal of vaccine uptake as an "innovation-decision process". In this framework, the decision to adopt an innovation (in this case: To allow one's children to be vaccinated) is a process as something that takes place gradually, over several "stages" – it is not a one-off decision. An individual passes from first knowledge about an innovation (here: the existence of vaccines and vaccination), and thereafter passes through a persuation stage (being convinced, or not, that vaccination is a good thing), a decision stage (deciding to vaccinate one's children), an implementation stage (actually seeking out the health clinic and getting the vaccination) , and a conformation stage (in hindsight, believing that this was a good thing to have done); but also with the possibility of further rejection (not seeking additional vaccines, or not seeking vaccination for later children) (Rogers 2010, 20) The process is illustrated in figure 4.

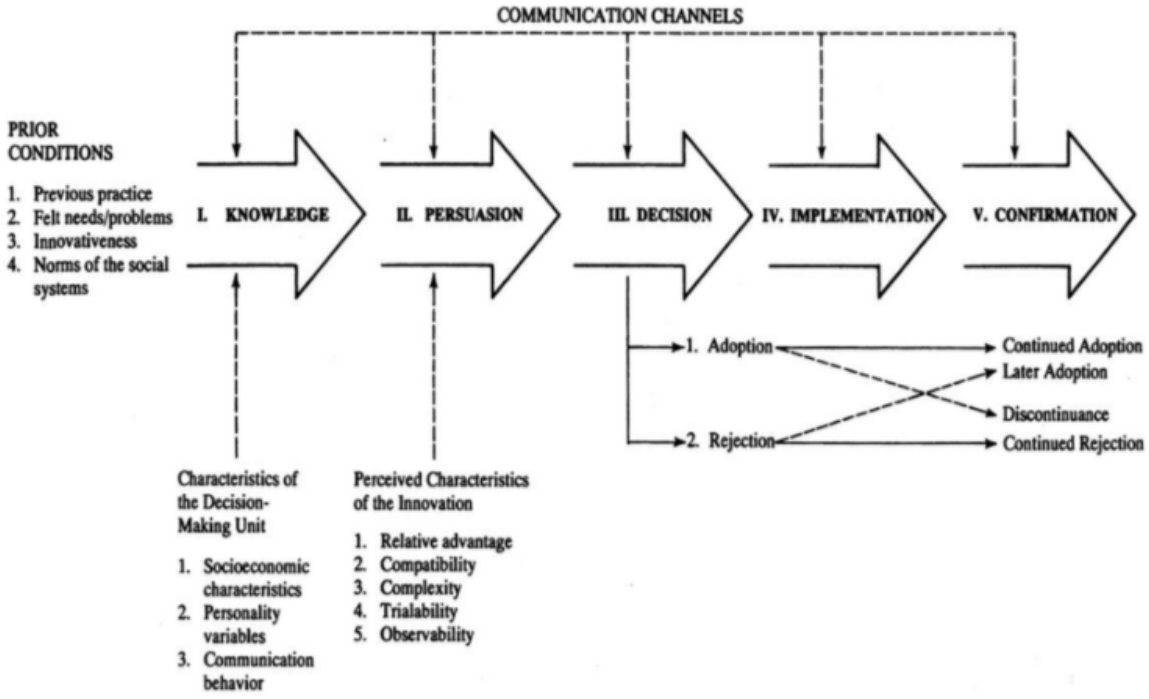

Figure.4: Innovation – decision process (Rogers 2010)

Rogers' (2003) model in most respects emphasize similar factors as the previous others, but in addition to a clearer process-perspective it also brings in one additional factor not emphasized earlier: The perceived characteristics of the "innovation" itself that the individual is to adapt of reject. The "innovation" in this case is the vaccination. Rogers' point, adopted in a health care setting, it that it may be more difficult to get people to utilize some health services rather than others. In particular, it may be more difficult to get them to perceive a need for, and seek, *preventive* health care interventions as compared to *curative* health care interventions. Vaccination represents a *preventive* health intervention, and that is in many ways different from a curative health intervention. Rogers tracks five characteristics of an innovation (here: vaccination), that may in itself have an impact on take-up. These are spelled out below.

3.4.2 Characteristics of vaccination, perceived as an innovation parents may or may not seek to utilize

Rogers (1995) identified five characteristics of an innovation that in themselves may explain the adaption (or not) of the innovation: (1) relative advantage (2) compatibility, (3) complexity, (4) trialability and (5) observability.

Relative advantage refers to the degree to which the innovation is perceived to be beneficial. It can be measured based on economic terms, satisfactory levels and convenience of the use (Rogers 2010, 15) it serves to explain the expenditures and risk arising when adopting an innovation. In case of immunization services, adoption of the new innovation (vaccination), benefits the adopters and thus aids in improving the immunization rates. *Compatibility* is the level to which the innovation is considered to be reliable when assessing the values, earlier experiences and the requirements of adopters (Rogers 2010, 15-16). Compatibility can be considered as a major characteristic for adopting an innovation. In this stud it is relevant because when the immunization programme is introduced to the community, it should fulfill all the necessary requirements like adequate manpower, resources and proper co-ordination and organization at all levels. The better the services (related vaccination programme) provided, the greater the rate of adoption of the innovation. *Complexity* is the extent to which the innovation is complicated such that it takes time for the user to adopt it (Rogers 2010, 16). In this study, there are several terminologies and theories (for example, germ theory related to vaccines) that may remain unclear for the adopters and may affect the innovation. *Trialability* is the extent to which the innovation is tested with limited bias. Learning by doing is the main idea conveyed here (Rogers 2010, 16). The introduction of new vaccines or combination of several vaccines

(for example pentavalent vaccines) is to ensure that one shot can protect more than one infectious disease. This innovation should be made compatible such that it is accepted by the community. *Observability* is the extent to which the outcome of the new idea is visible by others. This helps in easy adoption of the innovation by the users as it becomes known to all (Rogers 2010). Being a preventive aspect, the result of the innovation is not visible in most of the cases. Therefore, one doesn't know what the after effect of the vaccine is as there is no follow ups done.

Since immunization is a preventive measure, parents are not able to see the effect of the measure. The outcome of the vaccine (the child is not getting sick from an infectious disease) is not observed; contrary to curative interventions, where parents can see an improvement as a consequence of the intervention (a sick child gets better). With regard to complexity, the terminologies and medical concepts will not be clear to all the individuals. For example, many complex terms and queries related to vaccines including germ theory, purpose of vaccination and how is it prepared and their action in the human body is difficult to be understood rather than merely getting it administered.

The perceived characteristic of the health service discussed here adds to the Levesque´s framework,

In the following, I shall account for the methodology used in my study, and the choice of venues in India for conducting the study, before moving on to present and discuss my findings.

4. Methodology

4.1 Research Question

To recapitulate, the research questions in the study are as follows:

How is the implementation of immunization programmes perceived by Indian parents?

What are the factors that hinder parents from immunizing their children?

What methods can be adopted that are likely to improve vaccination uptake?

4.2 Research Approach

A qualitative approach was chosen. It represents a methodology where the researcher is engaged in a closer relation and identifies the participant's perspectives by detailed interviewing and observation. Braun and Clark`s (2013) define qualitative design as "it uses words as data…. collected and analyzed in all sorts of ways" Qualitative researches want to know how an individual interpret their experiences, how they fabricate their world and what they mean when they are trying to point out their experiences (Merriam 2016). Moreover, a qualitative approach gives us the possibility to search for new insights throughout the process, even in the later part of the interview sessions. Thus, it provides us with a chance to further explore subjects that arises during the data collection (Suter 2012). This is essential in this study,

4.3 Philosophical paradigm

All researchers have views and expressions about what constitutes "facts" and the intellectual understandings of these facts. These views lead our thoughts, perceptions, assumptions about the people around us and ourselves and thus we attain an overview of how we see the world around us. This is sometimes referred to by social scientists as a "paradigm". A paradigm is a means to describe a global view that is informed by philosophical assumptions about the type and understanding of social reality. This basic perception, or understanding, of the world can also be described as an ontology. While the *means* of achieving understanding and knowledge of the world is known as an epistemology (). Further, one's ethics and values are known as an axiology (the values and normative beliefs of participants, but also of the researchers who study participants). A paradigm guides us to put forward some questions rather than others, and can also imply to favor different methods when studying the social world. This is termed a methodology (how the world is to be studied) (Kawulich 2012).

In this study, I adopt a paradigm often called a constructivist / interpretative paradigm. To those parents who make the choice not to vaccinate their children, their social construction of reality is how and what they rationalize with regard to their behavior. The result of some social constructions of reality is that children are not vaccinated. My guiding assumption when considering the parents' social constructions of reality is that the consequences of these constructions are real (i.e. children are not vaccinated), regardless of whether one regards the social constructions maintained by their parents as "real" in an ontological sense.

To elaborate, the perception of reality differs from individual to individual and their action depends on how they perceive the person or situation. The so-called Thomas theorem in sociology states that "if men define situations as real, they are real in their consequences". The Thomas theorem focuses on the subjective aspect of human action.

It was introduced by the American sociologist W.I Thomas who argued that humans recognize "reality" through a complicated calculation that depends on the person´s understanding about the situation. This calculation can be exact or not. Moreover, people can attain a better knowledge of a situation, which may or may not accord with the needs of the individual. Thomas means that this happens throughout the social life of the individual. The main aspect of this theory is the subjective assessment. It is not the objective reality of the situation that our behavior is based on, but rather on our subjective explanation of reality. The after effects and the outcomes of our behavior is real, regardless of whether an outside observer judges our subjective explanations of reality as "real" or not.

The subjective aspect of the actions is emphasized throughout the history of sociology. To understand human behavior, a thorough assessment of the subjective component based on what people think, believe, feel and wish becomes important.

4.4 Research Design

A research design is a framework for gathering and analyzing data. In this study, a cross-sectional design was used to explore the research question. In this design, interviews were collected from more than one site, but at a single point of time. Bryman states that in a qualitative study unstructured or semi-structured interviews are done to gather information from many participants (Bryman 2012).

4.5 Research Method

A research method is a technique for gathering data. As mentioned above semi-structured interviews were the method chosen for gathering information from the participants. This research method helps the interviewer to attain more data and clarify them and, moreover, to understand the interviewee`s views directly. When conducting a semi-structured interview, the researcher usually prepares a set of questions beforehand, which is referred to as an interview

guide. However, it is the interviewee´s freedom how to answer these questions. Questions may not be asked exactly the same way as written in the interview guide.

Open-ended questions were asked, but the sub-questions were not pre-planned as they were asked based on the interviewee`s reply to the previous question. This helped me to gather in-depth information regarding the attitudes and opinions of the interviewees. But all the questions asked to different interviewees were the same. This method of gathering information is flexible (Bryman 2012). This method helped me to understand the parent`s views in detail about their perception regarding vaccination. Different techniques like probing, silence, specifying and structuring, direct and indirect questions and interpreting questions were used to gather information (Bryman 2012).

The interview guide should be developed in such a manner that it helps the interviewer to identify and gather data so as to understand how the research participants view their outside world(Bryman 2012). For this study, the interview guide consisted of 15 questions and these questions were discussed with my supervisor. The interview guide was based on the general theoretical frameworks for studying decision-making related to health services described above, plus the review of the literature of the of earlier studies of facilitators and barriers to vaccination.

I decided to perform a pilot study, before the main study. The aim of the pilot study was to assess the quality of the interview guide and to get an idea about the follow-up questions and the sub-questions. It helped me to plan the main interview guide and plan the order of the questions and their relevance. It also added to my confidence in conducting the main study. For the purpose of the pilot study two parents who had children under the age of five years were asked. They were familiar faces, and I had a little knowledge about them. After the pilot study was done, several changes were made in the interview guide as new ideas emerged. Some of the questions were reformulated to make it more convenient for the interviewee. Sub-questions were added to existing questions in some areas for gathering detailed information. The interview guide developed for the main study had 12 questions. The questions were not always asked on the same order as in the interview guide, as it varied according to the participant´s response. In some cases, extra questions outside the interview guide was also added. Both the interview guide used in the pilot study and the main study is enclosed in appendix 11.3 & 11.4

One of the advantages qualitative researchers have over quantitative researchers is that new pieces of data can merge even in the late stage of the analysis. This flexibility enrich our data collected. This is sometimes referred to as a "Grounded theory" method which enhances flexibility and allows the researcher to take up issues and ideas as they develop during the interviews (Bryman 2012). Thus, this study is also influenced by grounded theory.

I disclosed my identity to the participants as a mother of a young child and as a nurse who is doing her higher studies. However, my perceptions regarding vaccination or the vaccination status of my own child was not disclosed to any of the participants. Even though there were many situations where the views expressed by parents was challenging to me. Silence and active listening were used in such situations and followed the recommendation by Bryman (2012) by being alert on what is said without expressing any agreement or disagreement.

The research problem helps to plan which methods to adopt. Regardless of method, focus should be given on establishing trust with the participant (Bryman 2012). For example, during the interview session, when I interviewed an orthodox Muslim family, where only the mother supported vaccines and others opposed it, I tried to gain trust of the participant through actively asking her to know the reasons why the family disagreed vaccinating their children. In this fashion I as provided with data which was not anticipated, and it helped to improve my ideas regarding the participant´s perception of vaccination.

Open-ended questions were asked since they make the participants feel at ease of answering the questions and more information can be gathered. Participants were given time to reflect their views and freedom to speak freely before next questions were raised. I did not judge anything right or wrong. The interviews lasted approximately 40-90 minutes. The interviews were audio-recorded and transcribed verbatim. Since interviews were conducted in the home setting, usually interviews were conducted in the evening as per the convenience of the parents. Sometimes I had to wait for a long time over the fixed time of the interview, if the parents were busy. Unexpected guests and family members sometimes also distracted the mothers during the interview.

4.6 Research setting

As mentioned in the introduction, the areas selected for my study are three states in India namely, Kerala, Tamil Nadu and Karnataka. Tamil Nadu is 11th largest state in India with

bordering neighboring state Kerala in the west, Karnataka to the northwest. For my research I selected Kanchipuram District in Tamil Nadu. In Karnataka state I chose Udupi District. In Kerala state I chose Malappuram District. There are still cases reported in all these states regarding the existence of vaccine preventable diseases. Even if the government emphasize on immunization, the incidence of these diseases was still reported in these states. India is the seventh largest country in the world with 29 states and 7 union territories.

4.7 Recruitment of the sample

The parents of children under 5 years old is registered at the health centers in the selected areas were set as the target population. This age group was selected to get know about the parents in different stages of immunization programme. The ambition was to understand their perceptions regarding vaccination at different age levels. 10 parents from same locality in those 3 mentioned districts were selected for the study. It was initially planned to conduct the interview in 6 weeks, by spending 2 weeks each for the 3 states. But it took around 7 weeks to conduct the interview. A translator, who could Tamil and Kannada, accompanied during the interview sessions in Kanchipuram and Udupi. Being a native speaker, Malayalam was handled by myself. I preferred a translator who was a native of the area. The health care nurses helped to find the translators. Both translators assigned translated the information and translated the questions.

The parents were recruited through the public health nurses in the respective health centres in the 3 districts. I made clear the objectives and purpose of the study to the health care nurse. I asked for 12 parents to interview even though I wanted to select only10 parents out of the 12. However, around 15 parents were suggested from each health centres, out of which I selected 10 parents for the interview as per their interest and convenience. The reasons for how health centers recruited the initial 15 parents was not explicitly clarified to me. It is not clear if they were randomly selected or purposefully selected by the health care nurse. But the 10 parents I selected out of these 15 were selected from the same areas, and their living conditions seemed to me to be roughly similar.

The health care nurses in all the three states were very cooperative during the study. The underlying reason I assume is that from my experience in the field work during my bachelor's in nursing, the health care nurses utilized the students for data collection and to conduct surveys, which is actually a helping hand for them and therefore is beneficial for the health care nurses.

Thus, adequate data can be gathered and monitored by the health care nurse at this point of time by utilizing the data from my study. This suggests that the health care nurses choose respondents they were eager to reach otherwise, that is this was an element of purposive sampling underlying the interviewees they choose for my study.

I gave the information letter to the participants accompanied by a public health nurse. This helped me to be familiar with the participant´s house and the area. The 10 parents who showed their interest in participating in the study were provided with the consent form at the time interview. All the participants chose their home to be the interview setting. I made sure that the consent form was clear to the parents and was signed by them before the interview. Most of the parents showed their active participation which helped me gathering the needed information. The challenges I faced in conducting the interviews are discussed in the later chapters.

In the Malappuram district, Kerala, only four of the ten informants gave their children the full immunization as per the recommended immunization schedule, while four of them partially immunized their children and two of them had not immunized their children at all. In the Kanchipuram district of Tamil Nadu, only two of the ten had fully immunized their children, six had partially immunized their children while two had not immunized their children at all. In the Udupi district in Karnataka three parents had fully immunized their children, five parents had partially immunized their children and two had not immunized at all.

In table 1 to 3, participants are represented using numbers from P1 to P10, while male & female children are denoted with M & F respectively.

In Kerala out of the 10 parents selected, eight had two children each (only under -five children are registered for the study in all the states as mentioned earlier) and two parents had one child each. Thus, out of 16 children, seven children were fully-immunized (5 males and 2 females), five children were partially immunized (2 males and 3females) and four children were not immunized (1 male and 3 females).

Table 1-3 below sums up characteristics of the interviewees in the three districts.

Participants (P) **M – Male** **F – Female**	**Full Immunized**		**Partially Immunized**		**Non- Immunized**	
	4 Families		4 Families		2 Families	
	P1	0-1 M, 2-3 F	P5	2-3 M, 4-5 M	P9	1-2 F, 4-5 M
	P2	3-4 M	P6	1-2 F	P10	2-3 F, 3-4 F
	P3	2-3 M, 4-5 M	P7	1-2 F, 3-4 F		
	P4	0-1 M,2-3 F	P8	2-3 M, 4-5 M		

Age (Months/ Year)	State & Country	Fully Immunized - Male	Fully Immunized - Female	Partially Immunized- Male	Partially Immunized - Female	Non-Immunized - Male	Non-Immunized- Female
0-1	Kerala, India	2					
1-2	Kerala, India				1		1
2-3	Kerala, India	1	2	1			1
3-4	Kerala, India	1			1		1
4-5	Kerala, India	1		1	1	1	
Total		5	2	2	3	1	3

Table 1: Data collected from participants in Kerala, India.

In Tamil Nadu, out of 10 parents selected, 1 parent had 3 children, 7 parents had 2 children each, and the remaining and 2 parents had 1 child each. Out of the 19 children 4 children were fully immunized (3 males and 1 females), 11 children were partially immunized (6males and 5 females) and 4 children were non-immunized (1 male, 3 females).

Participants (P)	Full Immunized		Partially Immunized		Non- Immunized	
	2 Families		6 Families		2 Families	
	P1	0-1 M, 2-3 M	P3	1-2 M, 3-4 M	P9	2-3 F
	P2	3-4 F, 4-5 M	P4	1-2 F, 2-3 M	P10	0-1 M, 2-3F, 4-5 F
			P5	3-4 F		
M – Male			P6	3-4 F, 4-5 F		
F – Female			P7	0-1 M, 2-3 F		
			P8	1-2 F, 4-5 M		

Age (Months/ Years)	State & Country	Fully Immunized - Male	Fully Immunized - Female	Partially Immunized- Male	Partially Immunized - Female	Non-Immunized - Male	Non-Immunized- Female
0-1	Tamil Nadu, India	1		1		1	
1-2	Tamil Nadu, India			1	2		
2-3	Tamil Nadu, India	1		2			2
3-4	Tamil Nadu, India		1	1	2		
4-5	Tamil Nadu, India	1		1	1		1
Total		3	1	6	5	1	3

Table 2: Data collected from participants in Tamil Nadu, India.

In Karnataka, out of 10 parents selected, 1 parent had 3 children, 6 parents had 2 children each and 3 parents had 1 child each. Out of 18 children, 5 children were fully immunized (4 males and 1 female), 10 children were partially immunized (5 males and 5 females), 3 children were non-immunized (1 male and 2 females).

Participants (P)	Full Immunized		Partially Immunized		Non- Immunized	
	3 Families		5 Families		2 Families	
	P1	1-2 M, 3-4 F	P4	1-2 M, 2-3F	P9	0-1 M, 3-4 F
	P2	0-1 M	P5	1-2 M,2-3M, 4-5 F	P10	4-5 F
M – Male F - Female	P3	2-3 M, 4-5 M	P6	3-4 F		
			P7	1-2 F, 3-4 M		
			P8	0-1 F, 2-3 M		

Age (Months/ Year)	State & Country	Fully Immunized - Male	Fully Immunized - Female	Partially Immunized-Male	Partially Immunized –Female	Non-Immunized - Male	Non-Immunized-Female
0-1	Karnataka, India	1			1	1	
1-2	Karnataka, India	1		2	1		
2-3	Karnataka, India	1		2	1		
3-4	Karnataka, India		1	1	1		1
4-5	Karnataka, India	1			1		1
Total		4	1	5	5	1	2

Table 3: Data collected from participants in Karnataka, India.

4.8 Sampling technique

I initially asked for 12 parents in each district. However, around 15 parents were suggested from each health centre out of which I selected10 parents for the interview as per their interest and convenience. But since 10 parents were selected from a group of 15parents, I decided to use the purposeful random sampling as the sampling technique for the study.

Thus, sampling technique used during the study is the purposeful random sampling. This technique is a process of recognizing a population of interest and thereby choosing the cases in a systematic way which is not based on the enhanced knowledge of how the results would occur. The intention of using this method is to strengthen the credibility, and not to promote representativeness (Cohen D 2006). In this case, among the 15 samples suggested by the public health nurse in each district, only 10 parents were selected for the study.

4.9 Ethical considerations

I have categorized the main ethical issues that arise in relation to an interview process as the following: Reduce the risk of anticipated harm, protect the interviewee`s information, give

proper information to the interviewees regarding the nature of the study and decrease the risk of exploitation.

First of all, let us see the main task of the interviewer. The main task of the interviewer is to gather information from the interviewee by listening and understanding to the participants while she is speaking and also to encourage her to speak. One of the issues that arises in interviewing is from the perspective of the interviewee is the act of listening. When the interviewer listens and reflects his personal information to the interviewee, the process of interviewing is affected and may develop in unforeseen ways. This may result in unintended harm to the informant. For example, there was a case where the parent expressed her worries on her child`s whooping cough where she could not attend the immunization clinic due to some reasons regarding the interventional failure. Otherwise, such experiences may result in unintended harm to the participants.

Next issue is regarding the protection of the interviewee information. It is very important that the information provided by the participants should be anonymous. Otherwise, the interviewee may share information that may expose some sensitive things which may affect her situation in the house. It may be also due to some people who will have the information so as to create conflicts with the interviewee. For example, in cases where the interviewee vents their problems and frustrations during in-depth interviews, it may negatively affect the individual if the anonymity is not maintained or data is not properly protected. I made sure that the anonymity of the interviewees is maintained. I used pseudonyms to hide their identity.

The third issue arise with regard to improper information to the participants before or during the interview. It will be considered unfair if the participants in the study are not given proper information prior to the study. For example, when an interview is conducted with relation to a research study, and the informants are not properly informed neither regarding the purpose or nature of the study, nor collected a proper written informed consent; it may be difficult as the interviewee may not disclose all information or may disclose wrong information out of fear of information leakage or other problems, which may lead to bias. Therefore, it is very important to explain the nature and purpose of the study and obtain a written consent and an oral consent prior to the interview. In this case, invitation letter for the participants were given in prior (appendix 11.2). In order to gain their co-operation and attention, I tried to convince them by

explaining the importance of this project and how their valuable participation adds to it. I made them aware of the ethical points that will be presented in the following the main concerns were confidentiality, anonymity and informed consent. The parents were assured that the information gathered was used only for this study. Assurance was also given regarding that the information will not be exchanged, and will be stored properly and thereafter will be destroyed after use. The interview began only after the informed consent (appendix 11.2). The participants were informed both verbally and in writing, and with the signed consent before the data collection began. I assured them that their participation was voluntary and that they could withdraw from the interview without prior notice. They were assured that they did not need to make any payments for participating in the interview. They were not compelled to answer any questions. I also ensured them that I would not be judgmental or embarrass the participants for their replies.

Finally, the interviewees should not be exploited for personal gain. The interviewee should be free to expose his problems and experiences. The interview should give importance to the freedom of the participants more than the interviewer`s career. Researchers should consider the implication of their own research and use their experiences as a guide to improve their own ethical standards. Each time during the study, the convenience of the parents was taken into account. I allowed the parents to reflect their feelings and views with regard to the questions asked, such that their full-participation during the study was ensured to attain the most relevant information. The experiences I gained from earlier interviews helped me to improve the quality of the information collected on later interviews.

When conducting a research in/from Norway, it is important to get the permission also of the Norwegian Centre for Research Data (NSD) which expects that the researchers fill out a data protection form in case we collect personal information from respondents during an interview. The NSD form was filled out with the guidance of the professor supervision the study and got the approval for conducting the study (appendix 11.6)

4.10 Data Analysis

According to Bryman, one of the main challenges in qualitative research is the data analysis, since huge amounts of data is collected through transcription of interviews and notes. The main purpose of data analysis is to understand the perception of the participants and their view about

reality and thereby contribute to the current literature of the phenomenon that is studied (Bryman 2012).This study is not a representative` sample study. The scope for eventual generalizations must be based on theoretical generalization and not statistical generalization. Therefore, the inferences of the study discussed below are theoretical generalizations rather than statistical.

The perception of parents towards immunization, and the factors that hinders the process of vaccine uptake were the main aim when interviewing the parents.

4.10.1 Qualitative data analysis-coding and categorizing the data

Coding refers to categorizing fragments of data with a brief name which at the same time gives a summary and account for each piece of data. The codes selected reveals how to select, separate and sort data to begin the analytical process. Coding helps to arrange and organize the analytical frame which is the platform of our analysis. Charmaz refers to coding as a pivotal link between the gathering of data and creating an emergent theory in order to describe these data. Through coding, what is happening with the data at each stage is defined and this leads to further data gathering. From the beginning, the data is assessed word by word, line by line, incident by incident. (Charmaz 2006). The researcher used these codes and sorted them according to the theoretical perspectives applied in the study and compared to the existing literature.

4.10.2 Transcription of data

Bryman points out that the transcribing of interviews is time-consuming. An advantage of regular transcription is that it makes grounds for making analysis at the same time and this helps the researcher to understand and be aware of the themes that emerge which can be utilized in further interview sessions. During the first few days, the transcription took place on the very same day of the interview and the preliminary analysis was carried out.

Transcription was done manually for one of the states selected, and it took hours and hours to transcribe the data. Even though it was time consuming and required much hard work, I felt very much dedicated to the study when transcribing the data. Unfortunately, it was not possible to perform the transcription always after every interview, because some interviews were conducted in the evening when the mothers had finished their household work. However, transcription was done as soon as possible after each interview session. It was really a difficult task as the interviews were done in three different languages. The interviews were all translated

to English as it allows more convenience. The interviews done in Kerala were transcribed by myself, while transcribing the data collected from Tamil Nadu and Karnataka, one of my friends acted as the transcriber and data was transcribed using a software. Since she was one of the trust-worthy friends of mine and moreover doing her master's in nursing, she was very much familiar with the concepts and terminologies applied in the study. Therefore, I feel confident that she transcribed the data in an effective way.

5. Findings

The conversations with the parents are marked using quotations and identity is by a pseudonym. In all the cases, mothers were interviewed as fathers either were not interested to take part in the interview or might have been busy with other works. This may be due to the concept that males are considered as the breadwinners of the family and females are meant to do household works and rearing of the children. In the interviews conducted, only three mothers were working.

The data gathered is sorted and is correlated with the theoretical perspectives used in this study. Levesque´s framework of access to and utilization of health-care is the main theoretical framework used in this study. This is supplemented with insights from other frameworks like Theory of Reasoned Action (TRA), the Health Belief Model (HBM), the innovation-decision framework adopted from diffusion theory and the earlier empirical studies investigating take-up of vaccination.

Levesque´s five dimensions of accessibility as regards the supply side (health personnel) were approachability, acceptability, availability & accommodation, affordability, and appropriateness. The five equivalent dimensions of populations to access health services were the ability to perceive, the ability to seek, the ability to reach, the ability to pay, and the ability to engage with the health personnel. This framework is used below, as an outline for discussing the findings from the 30 interviews. It is important here to emphasis that I do not have information on how the supply side (the health personnel and the health stations) actually performed outreach campaigns, how accessible they were to patients, how they treated them etc. What I have is how the potential users (the parents) *perceive* the availability and accessibility of health personnel. Arguably, how the parents perceive the "supply side" is what in the end matters for their vaccination-decisions.

5.1 Perception of parents regarding the need to vaccinate.

Parents perception towards vaccination and their beliefs regarding it contributes to making their choice to vaccinate their children or not. Levesque´s access to health care framework describes various dimensions in which the parents´ ability to perceive the health care needs based on health beliefs, trust and expectation and health literacy. Let us investigate the "health belief" dimension, or more precisely: beliefs that acts as barriers to feel a need to vaccinate, plus to seek, vaccination.

5.1.1 The belief in natural immunity

In the literature review, I have already mentioned about the previous studies showing that parent's beliefs concerning natural immunity may limit their felt need for vaccinating their child.

Most of the parents who delayed or rejected vaccination used this as an argument for not immunizing their children. Hence my study supports the importance of this belief. Here´s how a mother from Karnataka put it:

´I was born and brought up in a joint family where none of us were vaccinated, it doesn't mean that I am against vaccination. But I don't support it either. My children got only the BCG vaccine and Hepatitis B vaccine at the time of birth as the hospital staff did it immediately after child birth. I was informed later about it, which I couldn't oppose. But I believe that our immune system develops as we grow, and it helps in fighting against the foreign bodies that comes into our body. Till now even my child develops a fever, I used to wait for at least 3 days before starting any antibiotics, giving his body a chance to fight against the disease and thus strengthening the immune system´.

This parent prefers what she perceives as natural immunity for her children rather than something she perceives as ´artificial´. This parent had a practical approach towards her thoughts and decisions.

Another mother from Karnataka who emphasized natural immunity argued that breast feeding was a means for developing immunity. The mother stated*: ´I have not yet vaccinated my* child*,*

as I believe in natural immunity and do breastfeed my child. I know my child´s immune system can help him to fight against the diseases´.

Pausing for a while, she added

´why does everybody prefer breastfeeding´?

I maintained silence and asked her to continue.

´The baby gets all the necessary stuffs for further growth and development and to strengthen their immune system which is something that is considered as life -long is acquired through breastmilk. Then what is the point of giving artificial vaccines to boost the immunity. I don't agree with it. Nothing can be replaced with breastmilk. Hope you can understand it´.

I smiled and nodded her head and moved to the conclusion. The quote reveals a mother´s will emphasizing the importance of breastfeeding, especially when she stated that nothing else can replace the strength of breastmilk.

Some parents delayed or rejected vaccinations for their children stating other reasons. Some emphasized that they took many other actions apart from immunization, to protect their child. One of the mothers who partly vaccinated her child stated view as follows:
´My child is soon two years and till now I have not vaccinated her except the BCG vaccine and Hepatitis B vaccine, first dose which she got from the hospital at the time of birth. I don't think I should vaccinate as her immune system is not developed yet. I didn't even send her to the play school either. The vaccines might interfere with her natural immunity and thereby decreases the body´s capacity to fight against the infections`.
She didn't even send the child to play school, which reveals that she is emphasizing on natural immunity and not accepting the vaccination due to this reason. She meant that the child´s body should be given adequate time to build its own immunity which helps in making the child stronger as they grow older such that the body develops natural immunity rather than artificial immunity.
This mother also signaled that she was not interested in the interview or in the vaccination programme. This was evident from the non-verbal communication expressed by the mother, by

looking outside pretending like waiting for somebody or wanted to show me that it was getting dark.

This was my first participant in Kerala, where I was a little nervous about the interview, how it is going to be held, when and where the follow up questions should be asked and what might be the parent´s thoughts and response. As I felt that the parent was not comfortable with the interview, the interview was concluded before the expected time.

Another mother who partially immunized her child, said that she waited till her child was 2 years to begin with the vaccinations and that she delayed vaccines for allowing the immune systems to grow. This also shows the particular mother´s belief for protection of her child. Roger´s perceived complexity of the innovation can be brought in here. Vaccination is delayed in this case, which points out the perceived complexity of the vaccination such that user prefers more time to adopt the innovation. From the previous literature, Nitcher´s(1995) perceptions about how the vaccination works is also considered in this case.

5.2.2 Traditional beliefs

A mother who belonged to a joint family of Brahmins responded to her perceptions of vaccines like she doesn't disagree or agree with them and she doesn't know much about it. She stated that the family usually depended on Ayurvedic medicines for their children and their whole family. When I asked about her perception regarding vaccination, she nodded her head and thought for a while and stated

` *Vaccination is something I am not very familiar with´. I have heard about vaccination through social media and television. None of our family members so far, I know has taken these vaccinations. When the doctor recommended to take vaccine for my children at the time of birth, myself and my family rejected it. We don't have that tradition and would like to follow our beliefs and culture´*. This was her response to the concerned doctor. He was not ready to give up and she was not ready to accept it. Later he wrote on the reports that the parents of the child didn't accept the vaccine for some personal reasons, and he closed the case. She added*, ´I am not against it, but rather I don't support it. It is my family´s tradition to follow Ayurvedic medicine and we follow it through out many generations, and we hold ourselves healthy. That´s what is important´.*

According to this mother, they follow a tradition of medicine for years. It is very important to them. In this case, the mother respects her family health beliefs and does not stay with or against the vaccination. However, the caring attitude of a mother is revealed here, and she makes her decision according to her family influences so as to protect her children. During this interview session, it was actually challenging for both the translator who had her first experience in translating the conversation and each time I was supposed to be prepared for the follow up questions based on the translated information. Fortunately, the translator was a keen observer and a good speaker.

Some parents argued for their parents not vaccinating them for some reasons, but they still lead a healthy life. This shows that the generational beliefs, which they attained from their ancestors. Most of the parents who showed their views against vaccination were almost brought up in some communities where the vaccination is not given its importance or those thinking that it is not necessary that all children may not be affected by VPDs or those who go for the natural means to attain maximum physical, mental and spiritual well-being. According to Rogers, perceived observability is lacking in this case as there is no evidence that the individual remains healthy.

5.1.3 Trust towards vaccination

Trust and expectations towards vaccines are also a factor that influences the parents in making decisions regarding vaccinating their children .Some parents may accept vaccines due to their trust in the immunization system.

According to some parents, the vaccines were good and they considered it as a ´natural´ measure for preventing the vaccine preventable diseases (VPD) by adopting the recommended childhood vaccination programme. A mother who accepts vaccination and considered it as `natural´ responded in the following manner when she was asked about why it is considered a ´natural' measure:

`*I don't know any reason why it is like that, but I consider vaccination is very beneficial to my child, as it gives me a lifelong guarantee that my child will never be infected with the disease that she got the vaccination against. It is something that is needed for our body throughout our life. You may know it better than me as you are also a mother and a nurse* `.

I carefully listened to the mother, by just nodding my head and maintained silence till she was completed and deviated the conversation.

This shows her trust in vaccines. Parents who declined, rejected or delayed vaccines each had their own ways of explanation about the recommended vaccinations by the health authorities. A mother talked for a long time as she was interested in the topic and even deviated from the topic sharing neighborhood experiences related to health care and about communicable diseases that occurred in the area as a result of the monsoon season in the state. I managed to end the conversation by bringing her back to the topic of the study.

5.1.4 Risk related to the service

There were many conspiracy theories mentioned in the literature review based on the association of vaccination to autism, infertility, mercury poisoning and religious arguments. When interviewing the parents, some of the conspiracy theories and their influence in creating distrust in the vaccines emerged.

This is how a mother revealed her perception on vaccination:

` I have two children of 5 years and 2 years. My eldest son was administered all the vaccines up to 4 years. Later when I heard many rumors were heard regarding the vaccines, like outdated vaccines lead to serious issues and even some other viruses were mixed with vaccines for the introduction of new vaccines aimed for business profits, I was very unsure about to decide whether to administer vaccine for my children or not. My family didn't want to take a risk and thus I decided to decline vaccines for my boys. But I am ready to reconsider this thinking, after I get a positive response regarding vaccination from the health services´.

This shows how a mother who took a decision to decline vaccination for her children since she do not want to take a risk which may lead to some health problems due vaccines. However, she is ready to continue the vaccination uptake if the situation changes. This shows that she makes decisions so as to protect her children, based on her beliefs. In addition, the influence of social media (WhatsApp and Facebook in this case was mentioned by the mother during the interview) on the public is evident.

The health belief model referred in the theory chapter particularly emphasize how perceived threats (risks) may influence seeking of health care.

An interview with a mother who is also a college lecturer really challenged my preconceived notions about poor educational status and low economic status as the factors behind the delaying

or rejection of vaccination. When the mother was asked about her view regarding vaccination, she answered at once without any second thinking.

`I have not vaccinated by children and I am not planning to reconsider about it.

She then questioned the researcher about if the researcher can give complete guarantee for all the vaccines taken in our country. The researcher-maintained silence. She nodded her head and continued `.

See, even you cannot give me an assurance regarding it. Previous year, I read in the newspapers about the contamination of vaccines and its only for business profits. I am happy that my child is healthy, and family is supporting me. So, I am not worried about anything`.

She then stopped, whispering to herself. I understood that the mother was very much annoyed and maintained silence for a while and moved to the concluding part. In this case even though the mother is educated, her trust in the health services provided is very low. Social Media's, television and newspapers have influenced her to an extent such that she is more aware of the unsafety of vaccines. Distrust of vaccines is a factor that hinders the vaccine uptake in this case. In this case, this is in line with the health belief model that emphasizes eventual threats of vaccination. The mother declined vaccinating her children as she wanted to avoid the risk which she believed is caused by the administration of vaccines. In turn the mother was concerned about the safety of the vaccines.

5.1.5 Conspiracy theory against the MMR vaccine

Some of the parents in Malappuram district in Kerala were very religious in attitude and it was very evident from their way of approach and dressing style. When asked about their perceptions of vaccination, a mother responded in this manner:

´In our family, we are not all bothered about all these things. We have not taken vaccination for our children. ´

An old lady who seemed to be their grandmother who was listening to us added:

´We have not given any injections to our sons or daughters, neither to our grandchildren. My children were all healthy and didn't require any hospitalization yet. All these are just

formalities and we don't have time for it now. Our religion doesn't encourage all these unwanted practices. ´

And she didn't want to talk more about it that she went inside a room.

The mother added:

`I remember, few months back, there was also campaigns against the vaccination were conducted due to some reason and even my husband and other males in the family were part of it. Even the attack of medical staff personals were reported.

She reduced her volume when the grandmother passed through. When I enquired the reason for the campaign, she responded,

`I don't remember actually, but it was a serious issue. `

She didn't talk more about it as the grandmother was staring at her.

There were many controversial stories aroused in this case in this particular area, which made me want to investigate the problem. It was evident from a local newspaper that this problem was an issue in this area and the school health immunization was stopped by the Muslim community. There were similar stories by mothers in Malappuram district in Kerala, where Muslims were against Measles and rubella vaccine. Here is how a mother illustrates it:

´We were advised through different meetings and our mobile phone (internet- WhatsApp) not to vaccinate our child against Measles and rubella since they are mild illness and doesn't require vaccinations and therefore many of us didn't take the Measles and Rubella shots for our children`.

These are some of the controversial stories that arises due to religious influences. Reports regarding this problem also was illustrated in the social media, where the health care staffs were attacked. This information further reveals the interconnections and influences of the mother, grandmother and other males in the family on making decisions regarding vaccination of the child who belongs to the family.

This illustrates Ajzen and Fishbein's theory of reasoned action, where a major point is how individuals are influenced by the opinions of relevant others. The mother in this case is influenced by the beliefs and perceptions of her family in a sense as she discussed the health-related practices and issues with those in the neighborhood.

5.1.6 Health literacy

Health literacy is another factor that influences the parents´ decision regarding vaccinating their children. In addition to the lack of knowledge about the germ theory, lack of proper explanation given. To the mother with regard to a newly introduced pentavalent vaccine is interpreted by a mother as a reason for declining the vaccination for her children .It was stated by mother of two children who were 10 years and three years old, who reacted in a different way especially with the pentavalent vaccines. She was not all agreeing with the pentavalent vaccine and her interpretation was that

´I have done all vaccines for my first child, but now I cannot accept the pentavalent vaccines. I don't understand how my child´s immune system can cope up with 5 different vaccines at once. It was not like this before. To save time may be the government has adopted this type vaccine´.
This concept of the mother left the children partially vaccinated. It may be a reason she chose for her children, but still focusing on child´s better health. Lack of proper knowledge of vaccines, incompetence of the health nurse in providing information and ineffective health education regarding their administration pattern is also seen here. Throughout the interviews, mothers who did not vaccinate their children often presented their choices as a way of caring for their children. Thus lack of vaccination was not a sign of neglect (among the parents I interviewed), but was presented to me rather as a particularly caring attitude. This was particularly the case among parents who emphasized perceived risks of vaccination, or lack of trust in government procedures (including supervision of pharmaceutical companies), or claiming to have access to superior ways of ensuring their children were healthy.

Levesque´s dimensions of accessibility can be referred in this case with regard to the adequacy of information about the vaccines provided, the incompetence of the health care nurse and lack of proper education regarding the vaccines and its administration.

Previous studies discussed in the literature review is relevant to point out here. Streefland uses the concept of ´local vaccination cultures` to point out how beliefs about the cause of a disease,

and ideas about the medicines used in preventive care, influences the individual´s decision to vaccinate or not.

According to Rogers model of the innovation-decision process, the perceived characteristics of an innovation includes its perceived relative advantage, perceived compatibility, perceived complexity, perceived trialability and perceived observability. Lack of compatibility with the parents´ norm system is more or less evident in this study from the Brahmin mother discussed above, who interpreted the reason for not vaccinating their children as based in her family following Ayurvedic healing practices which they perceived as more effective from their experiences, and more in accordance with the family values and culture. As we discussed earlier in the theoretical perspectives, immunization is a preventive intervention, and the outcome of preventive innovations (lack of something bad happening) cannot be directly observed. In this case: that the child remains free from the infectious disease that he/she is vaccinated against. In short: As an innovation, vaccination lacks observability. The complex nature in explaining the preparation of the vaccine and their contents and their way of action in the human body, is also difficult to be understood by a non-health professional. Hence vaccination, although simple to administer, is a complex intervention to understand (i.e. the mechanism through which it works is complex to understand, including having some knowledge of germ theory).

Ajzen and Fishbein's theory of reasoned action is also relevant here, pointing out that a person´s behavior is influenced by the beliefs of groups the individual is a part of, or whose opinions he/she cares about. This socio-behavioral perspective affect the decision making in the sense that family members as well as non-family members can influence the decisions made by the mother. The involvement of the grandmother and other family member's in-between the interview is noted during the interview.

5.2 Perception of the respondents towards the efforts taken by the government to enhance health-related information.

Parents were asked about the methods to improve vaccination coverage depending on their response towards vaccination. Those parents who were least bothered about vaccines were not asked about this matter, as their opposition to vaccination was clear during the interview.
The methods suggested by the parents to improve vaccine uptake relied on the problems they faced when attending an immunization clinic. Most of the mothers complained about prolonged

waiting hours due to long queue long waiting time for the health personals to arrive and long distance to the health centres are also factors mentioned by different mothers. This represents opportunity costs of vaccination (cf. Levesque et.al.'s dimension of "affordability").

Suggestions to overcome this problem might be to set up more vaccination points so as to reduce the long queues and waiting time and requesting the health professionals or health workers to reach the health- center or the vaccination point on time. A parent´ s response was: *´It's a great relief if there are many vaccination points made available that we don't want to wait for long time. Our household works does not become a burden to us if we spent less time for these clinics´*. This shows their difficulty in waiting for hours for just to vaccinate their child.

Another mother stated her suggestions in the following way: *´I have asked the health nurse many times to send notifications if the vaccination clinic is arranged and which vaccine is to be taken because we don't remember the exact date or the name of the vaccines ,but she didn't and when I enquired about it, she told they have not updated the correct mobile numbers of the residents in their system.`* This represents lack of "approachability" in Levesque et.al.'s access to health care – framework. Proper information systems and communication, and updating of these information along with a vaccination register constituting both the child and parent details, should be maintained and updated whenever necessary. Adequate knowledge regarding vaccines, their administration and side-effects should be clearly explained to the parents. That would improve both approachability and appropriateness (cf. Levesque et.al. 2013)

Provision of better facility in the health centres was pointed out by some mothers as a measure to improve the vaccine uptake. A mother added *´I know there are many parents coming to vaccinate their children, but it is very difficult to wait in these centres for long time as the babies starts crying due to noise and warm, hence it will be difficult to take care of them, no private rooms available to breast feed, no proper toilet facilities. Problems become worse when the baby needs a diaper change´*. Therefore, it is necessary to provide the basic facilities in a health-center. This related to the "availability & accommodation" dimension in Levesque et.al.'s framework.

5.3 Health seeking behavior: Health care seeking, health care reaching

The literature review mentions various factors and problems faced related to seeking health services and their approachability. This can be related to approachability dimension in Levesque et.al.'s framework. Problems discussed in previous studies by Nitcher(1995) and Streefland(1999), includes lack of proper notification prior to conducting the clinics or their

next doses, rejection of getting vaccinated due to lose of vaccine card, influence of living conditions, nature of household work and agricultural work, long walking hours, prolonged waiting in queues for immunization, lack of proper information and timings. The provider side also faces problems that is discussed in literature review. Cost of transportation and the difficulty in reaching the vaccination points and uneven transport facility are often problems faced by health workers as well.

This is how a mother described her perception of the vaccination experience.The mother had a bad experience with the Bacillus Calmette–Guérin (BCG) vaccine administered for her child at the time of birth in a government hospital. The experience made her to take a decision that she will not administer vaccines for her child anymore due to its after effects. She stated:

` *That was my first child, and I didn't have anybody to help me or my husband. We lived in a separate house after our marriage as it was not accepted by our family members. We hoped that our parents may accept us after a child is born. My husband works in a hotel nearby for daily wages. I am a cleaning staff in a school. So, we lived a difficult life. I don't have any idea about injections. From the hospital, the doctors and nurses asked us to give our child an injection on the back of side of her shoulders, and after that day we were discharged from the hospital. When I reached home, that nigh my child was crying continuously and vomited and not drinking milk and had slight fever. We were very much worried and asked about it to an old lady our neighborhood. I told her about the injection and when I checked my baby´s shoulder, it was swollen and red I was really worried, and I went alone to the hospital with my child, my husband had to go to work. After waiting for two hours, I was informed by the doctor that, it usually happens and try to breastfeed the child. It will recover soon. I felt helpless and came home weeping. It took around a month for the wound to heal. After that I never wanted to take a chance with these injections for my child somebody from health -entre came to inform about these injections.*

I could see tears in the participant's eyes. She was very much worried. I controlled her emotions and deviated the mother ´s attention by asking about her work and children. I made it sure not to deviate much from the topic of study and continued the interview. In this case, we can see that the mother was not given proper information regarding a BCG vaccine and the side-effects, which forced her to oppose all other vaccines.

This shows how a mother may take a decision to decline vaccination for her children since she don't want to take a risk which may lead to some health problems due to vaccines; a perceived risk that is enhanced by lack of an appropriate response to her worries on behalf of health personnel. The health belief model referred in the theory chapter particularly emphasize how perceived threats (risks) may influence seeking of health care.

A similar situation can be described as follows, a mother of two children, who works as a house-maid and her husband who is an auto driver stated that she strives very hard to bring up their children. When asked about the vaccination status of their children, she told that they got only two vaccines from the hospital at the time of birth and when enquired further she told that:

´I go to work daily from 07:00-06:00 and after coming home, I have to take care of the households and other works. My husband is an auto driver, he is not at all giving any money at home, and he spent his time after work with his friends in the Toddy. My only help is this old lady who is my grandmother. She looks after my children when I am at work. I don't have much knowledge regarding the vaccines. It is only for the higher-class people. I don't think we can afford it. Few months back somebody came home and told my grandmother about vaccination. But I don't know how it is possible, it is far from my home, I just left it because I know it is not easy for us, neither is it meant for us´.

In this case the lack of education and poor family status and also lack of support from the family was evident when the interview was conducted. Long distance to the vaccine clinic and lack of proper information is also visible. It is understood from the poor condition roads in the area and the very low frequency of buses to these areas. This mother views vaccine is something meant for high class people. This was one of the common reasons explained by some mothers for non-acceptance in Tamil Nadu. In addition, the mother was apparently not aware that vaccination is free. This relates to "perceived ability to pay" as well as "perceived affordability" in Levesques framework.

Some of the parents considered the health care centres their main source for information regarding vaccination. In all the three states most of the parents expressed dissatisfaction towards the health centres where the meeting to disclose health related information is conducted. The health centres did not have adequate space for accommodating all the parents called for meetings. The parents would have to stand for a long time or may even have to stand outside the health centres, whatever the climate may be.

Some parents are accompanied by their little ones and no proper breastfeeding rooms or private spaces are provided to them. This leads to decreased participation which includes missing of heath talks, not paying atten*tion to* it or being unable *to hear what is told at the meeting.* One of the mothers responded in the following way:

´The health center in our area is at its pathetic level. It is too small that not more than 20 people can be accommodated. It cannot all the mothers in our locality that we sometimes have to stand outside in the hot sun and heavy rains. Since the ventilation is poor, and in unhygienic environment, babies become uncomfortable and start crying, then the mothers have to go out with them while others occupy our seats. Thus, we don't have the complete participation and miss many information delivered´.

Lack of proper facilities are considered a reason for not attending immunization clinics or health centres. Most of the mothers in Karnataka and Tamil Nadu reported unhygienic environments in the health care centres during the interviews. Prolonged waiting time is also a major issue here. These factors clearly relate to the Levesque´s dimensions of availability & accommodation and appropriateness.

In addition to prolonged waiting hours, some mothers faced a negative pressure from their families. Some parents complained about the considerable amount of time they had to spend while they bring their children for vaccination in the immunization clinics.

However, there were a few parents who were not unhappy about the long waiting hours, as they think its beneficial since they can then interact with many other parents, not only about vaccination but about child health in general.

"*Up to me it is very helpful to have immunization clinic and the health care centre near our home. It is free of cost and I used to go to attend the health centre whenever informed. The health professionals provide us health talks. Usually they come late and if we are late, then they used to shout at us in front of everybody and it's really embarrassing. I also utilize this time to talk with other mothers. They share their experiences and I got many home remedial methods regarding some health issues in children. Therefore, I always try not miss my chance in attending the health talks or immunization clinics. For example, when my daughter was 8 months, she started weaning and suffered from digestive problems. Once I happen to discuss it with a mother during a meeting in the health centre and I was suggested to give my child some nutmeg paste mixed with the breast milk and it worked. So, I will not tell the time is wasted. But*

in my home, since I have to do all the households and therefore my mother-in-law used to scold me for waiting long time. Due to this reason I couldn't attend all the vaccination clinics or meetings and now I think it doesn't matter as my children are still healthy even without regular vaccinations. Now it is long back that have been to the immunization clinics`.

Due to prolonged waiting hours, some mothers find it difficult to organize their time to the clinics. Moreover, they get a negative pressure from their family as the household works gets pending.

Here is how another mother reflected her perceptions:

"I usually go to the health center after leaving my eldest daughter to school, packing lunch for my husband, preparing lunch for my in- laws and doing other households. By the time, I go the immunization clinic with my 1year old baby, it will be 12 PM, and it closes by 15:00PM. Waiting in the queues for long time, I become very exhausted. There were also some occasions where I left the vaccination clinics without vaccinating my child as it get closed and when I talked with the health nurse about my problem, she was not ready to help me or find a solution to the problem, she told me that she doesn't work overtime and no one pays her and that I should wait till the next turn. I felt really *bad and irritating; I had not been there later*."

Burden of the household work and the attitude of the males as only a bread winner and that females are fully responsible for taking care of their children leads to such a problem. This can be related to Levesque affordability dimension in case of opportunity costs as well as Ajzer & Fishbeins "social encouragement" factor where the attitude of other family members are seen.

Appropriateness includes the technical and interpersonal quality and the notion used here is the ability to engage. The attitude of the health care workers and other health professionals towards the parents are discussed in the literature review and this in turn influences vaccine acceptance. Impatient behavior of the staff, long waiting for the personnel at out-reach centres, rude behavior and technical incompetence adds to decreased immunization coverage. In the interviews conducted, many mothers complained regarding these issues. These access problems points out the Levesque´s dimension of ability to reach.

5.4 Utilization of health care

Levesque describes the accessibility of services through the dimensions of affordability and appropriateness. Affordability includes the indirect cost and opportunity cost. Levesque´ s dimensions on the abilities includes ability to pay. These dimensions are also present in the study.

In India, the vaccines are free of cost in a government setup. Whereas, in private sector, a considerable amount of fees is to be paid. However, long waiting hours in the immunization clinics are avoided when one approaches the private hospitals for vaccination.

Most of the mothers interviewed for the purpose of this study were home-makers. They were responsible for household works and taking care of their children. Moreover, the living conditions are also influenced such that they cannot meet the transportation expenses to these health centres, and this adds to the indirect costs. Sometimes it will be difficult to take a day-off from the work place as some of the parents work on daily wages. This creates opportunity costs.

5.5 Health care consequences

In Levesque´s framework of access to health-care, access is attained when the parents are fully satisfied with the vaccination experience and supports the measures taken by the government in improving the immunization coverage. As stated by one informant:

´I don't know any reason why it is like that, but I consider vaccination is very beneficial to my child, as it gives me a lifelong guarantee that my child will never be infected with the disease that she got the vaccination against. It is something that is needed for our body throughout our life´.

Another parent who supported vaccination and recommends it to other parents, when she sees a child in the neighborhood is affected with mumps to better vaccinate the child, rather than the child becomes sick:

´ I have vaccinated all my three children- eldest boy of 10years, next girl of 5 years and the youngest girl of 3 years. I think it is better that they get vaccinated, that I have an assurance that they don't become infected by the infectious disease'.

So far, I have discussed the perception of different mothers towards vaccination and the factors affecting the uptake of vaccines. In the course of this study, I came across some limitations

which will be discussed in the next chapter, before I move on to chapter 7 (discussing the findings).

6. Challenges and limitations in the study

According to Marshall and Rossman "No proposed research subject is without limitation, there is no such thing as a perfectly designed study" (2006,42). There are many limitations in this study and therefore there is a necessity to discuss them so as to identify the extent to which it has decreased the reliability and validity of the study. In addition, there aroused many challenges at each step during this study.

The first few interviews were very difficult and as a result it was difficult to develop rapport with the interviewee and it was reflected in the lack of some follow up questions. Only one interview was conducted on the first day of the study due to nervousness. This limitation existed in the first 2-3 interviews. After that I became less nervous and more competent in gathering information and could identify when and where the follow up questions need to be asked.

Next factor to be considered is my own role as a mother and health professional, in addition to that as a Master student, which was revealed to the participants. There is a chance that the participants might not have considered me as ´neutral´ during the interview related to this study. Sometimes there were situations where the respondents questioned me or mentioned me in such a manner as ´considering the researcher as a nurse´. For example, some parents asked `*Being a nurse, you will be familiar with the problem´*. Moreover, I felt like the parents might have expected the role of the nurse as a care provider and as a person who maintains a positive attitude towards vaccination. This might in turn have affected their answers.

A limitation is also in the sampling technique adopted. When enquired with the community health centres in each state, for the selection of the parents of that area, I was further referred to the primary health center since they meant that the primary health care nurses and other health workers were more in direct contact and therefore more familiar with the families in the area. I then approached the primary health nurse who had a busy schedule on the day due to house visits and the researcher got an appointment with the health care nurse on the next day. She was informed about the research details including the purpose of the study and the collection of interviewees. I needed 10 parents and asked for 12 parents for safety (as in cases if the parents

are not available at the fixed time). But the health care nurse provided 15 parents, and did not specify on what basis, she allotted the 15 parents. This can be limitation as I am not sure if she choose those 15 in a random manner (random sample) or purposively (purposive sample). It might be that she chose 15 families in the vicinity of the health station she was particularly curious about (purposive sample), but if so she did not vouch that information to me.

Some parents had children above five years of age who may or may not have been immunized or only partially immunized. In this study, only the under-five children are considered. Therefore, there might be a chance for missing some of the vaccination information related to the eldest child which over all affects the count. The under-five children were selected in the study because most of the vaccines are administered during this period and the parents´ motivation to vaccinate their children is clearly visible in these cases.

I planned to conduct the study in the health centers as the mothers arrived, but it was suggested by the health care nurse that mothers usually doesn't have time to spend a long time in the health centres, and therefore it would be wise to conduct the interviews in their homes. Moreover, the environment in the health center was not suitable for the interview. I waited for 2-3 days so that the health care nurses in all the three states agreed to accompany me to give the information letter to the participants for their respective states. I think ´time´ was a major challenge during this study as the participants convenience was very much considered in the course of study.

7. Discussion

7.1 Discussion related to the research setting

A mentioned earlier, three different states in India were selected as parts of the study. When conducting the research in these states I noticed both similarities and dissimilarities.

In all the three states, the study was conducted in the rural areas. For the purpose of the study, a primary health-center, in each of the state and parents of children below 5 years in that locality were selected with the help of health care nurse.

The researcher had different experiences in the three states. These differences were as follows:

Extended families were more common among the informants in Tamil Nadu and Kerala. Mothers usually lived with their in-laws and in some cases with their siblings, especially in

those interviewed - three family in Kerala and one Brahmin family in Karnataka. While most of the mothers in Kerala had their cousins or other relatives in their neighborhood or lived separately. Family decision and traditions were given importance in most of the families but among the informants it was evidenced more in Karnataka than in the other two states. Ajzen and Fishbein´s Theory of Reasoned Action is evident in this case where the influence of the family and relatives is observed which determines a person´s behavior to perform a behavior.

Even though it was a similar rural setup, the physical environment varied in the three states. The housing facilities and living standards including the roads and transport systems and their maintenance in the Kerala district seemed to be much better, judging from how the sites looked when I visited them. This may suggest a different living environment of the people and the facilities they enjoyed in their households. Most of the houses in the site in Tamil Nadu were partially made of mud and bricks, the informants had limited facilities in their houses, and were built very close to each other.

Some of the parents were emphasizing their cultural and religious beliefs which was evident from their influence on the decision to vaccinate their children.

I felt that the justifications given by higher-class mothers among the informants for rejecting the vaccines for their children were different from the justifications given by more lower-class mothers. Although the number of interviews are far too small to draw certain conclusions, lower-class parents often gave reasons for not vaccinating their children related to the practical difficulties they underwent to access the vaccination clinic. We have discussed these factors with reference to Levesques´ model in the above chapters. On the other hand, the higher-class mothers often referred to ideas rather than practical problems as reasons for declining vaccination. They were adhered to different belief system, for example beliefs associated with traditional Indian medicine and controversies.

My immediate impression was that the health centre was in a poor condition in Karnataka and they were very congested, but relatively better in Kerala and Tamil Nadu even though they were not very spacious. I think it is a reason for the mothers as they hesitated to attend the clinics and the meetings.

Health centres were not only for organizing immunization, but also had one or two doctors for conducting daily clinics for other diseases. Many tuberculosis patients visit these clinics for Directly Observed Treatment Short-course. Some parents told that there were no special units

for providing DOTS. Most of the parents utilized the health care centres as they were affordable to them. As I was been to this place , in my opinion it can be also a reason for not attending vaccination clinics as there arise risk of being contaminated by other diseases in the poor ventilated waiting rooms .

It was notable that none of the fathers were available in any of the three sites. They did not to take part in the interview even in cases when they were present at home when the interviews were conducted. This may be due to the concept that males are considered as breadwinners of the family and females are meant to do household works and the rearing of children.

7.2 Discussion regarding the perception of parents towards vaccination- a state wise review.

The study has mainly taken as a theoretical reference point Levesque´s access to health care framework. Many mothers found it difficult to reach the vaccine outpoints due to poor road &transport facilities which might lead long travelling distances and prolonged waiting in the clinics. In addition to this, the theory of reasoned action shows the influence of family and peers towards immunization, the health belief model showing the perceived risks of behavior and the perceived barriers to action, and the diffusion of innovation theory contributes to the perceived characteristics of innovation are supporting this study and also their contributions to the existing literature is essential. The influence of family members and religious influences were evident from different stages of the study.

The study shows that the parents´ decision to vaccinate their children or not, is not a decision that is made at once. The perception of the parents towards the vaccination is identified at different levels. It depends on their attitude towards vaccination, their beliefs and emotions, their knowledge and understanding, their educational and economic status, living conditions and environment, their social, religious and cultural influences, their choices to vaccinate their children or not, evaluating the risk of the Vaccine Preventable Diseases and their action to protect their children from the health problems.

The fully immunized children in Kerala were comparatively more than the other two states. However, partially immunized cases and non-immunized cases still exist in the state. The main reason behind this is the religious and cultural influences, where we have discussed about the

anti-vaccine campaigns in the area. The culture or religious ideas were motivating factors for some the informants in Kerala.

Other factors identified were lack of proper information regarding the vaccination programme. As suggested by a mother to provide notification or reminder on the day prior to the vaccination, the response she got from the health care nurse indicates a lack of communication, improper organization of the immunization system, lack of adequate facilities in the health-centre, lack of appropriate technology to maintain the updates, ineffective competence of the staff and inappropriate methods of maintaining records.

In Karnataka the informants were influenced by religious factors and natural immunity. There are many partially immunized cases and unimmunized cases in the state. Negligence of the staff, low-economic and educational status, lack of proper family support, lack of adequate information, incompetent health professionals, emotional stress, beliefs in other system of medicine, attitude of the staff, inadequate facilities in the health system and prolonged waiting hours were forwarded by some informants.

The reasons were almost similar to that of the other states while a case was detected in Tamil Nadu where it showed the influence of social media in spreading rumor in the area and misconception of vaccine as life- threatening is evident from the statements of the mothers as we discussed earlier.

For those who emphasize on breast feeding which leads to natural immunity rather than vaccination, I guess that the information campaigns on the benefits of breast milk perhaps has been successful in those areas.

Most findings in this study were already anticipated in the literature review. Even though there were many common factors influencing uptake of vaccines, a factor perhaps worth emphasizing is that the social media seems to be very influential in India. The growth of modern technology and the governments emphasis on ´Digital India Campaign´ which was established in 2015, promotes a network coverage and the use of mobile phones in rural areas. This influence of the mobile networks and the internet facilities made available was evident from the response

of some parents where they considered the information received through these media, but interestingly both in a positive and negative way (as seen from the perspective of desiring enhanced vaccination uptake). Since the anti-vaccine activists also utilized social media for quicker spread of information against vaccination.

It is also interesting to notice that few parents even find it beneficial to wait in the immunization clinic queues as it aids to discussion with other mothers where they share their experiences and thoughts related to child health.

Finally, after conducting the interviews, I understood that all the 30 parents whether they accepted vaccine or not, always had the intention of doing best for their children. They had their own interpretations for accepting and rejecting vaccines.

8. Policy Recommendations

The literature review pointed to many policies adopted by the government which aims to improve vaccination coverage. The introduction of Millennium Development Goals (MDGs), and later Sustainable Development Goals (SDGs) for decreasing child mortality is appreciated.

The World Health Organization emphasize and propose methods for improving vaccination coverage through extended packages of immunization, where home visits and incentives are used as additional interventions. Home visits provide an opportunity to parents and health workers to communicate with each other, clarify doubts, exchange information and in turn motivate the parents to build up a positive approach towards vaccination.

The indirect and the opportunity costs mentioned by some parents can be more or less negotiated through the provision of incentives. It can be indirectly illustrated with the successful attempt of the Indian government to introduce the midday meal programme, which is the largest school nutrition program in the world (Jayaraman and Simroth 2015). I believe it was an effective programme which helped increase the attainment of primary education of children up to 14 years. Apart from providing basic education, this programme gave a helping hand to poor children to fulfill their nutritional needs and reduce school drop outs. As per a 2006 report, around 120 million children has benefited from this programme (Jayaraman and Simroth 2015).

Similarly, I suggest an incentive programme for immunization, which may have a positive effect on immunization take-up. A suggestion here is to provide smart cards to all the vaccine -takers, in which points are added with each vaccine uptake, such that they can buy necessary baby products using these smart cards free of cost. In addition to this, a smart card can be used as a tool to record vaccines taken at each time. This in turn help to provide better electronic-data recording regarding immunization uptake. I also recommend collecting the name, address and the contact details of each parents during the registration of the smart card, such that vaccine-reminders can be sent to each parents two days before the immunization clinics, which gives them enough time to plan when to attend the clinics. Notifications prior to the immunization-clinic as scheduled, provide enough time for the parents to plan their activities and remind them regarding it. Maintenance of proper records and proper monitoring system and updating the personal details whenever necessary using modern technology may add to the systematic functioning of the immunization system.

The organization and development of the infrastructure of the health centres are also important. If they provide better facilities to the users, many of the supply-side barriers to vaccination will be lowered. This was one of the major concerns of most of the parents I interviewed attending the vaccination clinics. Properly ventilated meeting rooms and immunization clinics with separate rooms for breast feeding, and proper toilet facilities for those attending immunization clinics and other meetings arranged in the health-centre. Moreover, it is important to maintain proper hygiene in these health centers.

Some parents were rejecting vaccines for reasons that reveal beliefs that are mistaken based on present-day health science; for example believing that natural immunity in itself is sufficient, or even superior, protection against potentially deadly diseases. Others rejected vaccinations due to religious reasons. I think these conceptions can be controlled to some extent with proper and effective health education regarding vaccines by well-trained health professionals who are well-qualified such that they can answer all the questions asked by the public.

Some parents were worried about the accessibility to the immunization outpoint and services made available to them. Increasing the vaccine out-reach points, adequate allotment of staffs and employing competent staffs and proper transport facilities and roads are also essential in

increasing the vaccine coverage, these represent additional supply-side factors that hinder vaccination uptake

As a mother stated, the reason behind delaying vaccination is due to the reports against some vaccines that she saw in the social media. I would suggest that the government should directly takeover the power to information provided by social media to provide adequate and correct information to the public to improve vaccination. Strict measures should be undertaken by the government against duplicating of information, assurance of vaccine safety and thus avoid the spread of rumor and controversies related to the quality of the vaccines. I also recommend that the government should ensure the safety of vaccines by enhancing proper manufacturing, production, distribution and storage facilities including cold chains, and avoid the contamination of vaccines.

These are some of the recommendations I suggest in order to improve the vaccination coverage and thereby acquire maximum immunity which in turn increases the herd immunity.

9. Conclusion

The objective of the study was to assess the perception of Indian parents towards vaccination by selecting three different states in India. Thereafter methods to improve the immunization coverage was assessed and factors that hinder vaccination was identified. The study was conducted, and data was analyzed based on findings in the literature review on vaccination take-up, plus the more general theoretical frameworks concerning factors that influence utilization of health services, or even more generally: factors that influence behavioral change. The perception of a sample of parents towards vaccination was assessed in three states. Some parents supported vaccination, whereas some declined or delayed due to reasons which are discussed in the previous chapters. Methods suggested by the parents for improved vaccine coverage were also part of the interviews. The factors that affect vaccine uptake among the parents were investigated in detail. I think the major advantage of conducting a qualitative study over a quantitative study in this area of research is that it can capture more fully the reasons which affects the parent's decision to vaccinate their children or not, rather than merely emphasizing "structural" factors (such as socio-economic status). Therefore, I think the qualitative method has been adaptive for this study. I finally also suggested some

recommendations which, if the Indian government take them into consideration, may give India a better future in terms of immunization coverage.

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11. Appendix

11.1 Immunization Schedule followed in India

Vaccine	When to give	Dose	Route	Site
For pregnant women				
TT-1	Early in pregnancy	0.5ml	Intramuscular	Upper arm
TT-2	4 weeks after TT-1*	0.5ml	Intramuscular	Upper arm
TT- booster	If received 2 TT doses in a pregnancy within last 3 years*	0.5ml	Intramuscular	Upper arm
For infants				
BCG	At birth or as early as possible till one year of age	0.1ml (0.05ml till 1 moth age)	Intra dermal	Left upper arm
Hepatitis	At birth or as early as possible within 24 hours	0.5ml	Intra muscular	Antero lateral side of mid-thigh
OPV-0	At birth or as early as possible within 15 days	2 drops	Oral	Oral
OPV-1, 2 & 3	At 6weeks,10weeks &14weeks	2 drops	Oral	Oral
DPT 1, 2 & 3	At 6weeks,10weeks &14weeks	0.5ml	Intramuscular	Antero lateral side of mid-thigh
Hep B 1, 2 & 3	At 6weeks,10weeks&14weeks	0.5ml	Intramuscular	Antero lateral side of mid-thigh
Measles	9 completed months -12 months	0.5ml	Subcutaneous	Right upper arm
Vitamin – A (1st dose)	At 9 months with measles	1ml (1 lakh IU)	Oral	Oral
For children				
DPT booster	16-24 month	0.5 ml	Intra muscular	Antero-lateral side of mid thigh
Measles 2nd dose	16-24 month	0.5ml	Subcutaneous	Right upper arm
OPV booster	16-24month	2 drops	Oral	Oral
Japanese encephalitis **	16-24 month	0.5ml	Subcutaneous	Left upper arm
Vitamin – A * **				
(2nd to 9th dose)	16 months then one dose every 6 month upto age of 5 years	2 ml (2 lakh IU)	Oral	Oral
DPT booster	5-6 years	0.5 ml	Intra muscular	Upper arm
TT	10 years & 16 years	0.5 ml	Intra muscular	Upper arm

11.2 information letter and consent form

Subject: Invitation for the participation in the research study.

Dear Parent,

I am an international master student from Oslo and Akershus University College of Applied Sciences (HiOA). I would like to invite you for an interview for my research project. It deals with perception of immunization in India. Being a student, I would like to know in detail regarding the immunization practices followed and the perceptions among the parents. The

government takes many initiatives for the implementation of immunization programme in India. However, the vaccine -preventable diseases are still reported in the country. As a result, the under- five mortality rate doesn't show much decline. What is the challenge behind it? What is your view about immunization? What do you think about the underlying reasons that hinder the implementation of immunization programme? What are the challenges you faced when attending immunization clinics? Is there any cultural or religious influence that influence immunization? Since you are an expert in this field, and I would like to hear your opinion about this topic. For this I am asking an hour of your time, which is just estimation. If you would like to talk longer, you are always free to continue or if you would like to finish it in an hour, you can decide it. You are free to stop at any stage and without an explanation. If you do not want to attend at all, you are also free to express it. In case if any questions are not clear, it can be repeated and explained. Your views and opinions are valuable to us and it will be respected. It is assured that all the personal information is kept confidential. After reviewing and analyzing the data, it will be properly destroyed. Please make your that you read and understand the letter and give the informed consent before we begin with the interview. Thank you,

Yours faithfully,

Thejes Thankam Thomas

Informed consent

My participation in this interview is voluntary. I understand that the interviewer will not identify me by name in any of the reports using the information obtained from this interview, and that my confidentiality as a participant in this study will remain secure. I may withdraw from the interview any time without any penalty. I have read and understand the explanation provided to me. I voluntarily agree to participate in this interview. I have been given a copy of this consent form.

Name of the interviewee:

Name of the interviewer:

Signature of the interviewee:

Signature of the interviewer:

Information letter and consent form (Malayalam Version)

വിഷയം: ഗവേഷണ പഠനത്തിലെ പങ്കാളിത്തത്തിനുള്ള ക്ഷണം.

പ്രിയ മാതാവോ,

ഞാൻ ഓസ്ലോ, അക്കേർസ് യൂണിവേഴ്സിറ്റി യൂണിവേഴ്സിറ്റി കോളേജ് ഓഫ് അപ്ലൈഡ് സയൻസസിൽ (HiOA) നിന്നുള്ള ഒരു അന്താരാഷ്ട്ര അദ്ധ്യാപികയാണ്. എന്റെ ഗവേഷണ പദ്ധതിയ്ക്ക് ഒരു അഭിമുഖത്തിന് നിങ്ങളെ ക്ഷണിക്കാൻ ഞാൻ ആഗ്രഹിക്കുന്നു. ഇന്ത്യയിൽ പ്രതിരോധ കുത്തിവയ്പ്പ് ഉണ്ടാകുന്നതിനെ കുറിച്ചാണ് ഇത് വിവരിക്കുന്നത്. ഒരു വിദ്യാർഥി ആയി, ഞാൻ പിന്തുടരുന്ന രോഗപ്രതിരോധ നടപടികൾ, മാതാപിതാക്കൾക്കിടയിൽ അവബോധം എന്നിവയെക്കുറിച്ച് കൂടുതൽ അറിയാൻ ആഗ്രഹിക്കുന്നു. ഇന്ത്യയിൽ പ്രതിരോധ കുത്തിവയ്പ്പ് പരിപാടി നടപ്പിലാക്കുന്നതിന് ഗവൺമെന്റ് നിരവധി നടപടികളെടുക്കുന്നു. എന്നിരുന്നാലും, വാക്സിൻ - സാധ്യമായ രോഗങ്ങൾ ഇപ്പോഴും രാജ്യത്തു റിപ്പോർട്ട് ചെയ്യപ്പെട്ടിട്ടുണ്ട്. തത്ഫലമായി, 5 വയസ്സിനു താഴെയുള്ള മുതിർന്നവർക്കുള്ള നിരക്ക് വളരെ കുറഞ്ഞിട്ടില്ല. അതിനു പിന്നിലെ വെല്ലുവിളി എന്താണ്? രോഗപ്രതിരോധത്തെക്കുറിച്ചുള്ള നിങ്ങളുടെ കാഴ്ചപ്പാട് എന്താണ്? രോഗപ്രതിരോധ കുത്തിവയ്പ്പ് പദ്ധതി നടപ്പിലാക്കുന്നതിനുള്ള കാരണത്തെക്കുറിച്ച് നിങ്ങൾ എന്ത് ചിന്തിക്കുന്നു. രോഗപ്രതിരോധ ഇടപെടൽ ക്ലിനിക്കുകളിൽ പങ്കെടുക്കുമ്പോൾ നിങ്ങൾ നേരിടുന്ന വെല്ലുവിളികൾ എന്തൊക്കെയാണ്? സാംക്രമികമോ മതപരമോ സ്വാധീനം ചെലുത്തുന്ന സ്വാധീനമുണ്ടോ? നിങ്ങൾ ഈ ഫീൽഡിൽ ഒരു വിദഗ്ധനാണെന്നതിനാൽ ഈ വിഷയത്തെക്കുറിച്ചുള്ള നിങ്ങളുടെ അഭിപ്രായം കേൾക്കാൻ ഞാൻ ആഗ്രഹിക്കുന്നു. നിങ്ങളുടെ സമയത്തെ ഒരു മണിക്കൂറാണ് ഞാൻ ചോദിക്കുന്നത്, അത് വെറും എൺപത്. നിങ്ങൾക്ക് ഇനി സംസാരിക്കണമെന്നുണ്ടെങ്കിൽ, നിങ്ങൾക്ക് എല്ലായ്പ്പോഴും തുടരാം അല്ലെങ്കിൽ ഒരു മണിക്കൂറിൽ അത് പൂർത്തിയാക്കാൻ ആഗ്രഹിക്കുന്നുവെങ്കിൽ, നിങ്ങൾക്ക് അത് തീരുമാനിക്കാം. നിങ്ങൾക്ക് ഏതു ഘട്ടത്തിലും ഒരു വിശദീകരണമില്ലാതെ നിർത്താൻ സ്വാതന്ത്ര്യമുണ്ട്. നിങ്ങൾ പങ്കെടുക്കാൻ ആഗ്രഹിക്കുന്നില്ലെങ്കിൽ, അത് പ്രകടിപ്പിക്കാൻ നിങ്ങൾക്ക് സ്വാതന്ത്ര്യമുണ്ട്. ഏതെങ്കിലും ചോദ്യങ്ങൾ വ്യക്തമല്ലെങ്കിൽ, ആവർത്തിച്ച് വിശദീകരിക്കാം. നിങ്ങളുടെ കാഴ്ചപ്പാടുകളും അഭിപ്രായങ്ങളും ഞങ്ങൾക്ക് വിലപ്പെട്ടതാണ്, അത് ബഹുമാനിക്കും. എല്ലാ സ്വകാര്യ വിവരങ്ങളും രഹസ്യാത്മകമായി സൂക്ഷിക്കുന്നു എന്ന് ഉറപ്പുണ്ട് .ഡാറ്റ അവലോകനം ചെയ്ത്

വിശകലനം ചെയ്ത ശേഷം അത് ശരിയായി നശിപ്പിക്കപ്പെടും. നിങ്ങൾ കത്ത് വായിക്കുകയും മനസിലാക്കുകയും ചെയ്യുക, ഞങ്ങൾ അഭിമുഖത്തിൽ തുടങ്ങുന്നതിനു മുമ്പ് അറിവോടെയുള്ള സമ്മതം നൽകൂ. നന്ദി,

വിശ്വസ്തതയോടെ,

തേജ് തങ്കം തോമസ്

അറിവോടെയുള്ള സമ്മതം

ഈ അഭിമുഖത്തിൽ എന്റെ പങ്കാളിത്തം സ്വമേധയാ ആണ്. ഈ അഭിമുഖത്തിൽ നിന്നും ലഭിച്ച വിവരങ്ങൾ ഉപയോഗിച്ച് ഏതെങ്കിലും ഒരു റിപ്പോർട്ടിൽ എന്നെ അഭിമുഖം തിരിച്ചറിയാൻ കഴിയില്ലെന്നും ഈ പഠനത്തിലെ പങ്കാളി എന്ന നിലയിൽ എന്റെ രഹസ്യസ്വഭാവം സുരക്ഷിതമായിരിക്കും എന്നും ഞാൻ മനസ്സിലാക്കുന്നു. ഞാൻ ഏതു പെനാൽറ്റി കൂടാതെ അഭിമുഖത്തിൽ നിന്നും എപ്പോൾ വേണമെങ്കിലും പിൻവലിക്കാം. എനിക്ക് നൽകിയിട്ടുള്ള വിശദീകരണം വായിക്കുകയും മനസ്സിലാക്കുകയും ചെയ്തിട്ടുണ്ട്. ഈ അഭിമുഖത്തിൽ പങ്കെടുക്കാൻ ഞാൻ സ്വമേധയാ സമ്മതിക്കുന്നു. ഈ സമ്മതത്തിന്റെ ഒരു പകർപ്പ് എനിക്ക് നൽകിയിട്ടുണ്ട്.

അഭിമുഖത്തിന്റെ പേര്:

അഭിമുഖത്തിന്റെ പേര്:

അഭിമുഖ സംഭാഷണത്തിൻറെ ഒപ്പ്:

അഭിമുഖ സംഭാഷണത്തിൻറെ ഒപ്പ്:

Information letter and consent form (Tamil Version)

பொருள்: ஆய்வு ஆய்வில் பங்கேற்பதற்கான அழைப்பு.

அன்புள்ள பெற்றோர்,

நான் ஒஸ்லோ மற்றும் அக்செஷஸ் பல்கலைக்கழகத்தின் அப்ளிகேஷன் சயின்சஸ் (HiOA) பல்கலைக்கழகத்தின் சர்வதேச மாஸ்டர் மாணவன். என் ஆராய்ச்சி திட்டத்திற்கான நேர்காணலுக்கு உங்களை அழைக்க விரும்புகிறேன். இது இந்தியாவில் நோய் எதிர்ப்புத் தன்மையைப் பற்றியது. ஒரு மாணவராக இருப்பதால், தொடர்ந்து பின்பற்றப்படும் நோய்த்தடுப்பு நடைமுறைகளைப் பற்றியும் பெற்றோர்களிடையே உள்ள உணர்வுகள் பற்றியும் தெரிந்து கொள்ள விரும்புகிறேன். இந்தியாவில் நோய்த்தடுப்புத் திட்டத்தை செயல்படுத்த பல முயற்சிகள் மேற்கொள்ளப்படுகின்றன. இருப்பினும், தடுப்பூசி-தற்செயலான நோய்கள் இன்னமும் நாட்டில் பதிவாகியுள்ளன. இதன் விளைவாக, இறப்பு விகிதம் குறைவு மிகவும் குறைந்து காணப்படவில்லை. பின்னால் என்ன சவால்? நோய்த்தடுப்பு பற்றி உங்கள் கருத்து என்ன? நோய்த்தடுப்புத் திட்டத்தை செயல்படுத்துவதைத் தடுக்கும் அடிப்படை காரணங்களைப் பற்றி நீங்கள் என்ன நினைக்கிறீர்கள். தடுப்புமருந்து கிளினிக்குகளில் கலந்துகொண்டபோது நீங்கள் சந்தித்த சவால்கள் யாவை? நோய்த்தடுப்பு தாக்கத்தை ஏற்படுத்தும் எந்த கலாச்சார அல்லது மத செல்வாக்கு உள்ளது?

நீங்கள் இந்த துறையில் ஒரு நிபுணர் மற்றும் நான் இந்த தலைப்பை பற்றி உங்கள் கருத்தை கேட்க விரும்புகிறேன். இதற்காக நான் உங்கள் நேரத்தை ஒரு மணிநேரம் கேட்கிறேன், அது வெறும் மதிப்பீடுதான். நீங்கள் நீண்ட நேரம் பேச விரும்பினால், நீங்கள் எப்பொழுதும் தொடரலாம் அல்லது ஒரு மணி நேரத்திற்குள் முடிக்க விரும்பினால், அதைத் தீர்மானிக்கலாம். எந்த நிலையிலும் ஒரு விளக்கம் இல்லாமல் நீங்கள் நிறுத்தலாம். நீங்கள் கலந்து கொள்ள விரும்பவில்லை என்றால், அதை வெளிப்படுத்த நீங்கள் சுதந்திரமாக இருக்க வேண்டும். ஏதாவது கேள்விகள் தெளிவாக இல்லை என்றால், அது மீண்டும் மீண்டும் விளக்கப்படலாம். உங்கள் கருத்துக்கள் மற்றும் கருத்துக்கள் எங்களுக்கு மதிப்புமிக்கது, அது மதிக்கப்படும். எல்லா தனிப்பட்ட தகவல்களும் இரகசியமாக வைக்கப்பட்டுள்ளன என்பதில் சந்தேகம் உள்ளது. தரவை மறு ஆய்வு செய்து பகுப்பாய்வு செய்தபின், இது சரியாக அழிக்கப்படும். தயவுசெய்து அந்த கடிதத்தை படித்து புரிந்து கொள்ளவும், பேட்டியுடன் தொடங்குவதற்கு முன்னர் அறிந்த ஒப்புதலையும் தெரிவிக்கவும். நன்றி,

தங்கள் உண்மையுள்ள,
தேஜஸ் நன்றி டாக்டர்

அறிவிக்கப்பட்ட முடிவு

இந்த நேர்காணலில் என் பங்கு தானாகவே உள்ளது. இந்த நேர்காணலிலிருந்து பெறப்பட்ட தகவலைப் பயன்படுத்தி எந்தவொரு அறிக்கையிலும் பெயரிடப்பட்டவர் என்னை அடையாளப்படுத்த மாட்டார் என்பதை நான் புரிந்து கொள்கிறேன், இந்த ஆய்வில் பங்கேற்பாளராக எனது ரகசியத்தை பாதுகாப்பாக வைத்திருப்பேன். எந்தவொரு தண்டனையுமின்றி எப்போது வேண்டுமானாலும் நேர்காணலில் இருந்து விலகலாம். எனக்கு வழங்கப்பட்ட விளக்கத்தை நான் வாசித்து புரிந்துகொள்கிறேன். இந்த நேர்காணலில் பங்கேற்க நான் தானாகவே ஒப்புக்கொள்கிறேன். இந்த ஒப்புதல் படிவத்தின் நகல் எனக்கு வழங்கப்பட்டுள்ளது.

நேர்காணியின் பெயர்:
நேர்காணியின் பெயர்:
நேர்காணியின் கையொப்பம்:
பேட்டியாளரின் கையொப்பம்:

Information letter and consent form (Kannada Version)

ವಿಷಯ: ಸಂಶೋಧನಾ ಅಧ್ಯಯನದಲ್ಲಿ ಭಾಗವಹಿಸುವ ಆಹ್ವಾನ.

ಆತ್ಮೀಯ ಪೋಷಕ,

ನಾನು ಓಸ್ಲೋ ಮತ್ತು ಅಕರ್ಶಸ್ ಯೂನಿವರ್ಸಿಟಿ ಕಾಲೇಜ್ ಆಫ್ ಅಪ್ಲೈಡ್ ಸೈನ್ಸಸ್ (ಹೈಓಎ) ಯಿಂದ ಅಂತರರಾಷ್ಟ್ರೀಯ ಮಾಸ್ಟರ್ಸ್ ವಿದ್ಯಾರ್ಥಿಯಾಗಿದ್ದೇನೆ. ನನ್ನ ಸಂಶೋಧನಾ ಯೋಜನೆಗೆ ಸಂದರ್ಶನಕ್ಕಾಗಿ ನಿಮ್ಮನ್ನು ಆಹ್ವಾನಿಸಲು ನಾನು ಬಯಸುತ್ತೇನೆ. ಇದು ಭಾರತದಲ್ಲಿ ಪ್ರತಿರಕ್ಷಣೆಯ ಗ್ರಹಿಕೆಯೊಂದಿಗೆ ವ್ಯವಹರಿಸುತ್ತದೆ. ವಿದ್ಯಾರ್ಥಿಯಾಗಿರುವುದರಿಂದ, ನಾನು ಅನುಸರಿಸಿದ ಪ್ರತಿರಕ್ಷಣೆ ಅಭ್ಯಾಸಗಳು ಮತ್ತು ಪೋಷಕರಲ್ಲಿ ಗ್ರಹಿಕೆಯನ್ನು ಕುರಿತು ವಿವರಗಳನ್ನು ತಿಳಿಯಲು ಬಯಸುತ್ತೇನೆ. ಭಾರತದಲ್ಲಿ ರೋಗನಿರೋಧಕ ಕಾರ್ಯಕ್ರಮದ ಅನುಷ್ಠಾನಕ್ಕಾಗಿ ಸರ್ಕಾರವು ಅನೇಕ ಉಪಕ್ರಮಗಳನ್ನು ತೆಗೆದುಕೊಳ್ಳುತ್ತದೆ. ಆದಾಗ್ಯೂ, ಲಸಿಕೆ-ಪ್ರಚೋದಿಸುವ ರೋಗಗಳು

ಇನ್ನೂ ದೇಶದಲ್ಲಿ ವರದಿಯಾಗಿದೆ. ಇದರ ಪರಿಣಾಮವಾಗಿ ಐದು ಮರಣ ಪ್ರಮಾಣವು ಕಡಿಮೆಯಾಗಿದೆ. ಅದರ ಹಿಂದಿನ ಸವಾಲು ಏನು? ರೋಗನಿರೋಧಕತೆಯ ಬಗ್ಗೆ ನಿಮ್ಮ ಅಭಿಪ್ರಾಯವೇನು? ರೋಗನಿರೋಧಕ ಕಾರ್ಯಕ್ರಮದ ಅನುಷ್ಠಾನಕ್ಕೆ ಅಡ್ಡಿಯುಂಟುಮಾಡುವ ಮೂಲಭೂತ ಕಾರಣಗಳ ಬಗ್ಗೆ ನೀವು ಏನು ಯೋಚಿಸುತ್ತೀರಿ. ರೋಗನಿರೋಧಕ ಕ್ಲಿನಿಕ್ಗಳಿಗೆ ಭೇಟಿ ನೀಡಿದಾಗ ನೀವು ಎದುರಿಸುವ ಸವಾಲುಗಳು ಯಾವುವು? ರೋಗನಿರೋಧಕತೆಯನ್ನು ಪ್ರಭಾವಿಸುವ ಯಾವುದೇ ಸಾಂಸ್ಕೃತಿಕ ಅಥವಾ ಧಾರ್ಮಿಕ ಪ್ರಭಾವವಿದೆಯೇ? ಈ ಕ್ಷೇತ್ರದಲ್ಲಿ ನೀವು ಪರಿಣಿತರಾಗಿರುವುದರಿಂದ ಮತ್ತು ಈ ವಿಷಯದ ಬಗ್ಗೆ ನಿಮ್ಮ ಅಭಿಪ್ರಾಯವನ್ನು ಕೇಳಲು ನಾನು ಬಯಸುತ್ತೇನೆ. ಇದಕ್ಕಾಗಿ ನಾನು ನಿಮ್ಮ ಸಮಯದ ಒಂದು ಗಂಟೆ ಕೇಳುತ್ತೇನೆ, ಇದು ಕೇವಲ ಅಂದಾಜು. ನೀವು ಮುಂದೆ ಮಾತನಾಡಲು ಬಯಸಿದರೆ, ನೀವು ಯಾವಾಗಲೂ ಮುಂದುವರೆಯಲು ಸ್ವತಂತ್ರರಾಗಿರುತ್ತಾರೆ ಅಥವಾ ನೀವು ಅದನ್ನು ಒಂದು ಗಂಟೆಯಲ್ಲಿ ಮುಗಿಸಲು ಬಯಸಿದರೆ, ನೀವು ಇದನ್ನು ನಿರ್ಧರಿಸಬಹುದು. ನೀವು ಯಾವುದೇ ಹಂತದಲ್ಲಿ ಮತ್ತು ವಿವರಣೆ ಇಲ್ಲದೆ ನಿಲ್ಲಿಸಲು ಸ್ವತಂತ್ರರಾಗಿರುತ್ತಾರೆ. ನೀವು ಹಾಜರಾಗಲು ಬಯಸದಿದ್ದರೆ, ನೀವು ಅದನ್ನು ವ್ಯಕ್ತಪಡಿಸಲು ಉಚಿತವಾಗಿದೆ. ಯಾವುದಾದರೂ ಪ್ರಶ್ನೆಗಳನ್ನು ಸ್ಪಷ್ಟವಾಗಿಲ್ಲದಿದ್ದರೆ, ಅದನ್ನು ಪುನರಾವರ್ತಿಸಬಹುದು ಮತ್ತು ವಿವರಿಸಬಹುದು. ನಿಮ್ಮ ಅಭಿಪ್ರಾಯಗಳು ಮತ್ತು ಅಭಿಪ್ರಾಯಗಳು ನಮಗೆ ಬೆಲೆಬಾಳುವವು ಮತ್ತು ಅದನ್ನು ಗೌರವಿಸಲಾಗುವುದು. ಎಲ್ಲಾ ವೈಯಕ್ತಿಕ ಮಾಹಿತಿಗಳನ್ನು ಗೌಪ್ಯವಾಗಿ ಇರಿಸಲಾಗುತ್ತದೆ ಎಂದು ಭರವಸೆ ಇದೆ .ಡೇಟಾವನ್ನು ಪರಿಶೀಲಿಸಿದ ಮತ್ತು ವಿಶ್ಲೇಷಿಸಿದ ನಂತರ, ಅದು ಸರಿಯಾಗಿ ನಾಶವಾಗುತ್ತದೆ. ದಯವಿಟ್ಟು ಪತ್ರವನ್ನು ನೀವು ಓದುತ್ತಿದ್ದೀರಿ ಮತ್ತು ಅರ್ಥಮಾಡಿಕೊಂಡಿದ್ದೀರಿ ಮತ್ತು ಸಂದರ್ಶನದಲ್ಲಿ ಪ್ರಾರಂಭವಾಗುವ ಮೊದಲು ದಯವಿಟ್ಟು ತಿಳುವಳಿಕೆಯುಳ್ಳ ಸಮ್ಮತಿಯನ್ನು ನೀಡಿ. ಧನ್ಯವಾದ,

ಇಂತಿ ನಿಮ್ಮ ನಂಬಿಕಸ್ತ,

ಥೇಜಸ್ ಥಾಮಮ್ ಥಾಮಸ್

ತಿಳುವಳಿಕೆಯುಳ್ಳ ಒಪ್ಪಿಗೆ

ಈ ಸಂದರ್ಶನದಲ್ಲಿ ನನ್ನ ಭಾಗವಹಿಸುವಿಕೆ ಸ್ವಯಂಪ್ರೇರಿತವಾಗಿದೆ. ಸಂದರ್ಶಕನು ಈ ಸಂದರ್ಶನದಿಂದ ಪಡೆದ ಮಾಹಿತಿಯನ್ನು ಬಳಸಿಕೊಂಡು ಯಾವುದೇ ವರದಿಗಳಲ್ಲಿ ನನ್ನ ಹೆಸರನ್ನು ಗುರುತಿಸುವುದಿಲ್ಲ ಮತ್ತು ಈ ಅಧ್ಯಯನದಲ್ಲಿ ಭಾಗವಹಿಸುವವನಾಗಿ ನನ್ನ ಗೌಪ್ಯತೆ ಸುರಕ್ಷಿತವಾಗಿ ಉಳಿಯುತ್ತದೆ ಎಂದು ನಾನು ಅರ್ಥಮಾಡಿಕೊಂಡಿದ್ದೇನೆ. ಯಾವುದೇ ಸಂದೇಹವಿಲ್ಲದೆಯೇ ಯಾವುದೇ ಸಂದರ್ಶನದಿಂದ ನಾನು ಹಿಂತಿರುಗಬಹುದು. ನನಗೆ ಒದಗಿಸಿದ ವಿವರಣೆಯನ್ನು ನಾನು ಓದಿದ್ದೇನೆ ಮತ್ತು ಅರ್ಥಮಾಡಿಕೊಂಡಿದ್ದೇನೆ. ಈ ಸಂದರ್ಶನದಲ್ಲಿ ಭಾಗವಹಿಸಲು ನಾನು ಸ್ವಯಂಪ್ರೇರಣೆಯಿಂದ ಒಪ್ಪುತ್ತೇನೆ. ಈ ಸಮ್ಮತಿಯ ರೂಪದ ಪ್ರತಿಯನ್ನು ನನಗೆ ನೀಡಲಾಗಿದೆ.

ಸಂದರ್ಶಕರ ಹೆಸರು:

ಸಂದರ್ಶಕರ ಹೆಸರು:

ಸಂದರ್ಶಕರ ಸಹಿ:

ಸಂದರ್ಶಕರ ಸಹಿ:

11.3 Interview guide – main study

Self -introduction in brief:

Dear parent(name),

Researcher: I am Thejes Thankam Thomas, doing my higher education in Oslo. I came here as a part of my project. I hope you went through the letter which you got on my last visit which informs you that I come to you to conduct an interview. Hope you have gone through the letter.

Parent: Yes/No

(If ´yes´ then continuing) If not,

Researcher: I have a copy of the letter with me. Kindly go through it and let me know your interest. I assure you that all the information collected during this interview will be confidential.

Thank you for accepting your participation in this interview.

Your information is very valuable to me. Therefore, I don't want to miss a single information that you tell me. Can I use this tape recorder to record our conversation? Don't worry, the tapes will be safe hands and I would lock it rather and will be destroyed after the report from the project is finished. If you don't agree with using a tape, feel free to tell, I can take notes instead.

Researcher: Shall I read the consent form again?

Parent: Yes/No

Can I have your signature please on the consent form to make sure that are willing to participate in this interview?

Questions

Introduction: Can you present your family? (how many members in the family, nuclear/ extended family? If extended family- the members, breadwinner of the family, living with husband or single mother or husband working abroad)

How many children and how old are they? (Boys and/or girls?)

Focusing questions:

1. Have you heard about vaccination? If yes, can you start by telling what you think first about the childhood vaccination programme? /If No, the researcher gives certain hints regarding vaccination)
2. Have you heard about any awareness programs regarding vaccination? If yes, have you participated? Was it beneficial? /If not, Why (reasons)
3. Do you use television or smart phones where you have access to internet facilities? If yes then, are you aware of the information shared by them? Was it useful?
   If No, how do you know about vaccination and its updates?
4. What do you know about vaccine preventable diseases?
5. There are discussions regarding vaccine safety. What do you think?
6. Did you have your children vaccinated? If no, what are the reasons for not choosing vaccination? (The researcher plans the next question as per the response from the participant to understand the factors that hinders the vaccination process- by asking the parent to elaborate the reason)
7. Do you have an idea about when the immunization is usually administered to the children, at what age? (According to the response of the parent) If yes, how old was your child when you started vaccinating. How do you think it is done?
8. Have you been vaccinated yourselves? Is yes, continue with next question.
   If not, then the reasons are asked and is compared with the reason they told for no vaccinating their children. (opinion about their parents, spouse and friends regarding immunization)
9. Have you experienced a situation, when you went to a clinic for vaccination but was sent home due to lack of vaccine or some other reasons (accessibility, waiting time, and lack of availability of vaccines)? If yes? Can you elaborate the situation?
10. Would you like to let your child get vaccinated within a school -based immunization programme? If yes, can you share your experience? If no, why?

11. Did the health care-center professionals inform you in prior regarding the vaccination clinics? Do you get any notification or message alerts on your phone as a reminder to attend the vaccination clinic?
12. Whom do you trust the most – the public health services or private health services, with regard to provision of vaccination? Kindly elaborate why you trust _____ the most.
13. What are your suggestions for improving the immunization system? (the researcher explains the question to the participant to make it clear, if not understood) Can you please list the problems you usually face when attending the immunization clinics? Can you please elaborate that situation? (This question is optional-asked according to the response of the participants regarding vaccination)

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Thank you for spending your valuable time for this interview. Once again, I assure you that all the information collected will be confidential.

Interview guide – main study (Malayalam Version)

അഭിമുഖം ഗൈഡ് - പ്രധാന പഠനം

സ്വയം-ആമുഖം ചുരുക്കത്തിൽ:

പ്രിയ മാതാപിതാക്കൾ (പേര്)

ഗവേഷകൻ: ഞാൻ ... ഓസ്ലോയിൽ എന്റെ ഉന്നത വിദ്യാഭ്യാസം. എന്റെ പദ്ധതിയുടെ ഭാഗമായി ഞാൻ ഇവിടെ വന്നു. എന്റെ അവസാന സന്ദർശനത്തിലെ കത്ത് മുഖേന നിങ്ങൾ പോയിട്ട് ഒരു അഭിമുഖം നടത്താൻ ഞാൻ നിങ്ങളോട് വന്ന് അറിയിക്കുന്നതായി നിങ്ങൾ കരുതുന്നു. നിങ്ങൾ കത്ത് വഴി പോയി എന്ന് പ്രതീക്ഷിക്കുന്നു.

പാരന്റ്: അതെ / ഇല്ല

('ആഇസ്' തുടർന്നും തുടരുകയാണെങ്കിൽ) ഇല്ലെങ്കിൽ,

ഗവേഷക: എനിക്കും ഒരു കത്തിന്റെ പകർപ്പ് ഉണ്ട്. ദയവായി അതിലൂടെ കടന്നുപോവുകയും നിങ്ങളുടെ താല്പര്യം എന്നെ അറിയിക്കുകയും ചെയ്യുക. ഈ

അഭിമുഖത്തിൽ ശേഖരിച്ച എല്ലാ വിവരങ്ങളും രഹസ്യാത്മകമായിരിക്കുമെന്ന് ഞാൻ ഉറപ്പു നൽകുന്നു.

ഈ അഭിമുഖത്തിൽ പങ്കാളിത്തം സ്വീകരിച്ചതിന് നന്ദി.

നിങ്ങളുടെ വിവരങ്ങൾ എനിക്ക് വളരെ വിലപ്പെട്ടതാണ്. അതിനാൽ, നീ എന്നോട് ഒരൊറ്റ വിവരവും നഷ്ടപ്പെടുത്താൻ ഞാൻ ആഗ്രഹിക്കുന്നില്ല. ഞങ്ങളുടെ സംഭാഷണം റെക്കോർഡ് ചെയ്യാൻ എനിക്ക് ഈ ടേപ്പ് റെക്കോർഡർ ഉപയോഗിക്കാമോ? വിഷമിക്കേണ്ട, ടേപ്പുകൾ സുരക്ഷിതമായ കൈകളായിരിക്കും, ഞാൻ അത് പൂട്ടിയിരിക്കും, പദ്ധതി പൂർത്തിയാകുന്നതോടെ റിപ്പോർട്ട് നശിപ്പിക്കപ്പെടും. ഒരു ടേപ്പ് ഉപയോഗിച്ചുകൊണ്ട് നിങ്ങൾ അംഗീകരിക്കുന്നില്ലെങ്കിൽ, അറിയിക്കാൻ മടിക്കേണ്ടതില്ല, പകരം എനിക്ക് നോട്ടുകൾ എടുക്കാം.

ഗവേഷക: വീണ്ടും സമ്മതം എഴുതിയിട്ടുണ്ടോ?

പാരന്റ്: അതെ / ഇല്ല

ഈ അഭിമുഖത്തിൽ പങ്കുചേരാൻ തയ്യാറാണോ എന്ന് ഉറപ്പുവരുത്താൻ സമ്മതം ഫോമിലേക്ക് നിങ്ങളുടെ സിഗ്നേച്ചർ എനിക്ക് തരാമോ?

ചോദ്യങ്ങൾ

ആമുഖം: നിങ്ങളുടെ കുടുംബത്തെ നിങ്ങൾക്ക് അവതരിപ്പിക്കാമോ? (എത്ര കുടുംബാംഗങ്ങൾ, ആണവവശേഷി / കുടുംബാംഗങ്ങൾ, കുടുംബാംഗങ്ങൾ, കുടുംബാംഗങ്ങൾ, കുടുംബാംഗങ്ങൾ, ഭർത്താവ്, സിംഗിൾ മാതാവ്, ഭർത്താവ്)

അവർ എത്ര കുട്ടികളും എത്ര വയസ്സും ഉണ്ട് (ബോയ്സ് / അല്ലെങ്കിൽ പെൺകുട്ടികൾ?)

ചോദ്യങ്ങൾ കേന്ദ്രീകരിക്കുന്നു:

1. വാക്സിനേഷൻ സംബന്ധിച്ച് നിങ്ങൾ കേട്ടിട്ടുണ്ടോ? ഉവ്വ്, കുട്ടിക്കാലത്തെ വാക്സിനേഷൻ പ്രോഗ്രാമിനെ കുറിച്ചു നിങ്ങൾ ആദ്യം എന്ത് ചിന്തിക്കുന്നു? / ഇല്ലെങ്കിൽ, വാക്സിനേഷൻ സംബന്ധിച്ച് ഗവേഷകൻ ചില സൂചനകൾ നൽകുന്നു)
2. വാക്സിനേഷൻ സംബന്ധിച്ച് എന്തെങ്കിലും ബോധവൽക്കരണ പരിപാടികൾ നിങ്ങൾ കേട്ടിട്ടുണ്ടോ? ഉണ്ടെങ്കിൽ, നിങ്ങൾ പങ്കുചേർന്നോ? ഇത് പ്രയോജനകരമായിരുന്നോ? / ഇല്ലെങ്കിൽ, എന്തുകൊണ്ട് (കാരണങ്ങൾ)
3. നിങ്ങൾക്ക് ഇന്റർനെറ്റ് സൗകര്യങ്ങളുള്ള ടെലിവിഷൻ അല്ലെങ്കിൽ സ്മാർട്ട് ഫോണുകൾ ഉപയോഗിക്കാമോ? അങ്ങനെയെങ്കിൽ, അവ പങ്കിടുന്ന വിവരങ്ങൾ നിങ്ങൾക്കറിയാമോ? ഇത് ഉപയോഗപ്രദമായിരുന്നോ?

ഇല്ലെങ്കിൽ, വാക്സിനേഷനും അതിന്റെ അപ്ഡേറ്റുകളും നിങ്ങൾക്ക് എങ്ങനെ അറിയാം?

4. വാക്സിൻ തടയാനുള്ള രോഗങ്ങളെക്കുറിച്ച് നിങ്ങൾക്ക് എന്ത് അറിയാം?

5. വാക്സിൻ സുരക്ഷയുമായി ബന്ധപ്പെട്ട ചർച്ചകൾ ഉണ്ട്. നീ എന്ത് ചിന്തിക്കുന്നു?

6. നിങ്ങളുടെ കുട്ടികൾ വാക്സിനേഷൻ ചെയ്തിട്ടുണ്ടോ? ഇല്ലെങ്കിൽ, വാക്സിനേഷൻ തിരഞ്ഞെടുക്കുന്നതിനുള്ള കാരണങ്ങൾ ഏതെല്ലാമാണ്? (വാക്സിനേഷൻ പ്രക്രിയക്ക് തടസ്സം സൃഷ്ടിക്കുന്ന ഘടകങ്ങൾ മനസിലാക്കാൻ പങ്കാളിയുടെ പ്രതികരണം അനുസരിച്ച് അടുത്ത ചോദ്യത്തെക്കുറിച്ച് ഗവേഷകൻ വിശദീകരിക്കുന്നു - കാരണം, കാരണം വിശദീകരിച്ചതിന് മാതാപിതാക്കളെ ആവശ്യപ്പെടുക)

7. പ്രതിരോധ കുത്തിവയ്പ്പ് സാധാരണയായി കുട്ടികൾക്കു നൽകുമ്പോൾ, ഏത് പ്രായത്തിൽ? (മാതാപിതാക്കളുടെ പ്രതികരണം പ്രകാരം) എങ്കിൽ, നിങ്ങൾ വാക്സിനേഷൻ ആരംഭിക്കുമ്പോൾ നിങ്ങളുടെ കുട്ടി എത്ര വയസ്സായിരുന്നു. അത് എങ്ങനെയാണ് സംഭവിച്ചത് എന്ന് നിങ്ങൾ കരുതുന്നുണ്ടോ?

8. നിങ്ങൾ സ്വയം കുത്തിവയ്പ് ചെയ്തിട്ടുണ്ടോ? അതെ, അടുത്ത ചോദ്യത്തോടൊപ്പം തുടരുക.

ഇല്ലെങ്കിൽ, കാരണങ്ങൾ ചോദിക്കപ്പെടുന്നു അവരുടെ കുട്ടികളെ കുത്തിവയ്ക്കാൻ ഒന്നും അവർ പറഞ്ഞ കാരണം താരതമ്യം ചെയ്യുന്നു. (അവരുടെ മാതാപിതാക്കളുടെ അഭിപ്രായം, പ്രതിരോധം സംബന്ധിച്ച ബന്ധുക്കളും സുഹൃത്തുക്കളും സുഹൃത്തുക്കളും)

9. നിങ്ങൾ ഒരു രോഗാവസ്ഥ അനുഭവിച്ചോ, നിങ്ങൾ വാക്സിനേഷൻ ഒരു ക്ലിനിക്ക് പോയി, പക്ഷേ വാക്സിൻ അല്ലെങ്കിൽ മറ്റ് കാരണങ്ങൾ (പ്രവേശനക്ഷമത, കാത്തിരിപ്പ് സമയം, വാക്സിൻ ലഭ്യതയില്ലായ്മ) കാരണം വീട്ടിലേക്ക് അയച്ചു? ശരി ആണെങ്കിൽ? നിങ്ങൾക്ക് സാഹചര്യം വിശദീകരിക്കാമോ?

സ്കൂളിൽ നിർദ്ദിഷ്ട പ്രതിരോധ കുത്തിവയ്പ് പ്രോഗ്രാമിൽ നിങ്ങളുടെ കുട്ടിക്ക് വാക്സിനേഷൻ നൽകുവാൻ നിങ്ങൾ ആഗ്രഹിക്കുന്നുണ്ടോ? ഉണ്ടെങ്കിൽ, നിങ്ങളുടെ അനുഭവം പങ്കിടാൻ കഴിയുമോ? ഇല്ലെങ്കിൽ, എന്തുകൊണ്ട്?

11. വാക്സിനേഷൻ ക്ലിനിക്കുകളെ മുൻകൂട്ടി അറിയിച്ച ഹെൽത്ത് സെന്റർ പ്രൊഫഷണലുകളെ അറിയിച്ചോ? വാക്സിനേഷൻ ക്ലിനിക്കിൽ പങ്കെടുക്കാൻ നിങ്ങൾക്ക് ഒരു ഓർമ്മപ്പെടുത്തലായി നിങ്ങളുടെ ഫോണിൽ എന്തെങ്കിലും അറിയിപ്പ് അല്ലെങ്കിൽ സന്ദേശം അലേർട്ടുകൾ ലഭിച്ചിട്ടുണ്ടോ?

12. നിങ്ങൾ ആരെയാണ് വിശ്വസിക്കുന്നത് - പൊതുജനാരോഗ്യ സേവനങ്ങൾ അല്ലെങ്കിൽ സ്വകാര്യ ആരോഗ്യ സേവനങ്ങൾ, വാക്സിനേഷൻ നൽകുന്ന കാര്യത്തിൽ? നിങ്ങൾ ഏറ്റവും കൂടുതൽ _____ എന്തിനു വിശ്വസിക്കുന്നു എന്ന് നന്നായി വിവരിക്കുക.

13. പ്രതിരോധ സംവിധാനം മെച്ചപ്പെടുത്തുന്നതിനുള്ള നിങ്ങളുടെ നിർദ്ദേശങ്ങൾ എന്താണ്? (ഇത് വ്യക്തമാക്കാതിരിക്കാനും പങ്കുവയ്ക്കാനും പാടില്ല എന്നു ഗവേഷകന് വിശദീകരിക്കുന്നു) രോഗപ്രതിരോധ ശീലം ക്ലിനിക്കുകളിൽ പങ്കെടുക്കുമ്പോൾ നിങ്ങൾ നേരിടുന്ന പ്രശ്നങ്ങൾ നിങ്ങൾക്ക് കാണാമോ? ആ സ്ഥിതിവിശേഷം വിശദീകരിക്കാമോ? (വാക്സിനേഷൻ സംബന്ധിച്ച് പങ്കെടുക്കുന്നവരുടെ പ്രതികരണം അനുസരിച്ച് ഓപ്ഷണലായതാണ് ഈ ചോദ്യം)

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ഈ അഭിമുഖത്തിന് നിങ്ങളുടെ വിലപ്പെട്ട സമയം ചിലവഴിച്ചതിന് നന്ദി. ശേഖരിച്ച എല്ലാ വിവരങ്ങളും രഹസ്യാത്മകമായിരിക്കുമെന്നത് ഞാൻ വീണ്ടും ഉറപ്പിക്കുന്നു.

Interview guide – main study (Tamil Version)

நேர்முக வழிகாட்டி - முக்கிய ஆய்வு

சுய அறிமுகம் சுருக்கமாக:

அன்புள்ள பெற்றோர் (பெயர்),

ஆராய்ச்சியாளர்: நான் ..., ஓஸ்லோவில் என் உயர் கல்வி செய்து. நான் என் திட்டத்தின் ஒரு பகுதியாக இங்கு வந்தேன். நான் கடைசியாக வந்த வருகைக்கு நீங்கள் வந்த கடிதத்தை நீங்கள் அடைந்துவிட்டீர்கள் என்று நம்புகிறேன், இது ஒரு நேர்காணலை நடத்த நான் உங்களிடம் வருவதாக உங்களுக்கு அறிவிக்கிறேன். நீங்கள் கடிதம் மூலம் சென்றுவிட்டீர்கள் என்று நம்புகிறேன்.

பெற்றோர்: ஆம் / இல்லை

(அப்படியானால் 'தொடரும்' என்றால்) இல்லையென்றால்,

ஆராய்ச்சியாளர்: எனக்கு கடிதத்தின் நகலை என்னுடன் கொண்டிருக்கிறது. தயவுசெய்து அதைக் கடந்து சென்று உங்கள் ஆர்வத்தை எனக்குத் தெரியப்படுத்துங்கள். இந்த நேர்காணலின் போது சேகரிக்கப்பட்ட அனைத்து தகவல்களும் இரகசியமாக இருக்கும் என்று நான் உறுதியளிக்கிறேன்.

இந்த நேர்காணலில் உங்கள் பங்களிப்பை ஏற்றுக் கொண்டதற்கு நன்றி.

உங்கள் தகவல் எனக்கு மிகவும் மதிப்புமிக்கதாகும். எனவே, நீங்கள் என்னிடம் சொல்லும் தகவலை இழக்க விரும்பவில்லை. எங்கள் உரையாடலை பதிவு செய்ய இந்த டேப் ரெக்கார்டர் பயன்படுத்தலாமா? கவலைப்படாதே, நாடாக்கள் பாதுகாப்பான கையில் இருக்கும், நான் அதை பூட்ட வேண்டும், திட்டத்தின் முடிவில் இருந்து அறிக்கை முடிந்தபின் அழிக்கப்படும். ஒரு டேப்பைப் பயன்படுத்துவதை நீங்கள் ஏற்றுக் கொள்ளவில்லை என்றால், அதற்கு பதிலாக, குறிப்புகளை எடுத்துக்கொள்ளலாம்.

ஆராய்ச்சியாளர்: நான் மீண்டும் ஒப்புதல் படிவத்தை படிக்கலாமா?

பெற்றோர்: ஆம் / இல்லை

இந்த நேர்காணலில் பங்கேற்க தயாராக உள்ளீர்கள் என்பதை உறுதிப்படுத்த, உங்கள் கையொப்பம் ஒப்புக் கொள்ளுமா?

கேள்விகள்

அறிமுகம்: உங்கள் குடும்பத்தை நீங்கள் முன்வைக்க முடியுமா? (குடும்பத்தில் எத்தனை உறுப்பினர்கள், அணு / நீட்டிக்கப்பட்ட குடும்பம்? நீட்டிக்கப்பட்ட குடும்பம்- குடும்ப உறுப்பினர்கள், கணவன் அல்லது ஒற்றை தாயோ அல்லது கணவனுடன் வாழும் வெளிநாட்டில் பணி புரிபவர்கள்)

எத்தனை குழந்தைகள் மற்றும் எத்தனை வயது? (பாய்ஸ் மற்றும் / அல்லது பெண்கள்?)

கேள்விகள் கவனம் செலுத்துதல்:

1. தடுப்பூசி பற்றி கேட்டீர்களா? ஆம் என்றால், குழந்தை பருவ தடுப்பூசி திட்டத்தைப் பற்றி முதலில் நீங்கள் என்ன நினைக்கிறீர்கள் என்று சொல்ல முடியுமா? / இல்லையெனில், ஆராய்ச்சியாளர் தடுப்பூசி பற்றிய சில குறிப்புகள் கொடுக்கிறார்)

2. தடுப்பூசி பற்றிய விழிப்புணர்வு திட்டங்கள் பற்றி நீங்கள் கேள்விப்பட்டீர்களா? ஆம் என்றால், நீங்கள் கலந்து கொண்டீர்களா? அது பயனளிக்கிறதா? / இல்லையெனில், ஏன் (காரணங்கள்)

3. நீங்கள் இணைய வசதிகளை அணுகக்கூடிய தொலைக்காட்சி அல்லது ஸ்மார்ட் ஃபோன்களைப் பயன்படுத்துகிறீர்களா? ஆம் என்றால், அவர்கள் பகிர்ந்துள்ள தகவலை நீங்கள் அறிந்திருக்கிறீர்களா? அது பயனுள்ளதாக இருந்ததா?

இல்லையெனில், தடுப்பூசி மற்றும் அதன் புதுப்பிப்புகளைப் பற்றி உங்களுக்கு எப்படி தெரியும்?

4. தடுப்பூசி தடுக்கக்கூடிய நோய்கள் பற்றி உங்களுக்கு என்ன தெரியும்?

5. தடுப்பூசி பாதுகாப்பு பற்றிய விவாதங்கள் உள்ளன. நீங்கள் என்ன நினைக்கறீர்கள்?

6. உங்கள் பிள்ளைகளுக்கு தடுப்பூசி வைத்திருக்கிறீர்களா? இல்லை என்றால், தடுப்பூசி தேர்ந்தெடுப்பதற்கான காரணங்கள் யாவை? (ஆராய்ச்சியாளர் தடுப்பூசி செயல்முறை தடுக்கிறது காரணிகளை புரிந்து கொள்ள பங்கேற்பாளர் இருந்து பதில் அடுத்த கேள்வியை திட்டமிட்டுள்ளது - பெற்றோர் கேட்டு காரணம் கேட்டு)

7. குழந்தைகளுக்கு நோய்த்தடுப்பு பொதுவாக வழங்கப்படுகையில், எந்த வயதில் உங்களுக்கு ஒரு யோசனை இருக்கிறதா? (பெற்றோரின் பதிவின் படி) ஆம் என்றால், உங்கள் பிள்ளைக்கு வயதானால் வயதானபோது எவ்வளவு வயதானவர். அது எப்படி முடிந்தது என்று நீங்கள் நினைக்கிறீர்கள்?

8. நீங்களே தடுப்பூசி போட்டுள்ளீர்களா? ஆம், அடுத்த கேள்வியுடன் தொடர்க.

இல்லையென்றால், பின்னர் அவர்கள் கேட்கும் காரணங்களைக் கேட்கவும், தங்கள் குழந்தைகளுக்கு தடுப்பூசி போடாத காரணத்தால்வும் ஒப்பிடப்படுகிறது. (தங்கள் பெற்றோர்களைப் பற்றிய கருத்து, மனைவி மற்றும் நண்பர்களை நோய்த்தடுப்பு தொடர்பாக)

9. நீங்கள் ஒரு சூழ்நிலையை அனுபவித்திருக்கிறீர்களா, தடுப்பூசிக்கு ஒரு மருத்துவமனைக்குச் சென்றிருந்தாலும், தடுப்பூசி அல்லது வேறு சில காரணங்களால் (அணுகல், காத்திருக்கும் நேரம், தடுப்பூசிகளின் கிடைக்காதது) காரணமாக வீட்டிற்கு அனுப்பப்பட்டேன்? ஆமெனில்? நீங்கள் நிலைமையை விரிவாக்க முடியுமா?

10. உங்கள் குழந்தை ஒரு பள்ளியில் தடுப்பூசி பெற அனுமதிக்க விரும்புகிறீர்களா? ஆம் என்றால், உங்கள் அனுபவத்தை நீங்கள் பகிர்ந்து கொள்ள முடியுமா? இல்லை என்றால், ஏன்?

11. தடுப்பூசி கிளினிக்குகளுக்கு முன்னரே சுகாதார மையம் நிபுணர்கள் உங்களுக்குத் தெரியுமா? தடுப்பூசி கிளினிக்கில் கலந்து கொள்வதற்காக உங்கள் தொலைபேசியில் ஏதாவது அறிவிப்பு அல்லது செய்தி எச்சரிக்கைகள் உங்களுக்கு நினைவூட்டல் கிடைக்குமா?

12. பொது சுகாதார சேவைகள் அல்லது தனியார் சுகாதார சேவைகள், தடுப்பூசி வழங்குவதைப் பொறுத்தவரை நீங்கள் யாருக்கு அதிகம் நம்புகிறீர்கள்? நீங்கள் அதிகமாக _____ ஐ ஏன் நம்புகிறீர்கள் என்பதை விரிவாக விளக்குங்கள்.

13. நோயெதிர்ப்பு முறைமையை மேம்படுத்துவதற்கான உங்கள் ஆலோசனைகள் யாவை? (ஆராய்ச்சியாளர் அதை தெளிவாக புரிந்து கொள்ளாமல், பங்கேற்பாளருக்கு வினாவை விளக்குகிறார்) நோய்த்தடுப்பு கிளினிக்குகளில் கலந்துகொள்வதன் மூலம் நீங்கள் வழக்கமாக எதிர்கொள்ளும் பிரச்சனைகளை பட்டியலிட முடியுமா? அந்த சூழ்நிலையை விரிவாக விளக்க முடியுமா? (இந்த கேள்வியானது, தடுப்பூசியைப் பற்றிய பங்கேற்பாளர்களின் பதிலின் அடிப்படையில் விருப்பம்-கேட்கப்பட்டது)

இந்த நேர்காணலுக்கு உங்கள் மதிப்புமிக்க நேரம் செலவழித்ததற்கு நன்றி. மீண்டும் சேகரிக்கப்பட்ட அனைத்து தகவல்களும் இரகசியமாக இருக்கும் என்று நான் உறுதி கூறுகிறேன்.

Interview guide – main study (Kannada Version)

ಸಂದರ್ಶನ ಮಾರ್ಗದರ್ಶಿ - ಮುಖ್ಯ ಅಧ್ಯಯನ

ಸಂಕ್ಷಿಪ್ತವಾಗಿ ಸ್ವಯಂ ಪರಿಚಯ:

ಆತ್ಮೀಯ ಪೋಷಕರು (ಹೆಸರು),

ಸಂಶೋಧಕ: ನಾನು ..., ಓಸ್ಲೋನಲ್ಲಿ ನನ್ನ ಉನ್ನತ ಶಿಕ್ಷಣವನ್ನು ಮಾಡುತ್ತಿದ್ದೇನೆ. ನನ್ನ ಯೋಜನೆಯ ಭಾಗವಾಗಿ ನಾನು ಇಲ್ಲಿಗೆ ಬಂದಿದ್ದೇನೆ. ನನ್ನ ಕೊನೆಯ ಭೇಟಿಯಲ್ಲಿ ನೀವು ಸಿಕ್ಕಿದ ಪತ್ರದ ಮೂಲಕ ನೀವು ಹೋಗಿದ್ದೀರಿ ಎಂದು ನಾನು ನಿಮಗೆ ಹೇಳುತ್ತೇನೆ, ಸಂದರ್ಶನವೊಂದನ್ನು ನಡೆಸಲು ನಾನು ನಿಮ್ಮ ಬಳಿಗೆ ಬರುತ್ತೇನೆ. ನೀವು ಪತ್ರದ ಮೂಲಕ ಹೋಗಿದ್ದೀರಿ ಎಂದು ಭಾವಿಸುತ್ತೇವೆ.

ಪೋಷಕ: ಹೌದು / ಇಲ್ಲ

('ಯೆಸ್' ನಂತರ ಮುಂದುವರಿದರೆ)

ಸಂಶೋಧಕ: ನನ್ನೊಂದಿಗೆ ಪತ್ರದ ಪ್ರತಿಯನ್ನು ನಾನು ಹೊಂದಿದ್ದೇನೆ. ದಯವಿಟ್ಟು ಅದರ ಮೂಲಕ ಹೋಗಿ ಮತ್ತು ನಿಮ್ಮ ಆಸಕ್ತಿಯನ್ನು ನನಗೆ ತಿಳಿಸಿ. ಈ ಸಂದರ್ಶನದಲ್ಲಿ ಸಂಗ್ರಹಿಸಿದ ಮಾಹಿತಿಯು ಗೌಪ್ಯವಾಗಿರುತ್ತದೆ ಎಂದು ನಾನು ನಿಮಗೆ ಭರವಸೆ ನೀಡುತ್ತೇನೆ.

ಈ ಸಂದರ್ಶನದಲ್ಲಿ ನಿಮ್ಮ ಭಾಗವಹಿಸುವಿಕೆಯನ್ನು ಸ್ವೀಕರಿಸಿದ್ದಕ್ಕಾಗಿ ಧನ್ಯವಾದಗಳು.

ನಿಮ್ಮ ಮಾಹಿತಿ ನನಗೆ ತುಂಬಾ ಅಮೂಲ್ಯವಾಗಿದೆ. ಆದ್ದರಿಂದ, ನೀವು ನನಗೆ ಹೇಳುವ ಒಂದೇ ಮಾಹಿತಿಯನ್ನು ತಪ್ಪಿಸಿಕೊಳ್ಳಬಾರದು. ನಮ್ಮ ಸಂವಾದವನ್ನು ರೆಕಾರ್ಡ್ ಮಾಡಲು ನಾನು ಈ ಟೇಪ್ ರೆಕಾರ್ಡರ್ ಅನ್ನು ಬಳಸಬಹುದೇ? ಚಿಂತಿಸಬೇಡಿ, ಟೇಪ್ಗಳು ಸುರಕ್ಷಿತ ಕೈಗಳಾಗಿರುತ್ತವೆ ಮತ್ತು ನಾನು ಅದನ್ನು ಲಾಕ್ ಮಾಡುತ್ತೇನೆ ಮತ್ತು ಯೋಜನೆಯಿಂದ ವರದಿ ಪೂರ್ಣಗೊಂಡ ನಂತರ ನಾಶವಾಗುತ್ತದೆ. ನೀವು ಟೇಪ್ ಬಳಸಿ ಒಪ್ಪಿಕೊಳ್ಳದಿದ್ದರೆ, ಹೇಳಲು ಮುಕ್ತವಾಗಿರಿ, ಬದಲಿಗೆ ನಾನು ಟಿಪ್ಪಣಿಗಳನ್ನು ತೆಗೆದುಕೊಳ್ಳಬಹುದು.

ಸಂಶೋಧಕ: ನಾನು ಮತ್ತೊಮ್ಮೆ ಒಪ್ಪಿಗೆಯನ್ನು ಓದಬಹುದೇ?

ಪೋಷಕ: ಹೌದು / ಇಲ್ಲ

ಈ ಸಂದರ್ಶನದಲ್ಲಿ ಪಾಲ್ಗೊಳ್ಳಲು ಸಿದ್ಧರಿದ್ದೀರಾ ಎಂದು ಖಚಿತಪಡಿಸಿಕೊಳ್ಳಲು ದಯವಿಟ್ಟು ನಿಮ್ಮ ಸಹಿಯನ್ನು ದಯವಿಟ್ಟು ಸಮ್ಮತಿಯ ರೂಪದಲ್ಲಿ ಹೊಂದಬಹುದೇ?

ಪ್ರಶ್ನೆಗಳು

ಪೀಠಿಕೆ: ನಿಮ್ಮ ಕುಟುಂಬವನ್ನು ನೀವು ಪ್ರಸ್ತುತಪಡಿಸಬಹುದೇ? (ಕುಟುಂಬದಲ್ಲಿ ಎಷ್ಟು ಸದಸ್ಯರು, ಪರಮಾಣು / ವಿಸ್ತೃತ ಕುಟುಂಬ? ವಿಸ್ತೃತ ಕುಟುಂಬ - ಸದಸ್ಯರು, ಕುಟುಂಬದ ಬ್ರೆಡ್ವಿನ್ನರ್, ಗಂಡ ಅಥವಾ ಏಕ ತಾಯಿ ಅಥವಾ ಗಂಡನೊಂದಿಗೆ ವಾಸಿಸುತ್ತಿರುವ ವಿದೇಶದಲ್ಲಿ ಕೆಲಸ ಮಾಡುವವರು)

ಎಷ್ಟು ಮಕ್ಕಳು ಮತ್ತು ಎಷ್ಟು ವಯಸ್ಸಿನವರು? (ಬಾಯ್ಸ್ ಮತ್ತು / ಅಥವಾ ಹುಡುಗಿಯರು?)

ಕೇಂದ್ರೀಕರಿಸುವ ಪ್ರಶ್ನೆಗಳು:

1. ಲಸಿಕೆ ಬಗ್ಗೆ ನೀವು ಕೇಳಿದ್ದೀರಾ? ಹೌದು, ಬಾಲ್ಯದ ವ್ಯಾಕ್ಸಿನೇಷನ್ ಕಾರ್ಯಕ್ರಮದ ಬಗ್ಗೆ ನೀವು ಏನನ್ನು ಯೋಚಿಸುತ್ತೀರಿ ಎಂದು ಹೇಳುವ ಮೂಲಕ ನೀವು ಪ್ರಾರಂಭಿಸಬಹುದು? / ಇಲ್ಲದಿದ್ದರೆ, ಸಂಶೋಧಕನು ಚುಚ್ಚುಮದ್ದಿನ ಬಗ್ಗೆ ಕೆಲವು ಸುಳಿವುಗಳನ್ನು ನೀಡುತ್ತದೆ)

2. ವ್ಯಾಕ್ಸಿನೇಷನ್ ಬಗ್ಗೆ ಯಾವುದೇ ಜಾಗೃತಿ ಕಾರ್ಯಕ್ರಮಗಳ ಬಗ್ಗೆ ನೀವು ಕೇಳಿದ್ದೀರಾ? ಹೌದು, ನೀವು ಭಾಗವಹಿಸಿದ್ದೀರಾ? ಇದು ಪ್ರಯೋಜನಕಾರಿಯಾಗಿತ್ತುಯಾ? / ಇಲ್ಲದಿದ್ದರೆ, ಏಕೆ (ಕಾರಣಗಳು)

3. ನೀವು ಇಂಟರ್ನೆಟ್ ಸೌಲಭ್ಯಗಳನ್ನು ಪ್ರವೇಶಿಸುವ ಟೆಲಿವಿಷನ್ ಅಥವಾ ಸ್ಮಾರ್ಟ್ ಫೋನ್ಗಳನ್ನು ಬಳಸುತ್ತೀರಾ? ಹೌದು ಆಗಿದ್ದರೆ, ಅವರ ಮೂಲಕ ಹಂಚಿದ ಮಾಹಿತಿಯ ಬಗ್ಗೆ ನಿಮಗೆ ತಿಳಿದಿದೆಯೇ? ಇದು ಉಪಯುಕ್ತವಾದುದಾಗಿದೆ?

ಇಲ್ಲದಿದ್ದರೆ, ಲಸಿಕೆ ಮತ್ತು ಅದರ ನವೀಕರಣಗಳ ಬಗ್ಗೆ ನಿಮಗೆ ಹೇಗೆ ಗೊತ್ತು?

4. ಲಸಿಕೆಯ ತಡೆಗಟ್ಟುವ ರೋಗಗಳ ಬಗ್ಗೆ ನಿಮಗೆ ಏನು ಗೊತ್ತು?

5. ಲಸಿಕೆ ಸುರಕ್ಷತೆಯ ಬಗ್ಗೆ ಚರ್ಚೆಗಳಿವೆ. ನೀವು ಏನು ಯೋಚಿಸುತ್ತೀರಿ?

6. ನಿಮ್ಮ ಮಕ್ಕಳು ಲಸಿಕೆಯನ್ನು ಹೊಂದಿದ್ದೀರಾ? ಇಲ್ಲದಿದ್ದರೆ, ವ್ಯಾಕ್ಸಿನೇಷನ್ ಆರಿಸದೇ ಇರುವ ಕಾರಣಗಳು ಯಾವುವು? (ಸಂಶೋಧಕರು ಮುಂದಿನ ಪ್ರಶ್ನೆಗೆ ಪಾಲ್ಗೊಳ್ಳುವವರ ಪ್ರತಿಕ್ರಿಯೆಯ ಪ್ರಕಾರ ವ್ಯಾಕ್ಸಿನೇಷನ್ ಪ್ರಕ್ರಿಯೆಯನ್ನು ತಡೆಗಟ್ಟುತ್ತಿರುವ ಅಂಶವನ್ನು ಅರ್ಥಮಾಡಿಕೊಳ್ಳುತ್ತಾರೆ-ಕಾರಣವನ್ನು ವಿವರಿಸಲು ಮೂಲವನ್ನು ಕೇಳುತ್ತಾರೆ)

7. ಯಾವ ವಯಸ್ಸಿನಲ್ಲಿ, ಪ್ರತಿರಕ್ಷಣೆ ಸಾಮಾನ್ಯವಾಗಿ ಮಕ್ಕಳಲ್ಲಿ ನಿರ್ವಹಿಸಲ್ಪಡುತ್ತದೆ ಎಂಬ ಬಗ್ಗೆ ನಿಮಗೆ ಒಂದು ಕಲ್ಪನೆ ಇದೆ? (ಪೋಷಕರ ಪ್ರತಿಕ್ರಿಯೆಯ ಪ್ರಕಾರ) ಹೌದು, ನೀವು ಲಸಿಕೆಯನ್ನು ಪ್ರಾರಂಭಿಸಿದಾಗ ನಿಮ್ಮ ಮಗು ಎಷ್ಟು ಹಳೆಯದು. ಇದನ್ನು ಮಾಡಲಾಗುತ್ತದೆ ಎಂದು ನೀವು ಹೇಗೆ ಭಾವಿಸುತ್ತೀರಿ?

8. ನಿಮ್ಮನ್ನು ಲಸಿಕೆ ಮಾಡಿದ್ದೀರಾ? ಹೌದು, ಮುಂದಿನ ಪ್ರಶ್ನೆಯೊಂದಿಗೆ ಮುಂದುವರಿಯಿರಿ.

ಇಲ್ಲದಿದ್ದರೆ, ಕಾರಣಗಳನ್ನು ಕೇಳಲಾಗುತ್ತದೆ ಮತ್ತು ಅವರ ಮಕ್ಕಳಿಗೆ ಲಸಿಕೆಯನ್ನು ನೀಡದಿರುವುದಕ್ಕೆ ಅವರು ಹೇಳಿದ ಕಾರಣವನ್ನು ಹೋಲಿಸಲಾಗುತ್ತದೆ. (ಅವರ ಪೋಷಕರು, ಸಂಗಾತಿ ಮತ್ತು ಸ್ನೇಹಿತರ ಬಗ್ಗೆ ಪ್ರತಿರಕ್ಷಣೆ ಬಗ್ಗೆ ಅಭಿಪ್ರಾಯ)

9. ನೀವು ಲಸಿಕೆಗಾಗಿ ಕ್ಲಿನಿಕ್ಗೆ ಹೋದಾಗ, ಲಸಿಕೆಯ ಕೊರತೆ ಅಥವಾ ಇತರ ಕಾರಣಗಳಿಗಾಗಿ (ಪ್ರವೇಶಿಸುವಿಕೆ, ಕಾಯುವ ಸಮಯ, ಲಸಿಕೆಗಳ ಲಭ್ಯತೆ ಕೊರತೆ) ಕಾರಣದಿಂದ ನೀವು ಮನೆಗೆ ಕಳುಹಿಸಿದಾಗ ನೀವು ಪರಿಸ್ಥಿತಿಯನ್ನು ಎದುರಿಸಿದ್ದೀರಾ? ಹೌದು ವೇಳೆ? ನೀವು ಪರಿಸ್ಥಿತಿಯನ್ನು ವಿವರಿಸಬಹುದೇ?

10. ಶಾಲಾ ಆಧಾರಿತ ಪ್ರತಿರಕ್ಷಣೆ ಕಾರ್ಯಕ್ರಮದೊಳಗೆ ನಿಮ್ಮ ಮಗುವು ವ್ಯಾಕ್ಸಿನೇಷನ್ ಮಾಡಲು ಅವಕಾಶ ನೀಡುವುದೇ? ಹೌದು, ನಿಮ್ಮ ಅನುಭವವನ್ನು ನೀವು ಹಂಚಿಕೊಳ್ಳಬಹುದೇ? ಇಲ್ಲದಿದ್ದರೆ, ಏಕೆ?

11. ವ್ಯಾಕ್ಸಿನೇಷನ್ ಚಿಕಿತ್ಸಾಲಯಗಳ ಬಗ್ಗೆ ಮೊದಲು ಆರೋಗ್ಯ-ಕೇಂದ್ರಿತ ವೃತ್ತಿಪರರು ನಿಮಗೆ ತಿಳಿಸಿದ್ದಾರೆಯಾ? ವ್ಯಾಕ್ಸಿನೇಷನ್ ಕ್ಲಿನಿಕ್ಗೆ ಹಾಜರಾಗಲು ನಿಮ್ಮ ಫೋನ್ನಲ್ಲಿ ಯಾವುದೇ ಅಧಿಸೂಚನೆಯ ಅಥವಾ ಸಂದೇಶ ಎಚ್ಚರಿಕೆಗಳನ್ನು ನೀವು ಪಡೆಯುತ್ತೀರಾ?

12. ಲಸಿಕೆ ನೀಡುವ ನಿಟ್ಟಿನಲ್ಲಿ ಸಾರ್ವಜನಿಕ ಆರೋಗ್ಯ ಸೇವೆಗಳು ಅಥವಾ ಖಾಸಗಿ ಆರೋಗ್ಯ ಸೇವೆಗಳನ್ನು ಯಾರೆಂದು ನೀವು ನಂಬುತ್ತೀರಿ? ನೀವು _____ ಅನ್ನು ಏಕೆ ನಂಬುತ್ತೀರಿ ಎಂಬುದನ್ನು ದಯವಿಟ್ಟು ವಿಸ್ತಾರವಾಗಿ ವಿವರಿಸಿ.

13. ಪ್ರತಿರಕ್ಷಣೆ ವ್ಯವಸ್ಥೆಯನ್ನು ಸುಧಾರಿಸಲು ನಿಮ್ಮ ಸಲಹೆಗಳೇನು? (ಸಂಶೋಧಕರು ಪ್ರಶ್ನೆಗಳನ್ನು ಸ್ಪಷ್ಟಪಡಿಸುವಂತೆ ಸ್ಪಷ್ಟಪಡಿಸಬೇಕೆಂದು ವಿವರಿಸುತ್ತಾರೆ, ಅರ್ಥವಾಗದಿದ್ದರೆ) ನೀವು ಪ್ರತಿರಕ್ಷಣೆ ಕ್ಲಿನಿಕ್ಗಳಿಗೆ ಭೇಟಿ ನೀಡಿದಾಗ ನೀವು ಸಾಮಾನ್ಯವಾಗಿ ಎದುರಿಸುತ್ತಿರುವ ಸಮಸ್ಯೆಗಳನ್ನು ದಯವಿಟ್ಟು ಪಟ್ಟಿಮಾಡಬಹುದೇ? ನೀವು ಆ ಪರಿಸ್ಥಿತಿಯನ್ನು ವಿಸ್ತರಿಸಬಹುದೇ? (ವ್ಯಾಕ್ಸಿನೇಷನ್ ಬಗ್ಗೆ ಭಾಗಿಗಳ ಪ್ರತಿಕ್ರಿಯೆಯ ಪ್ರಕಾರ ಈ ಪ್ರಶ್ನೆ ಐಚ್ಛಿಕವಾಗಿರುತ್ತದೆ)

ಈ ಸಂದರ್ಶನಕ್ಕಾಗಿ ನಿಮ್ಮ ಅಮೂಲ್ಯವಾದ ಸಮಯವನ್ನು ಖರ್ಚು ಮಾಡಿದಕ್ಕಾಗಿ ಧನ್ಯವಾದಗಳು. ಮತ್ತೊಮ್ಮೆ, ಸಂಗ್ರಹಿಸಿದ ಎಲ್ಲಾ ಮಾಹಿತಿಗಳು ಗೌಪ್ಯವಾಗಿರುತ್ತವೆ ಎಂದು ನಾನು ನಿಮಗೆ ಭರವಸೆ ನೀಡುತ್ತೇನೆ.

11.4 Interview guide -pilot study

Self -introduction in brief:

Dear parent(name),

Researcher: I am … , doing my higher education in Oslo. I came here as a part of my project. I hope you went through the letter which you got on my last visit which informs you that I come to you to conduct an interview. Hope you have gone through the letter.

Parent : Yes/No|

(If ´yes´ then continuing) If not,

Researcher: I have a copy of the letter with me. Kindly go through it and let me know your interest. I assure you that all the information collected during this interview will be confidential.

Thank you for accepting your participation in this interview.

Your information is very valuable to me. Therefore, I don't want to miss a single information that you tell me. Can I use this tape recorder to record our conversation? Don't worry, the tapes will be safe hands and I would lock it rather and will be destroyed after the report from the project is finished. If you don't agree with using a tape, feel free to tell, I can take notes instead.

Researcher: Shall I read the consent form again?

Parent : Yes/No

Can I have your signature please on the consent form to make sure that are willing to participate in this interview?

Questions

Introduction: Can you present your family? (how many members in the family, nuclear/ extended family? If extended family- the members, breadwinner of the family, living with husband or single mother or husband working abroad)

How many children and how old are they? (Boys and/or girls?)

Focusing questions:

1. Have you heard about vaccination? If yes, can you start by telling what you think first about the childhood vaccination programme? /If No, the researcher gives certain hints regarding vaccination)
2. Have you heard about any awareness programmes regarding vaccination? If yes, have you participated? Was it beneficial? /If not , Why (reasons)
3. Do you use television or smart phones where you have access to internet facilities to access more information about the vaccination?
4. What do you know about vaccine preventable diseases?
5. There are discussions regarding vaccine safety. What do you think?
6. Did you have your children vaccinated? If no, what are the reasons for not choosing 3ewsvaccination? If yes, how old was your child when you started vaccinating. How do you think it is done?
7. Does it vary with gender? For example, may be one of the gender is prioritized for getting vaccinated?
8. Have you been vaccinated yourselves? Is yes, continue with next question.
   If not, Why?
9. Do your parents and friends support the immunization programme?
10. Is there any religious or cultural reason for you may deny vaccination? If yes, what is the reason?
11. Would you like to let your child get vaccinated within a school -based immunization programme? If yes, can you share your experience? If no, why?
12. Does the health care-center professionals inform you in prior regarding the vaccination clinics?
13. Whom do you trust the most – the public health services or private health services, with regard to provision of vaccination? Kindly elaborate why you trust _____ the most.
14. Have you ever experienced a situation where your trust in the government's vaccination program diminished? If yes, can you describe the situation?

15. Have you experienced a situation, when you went to a clinic for vaccination but was sent home due to lack of vaccine or some other reasons (accessibility, waiting time, lack of availability of vaccines)? If yes? Can you elaborate the situation?

****

Thank you for spending your valuable time for this interview. Once again I assure you that all the information collected will be confidential.

11.5 Map of India

11.6 NSD Approval Form

Einar Øverbye
Pilestredet 35
0130 OSLO

Vår dato: 21.02.2018 Vår ref: 58528 / 3 / STM Deres dato: Deres ref:

Tilrådning fra NSD Personvernombudet for forskning § 7-27

Personvernombudet for forskning viser til meldeskjema mottatt 19.01.2018 for prosjektet:

58528	*Perception of the Indian mothers regarding immunization and their implementation, identifying the factors that hinder the immunization programme, measures that should be undertaken to improve the implementation of the programme.*
Behandlingsansvarlig	*Høgskolen i Oslo og Akershus, ved institusjonens øverste leder*
Daglig ansvarlig	*Einar Øverbye*
Student	*Thejes Thankam Thomas*

Vurdering

Etter gjennomgang av opplysningene i meldeskjemaet og øvrig dokumentasjon finner vi at prosjektet er unntatt konsesjonsplikt og at personopplysningene som blir samlet inn i dette prosjektet er regulert av § 7-27 i personopplysningsforskriften. På den neste siden er vår vurdering av prosjektopplegget slik det er meldt til oss. Du kan nå gå i gang med å behandle personopplysninger.

Vilkår for vår anbefaling

Vår anbefaling forutsetter at du gjennomfører prosjektet i tråd med:

- opplysningene gitt i meldeskjemaet og øvrig dokumentasjon
- vår prosjektvurdering, se side 2
- eventuell korrespondanse med oss

Meld fra hvis du gjør vesentlige endringer i prosjektet

Dersom prosjektet endrer seg, kan det være nødvendig å sende inn endringsmelding. På våre nettsider finner du svar på hvilke endringer du må melde, samt endringsskjema.

Opplysninger om prosjektet blir lagt ut på våre nettsider og i Meldingsarkivet

Vi har lagt ut opplysninger om prosjektet på nettsidene våre. Alle våre institusjoner har også tilgang til egne prosjekter i Meldingsarkivet.

Vi tar kontakt om status for behandling av personopplysninger ved prosjektslutt

Ved prosjektslutt 01.01.2019 vil vi ta kontakt for å avklare status for behandlingen av personopplysninger.

Dokumentet er elektronisk produsert og godkjent ved NSDs rutiner for elektronisk godkjenning.

Se våre nettsider eller ta kontakt dersom du har spørsmål. Vi ønsker lykke til med prosjektet!

Vennlig hilsen

Dag Kiberg

Siri Tenden Myklebust

Kontaktperson: Siri Tenden Myklebust tlf: 55 58 22 68 / Siri.Myklebust@nsd.no
Vedlegg: Prosjektvurdering
Kopi: Thejes Thankam Thomas, thejesbibu12@gmail.com

Personvernombudet for forskning

Prosjektvurdering - Kommentar

Prosjektnr: 58528

PURPOSE/RESEARCH QUESTIONS

•How is the implementation of immunization programme perceived by the Indian woman, by selecting a particular state in India, Kerala?

•What is the present full immunization coverage in Kerala, India?

•Identify the factors that hinder the immunization process?

•What are the methods to be adopted to improve the vaccination coverage?

SAMPLE AND RECRUITMENT

The sample consists of parents of children of age less than 5 years. The community health centre in the area will assist in recruiting participants. The Data Protection Official presupposes that the recruitment process is done in a way that fulfils the requirement of voluntarily participation and confidentiality.

INFORMATION AND CONSENT

According to your notification form the sample will receive written and oral information and will give their consent to participate. The information letter we have received is well formulated, but you must also include your supervisors contact information.

SENSITIVE INFORMATION

It is indicated that you intend to process sensitive personal data about ethnic origin or political/philosophical/religious beliefs and health.

INFORMATION SECURITY

The Data Protection Official presupposes that you will process all data according to the Høgskolen i Oslo og Akershus internal guidelines/routines for information security.

END OF PROJECT

The estimated end date of the project is 01.01.2019. According to your notification form and information letter you intend to anonymise the collected data by this date. Making the data anonymous entails processing it in such a way that no individuals can be identified. This is done by:

- deleting all direct personal data (such as names/lists of reference numbers)
- deleting/rewriting indirectly identifiable personal data (i.e. an identifying combination of background variables, such as residence/work place, age and gender)
- deleting digital audio files