

Identification of Knowledge & Practice of Vaccination, Dental & Eye Glass Program in Alia Madrasah in Dhaka City of Bangladesh



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A dissertation is submitted for the partial fulfillment of the course Pharmaceutical Research of the Department of Pharmacy, East West University for the Degree of Masters of Pharmacy in Clinical pharmacy and Molecular Pharmacology

Declaration By The Candidate

I, **Mahadi Hasan**, hereby declare that the dissertation entitled “**Identification of Knowledge & Practice of Vaccination, Dental & Eye Glass Program in Alia Madrasah in Dhaka City of Bangladesh**” submitted by me the Department of Pharmacy, East West University, in partial fulfillment of the requirements for the degree of Masters in Pharmacy (M. Pharm) is a confide record of original survey work carried out by me under the supervision and guidance of **Md. Anisur Rahman**, Senior Lecturer, Dept. of Pharmacy, East West University.

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Certificate By The Supervisor

This is to certify that the dissertation entitled “**Identification of Knowledge & Practice of Vaccination, Dental & Eye Glass Program in Alia Madrasah in Dhaka City, Bangladesh**” submitted to the Department of Pharmacy, East West University, in partial fulfillment of the requirements for the degree of Masters in Pharmacy (M. Pharm), was carried out by **Mahadi Hasan, ID No.: 2013-3-79-001** under my supervision and no part of this dissertation has been or is being submitted elsewhere for the award of any Degree/Diploma.

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Endorsement by the Chairperson

This is to certify that the dissertation entitled “**Identification of Knowledge & Practice of Vaccination, Dental & Eye Glass Program in Alia Madrasah in Dhaka City of Bangladesh**” is a genuine survey work carried out by **Mahadi Hasan**, under the supervision of **Md. Anisur Rahman**, Senior Lecturer, Dept. of Pharmacy, East West University. I further certify that no part of the survey has been submitted for any other degree and all the resources of the information in this connection are duly acknowledged.

Dr. Shamsun Nahar Khan

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Dedication

***This Survey Paper is Dedicated
To
My Beloved Parents***

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ABSTRACT

The present study was aimed to identify the knowledge & practice of vaccination program in Alia madrasah and know the Government & Non-Government organizational programs and its implementation status of vaccination & also identify the status of dental & eye glass checkup in this madrasah. Simultaneously this study is carried out to know the feelings of the teachers of Alia madrasah towards vaccination and their acceptance of vaccine. Data were collected through structured questionnaires from the principal/leaders of the Alia madrasah.

Among 35 Alia madrasahs, most of the principals have a little knowledge about vaccination. In this study it has been found that among 35 madrasah, (69%) madrasahs have taken vaccine & 11(31%) madrasahs have not taken vaccine. Government has given vaccine in 19 (79%) madrasah and Non-Govt. organizations have given vaccine in 5 (21%) madrasahs among 24 vaccinated madrasahs. Madrasah leader did not arrange vaccination program for their student due to unavailability of vaccination team (73%) and few cases money problem have been raised among those are not take vaccine. It can be said that financial conditions of Alia madrasahs have no effect on vaccine acceptability. But, most of the Alia madrasahs leader asked to arrange vaccination program without cost. Unfortunately the scenario of dental and eye glass checkup is totally reversed from vaccination program in Alia madrasah. It has been found that only 01 (3%) madrasah has taken dental and eye glass checkup for their student which is arranged by Anguman Mufidul Islam. & 34 (97%) madrasahs have not found this checkup.

These findings indicate the need for further advocacy for increased knowledge on the importance of vaccination and affordable public immunization & medical care of dental & eye glass programs should be focused on Alia madrasah.

Key Words: Vaccination, EPI, Dental & Eye Glass Checkup, Alia Madrasah, Bangladesh

Chapter One

Introduction

1. INTRODUCTION

Vaccinations are an essential tool in our fight against infectious disease. According to the World Health Organization (WHO), vaccination has greatly reduced the burden of infectious disease globally. Vaccines protect the vaccinated individual by direct immunization and can protect unvaccinated individuals through community protection or herd immunity. (Andre, F. E., et al. (Feb. 2008). Vaccination has also been highlighted as one of the main reasons for the fall in health disparities both within and across countries in the last century. It was recently estimated that since 1924, vaccinations have prevented 103 million cases of childhood infection, representing approximately 95 percent of infections that would have occurred, including 26 million in the last decade alone. (Van Panhuis, W.G., et al., 2013).

In only the first decade of the twenty-first century, an estimated 2.5 million deaths of children younger than five were prevented worldwide by vaccines. Given the relative successes of the GAVI Alliance (formerly, the Global Alliance for Vaccines and Immunization) and the recent call by the World Health Assembly for a global vaccine action plan to guide the world for the next 10 years, the world is focusing much attention, justifiably, on various aspects of macropolicy and planning for the progressive expansion of global vaccine efforts. (Phillip Nieburg et al, 2011)

The widespread success of vaccinations has led one medical report to comment that “next to clean water, no single intervention has had so profound an effect on reducing mortality from childhood diseases as has the widespread introduction of vaccines. (*CP Howson, et al., 1991*)

There have been significant developments in the production of new and improved vaccines in recent years. Yet, there remains the question of whether the expanded availability of vaccines will reach those in need. There is increasing evidence that public acceptance of a vaccine requires intensive communication effort that addresses information needs and concerns of a variety of stakeholders such as health care providers, families, and community leaders in a target population. Immunization programs are also affected by the interplay of local and national politics. Challenges have ranged from isolated episodes of non-acceptance (due to religious, ethical, and medical considerations) to active political mobilization against immunization

programs driven by political and conspiratorial arguments. This is of particular concern considering recent growing evidence of declining confidence in governments in developed and developing countries. (Waisbord, S. et. Al., 2005)

The needs for information to motivate target populations and respond to misunderstandings have led to an increase in research to assess perceptions and attitudes related to the use of vaccines. Despite this progress, vaccine-preventable diseases remain a major cause of morbidity and mortality. Adoption of new vaccines by low- and middle-income countries (where disease burdens are often the highest) has been slower than in high-income countries. In 2010, for example, only 13% of the total high-income country birth cohort lived in countries that did not have pneumococcal conjugate vaccines in their immunization schedules. Of the total low-income country birth cohort, 98% lived in countries that did not have pneumococcal conjugate vaccines in their schedules. Coverage gaps persist between countries, as well as within countries. The average coverage with three doses of diphtheria-tetanus-pertussis-containing vaccine and with measles-containing vaccine in low-income countries was 16% and 15% below that of high-income countries in 2010, respectively. However, this represents a positive trend in comparison with the coverage gap of 30% for both vaccines in the year 2000. In some countries, coverage of measles-containing vaccine in rural areas is 33% lower than in urban areas. Similarly, the measles vaccine coverage rate for the richest fifth of the population in some countries is up to 58% higher than for the poorest fifth. Coverage can also be very low in settlements of the urban poor, especially in cities with transitory migrant populations, and in indigenous communities. Geographical distance from health centres is not the only determinant of low coverage; inequities are also associated with other socioeconomic determinants, such as income levels and the educational status of the mother. A special geographic focus is needed on lower-middle-income countries with large populations, where the majority of the unvaccinated live. Reaching underserved populations will be especially challenging, but inequities need to be tackled because these populations often carry a heavier disease burden and may lack access to medical care and basic services, with the fragile economies of individuals and their families suffering a severe disease-related impact as a consequence. (World Health Organization Global Vaccine Action Plan 2011-2020, 2015)

The acceptance of this vaccination has increased but levels of full immunization coverage are less than satisfactory and can be improved. Moreover, there are still large variations among different levels of education and socio-economic factors. In Alia madrasah vaccination program is not satisfactory level. They are not so aware about vaccination & its importance.

In this paper, I draw upon data from the principals of the Alia madrasah through questionnaires. I wanted to show that indeed, maximum madrasah want vaccine and other medical facilities. Here, most of the students are unprivileged and they are not capable to spend money for these activities.

The paper unfolds as follows. It provides an overview of education system of Alia madrasah and vaccination status of this madrasah in Bangladesh. I present that the leader of Alia madrasah are not keeping necessary knowledge about vaccine and even documentation of vaccinated student. Madrasahs in the sub-continent, therefore, are alleged to exclusively rely on external finance and private donations made for religious purposes. Madrasah education is a system whereby Islamic branches of knowledge are taught besides the teaching of general branches of knowledge. Madrasahs are generally known as “religious schools”. According to Dr. Manaros B. Boransing, “*Madrasah* (pl. *madaris*) generally refers to Muslim private schools with core emphasis on Islamic studies and Arabic literacy.” Madrasahs are usually privately-operated schools, which rely on the support of the local community or foreign donors and Governments, particularly from Islamic or Muslim countries.

1.1 ABOUT IMMUNIZATION

Immunization is the process whereby a person is made immune or resistant to an infectious disease, typically by the administration of a vaccine. Vaccines stimulate the body's own immune system to protect the person against subsequent infection or disease.

Immunization is a proven tool for controlling and eliminating life-threatening infectious diseases and is estimated to avert between 2 and 3 million deaths each year. It is one of the most cost-effective health investments, with proven strategies that make it accessible to even the most hard-to-reach and vulnerable populations. It has clearly defined target groups; it can be delivered effectively through outreach activities; and vaccination does not require any major lifestyle change. (World Health Organization Health Topics Immunization 2015)

Immunization has helped drive this reduction in child mortality: coverage of vaccines that have been in use since the inception of the Expanded Programme on Immunization has expanded, and new vaccines have been introduced. Vaccines against hepatitis B and Haemophilus influenzae type b have become part of national immunization schedules in 179 and 173 countries, respectively; poliomyelitis is nearing eradication; and a large number of deaths from measles are being averted every year. The number of deaths caused by traditional vaccine-preventable diseases (diphtheria, measles, neonatal tetanus, pertussis and poliomyelitis) has fallen from an estimated 0.9 million in 2000 to 0.4 million in 2010. New and increasingly sophisticated vaccines that have become available in the last decade, including pneumococcal conjugate vaccine and vaccines against infection with rotavirus and human papillomavirus, are currently being rolled out globally. Efforts are being made to shorten the time lag that has historically existed in the introduction of new vaccines between high- and low-income countries. For example, pneumococcal conjugate vaccines were introduced in low-income countries approximately a year after being introduced in high-income countries. (World Health Organization Global Vaccine Action Plan 2011-2020 (2015))

1.2 About Vaccination

A vaccine is a biological preparation that improves immunity to a particular disease. A vaccine typically contains an agent that resembles a disease-causing microorganism, and is often made from weakened or killed forms of the microbe, its toxins or one of its surface proteins. The agent stimulates the body's immune system to recognize the agent as foreign, destroy it, and "remember" it, so that the immune system can more easily recognize and destroy any of these microorganisms that it later encounters. (World Health Organization Health Topics Vaccines 2015)

It is also one of the most economical interventions of modern age, against some of the most lethal and debilitating diseases like smallpox, poliomyelitis, influenza etc. (Chowdhury *et al.*, 2003). Childhood vaccination or child vaccination is the process of administering vaccines on children to stimulate their immune systems to develop adaptive immunity to a disease. Significant reduction of child mortality and finding a cost effective way to improve child health, particularly for poor households residing in high-disease prone regions, is the fundamental principle of childhood vaccination.

A vaccine is any preparation intended to produce immunity to a disease by stimulating the production of antibodies. Vaccines include, for example, suspensions of killed or attenuated microorganisms, or products or derivatives of microorganisms. The most common method of administering vaccines is by injection, but some are given by mouth or nasal spray.

Unlike traditional pharmaceuticals, vaccines are prophylactic medicines designed to prevent rather than treat disease. Essentially vaccines help reduce the risk of a disease by introducing a killed or attenuated version of the disease-causing organism to the body's immune system. If our immune system then encounters the disease-causing germ, quick recognition allows our body to fight infection with a rapid and effective immune response. In this way, vaccines mimic the body's natural immunity.

1.3 Purpose of vaccine

The purpose of a vaccine is to provide the person receiving it with immunity to a particular microorganism. These vaccines are injected into the bloodstream of the person, sometimes at an early age. In some cases, they give lifelong immunity, but in other cases, the vaccination must be repeated at regular intervals. The point, though, is to keep the person disease-free from some of the most damaging entities that humanity faces such as the influenza virus, for example. Ultimately, an appropriate vaccine could even spell the end of HIV, although this seems some way off yet.

Vaccines, medicines containing a preparation of weakened or dead microbes of the kind that cause a particular disease, are administered to stimulate the immune system to produce antibodies against that disease. They are used to force the body's white blood cells to develop a response to the specific pathogen and rid the body of the invading microorganisms.

Immunization can occur naturally when an untreated microbe in the environment is received by a person who has had no prior exposure to that microbe and, therefore, has no pre-made antibodies for defense. The immune system of an otherwise healthy individual will eventually create antibodies for the microbe, but this is a slow process and, if the microbe is deadly, there may not be enough time for the antibodies to begin being used to inactivate the microbe before serious symptoms or even death can occur. Artificial active immunization (vaccination) was created to boost the immune system's abilities to more quickly respond. In this process, the microbe is introduced into the person before they have been exposed to take it in naturally from the environment or directly from an infected person. Microbes to be used in a vaccine are treated to weaken them (attenuated live vaccines) so that they will not cause disease in the person receiving the vaccination. Depending on the type of microorganism for which immunization is desired, vaccines can be used made from the attenuated pathogen, from entirely inactivated ("dead") microbes, from incomplete particles of the microbe, or treated toxins from the germ.

1.4 How Vaccines Work?

Vaccines help develop immunity by imitating an infection. This type of infection, however, does not cause illness, but it does cause the immune system to produce T-lymphocytes and antibodies. Sometimes, after getting a vaccine, the imitation infection can cause minor symptoms, such as fever. Such minor symptoms are normal and should be expected as the body builds immunity. Once the imitation infection goes away, the body is left with a supply of “memory” T-lymphocytes, as well as B-lymphocytes that will remember how to fight that disease in the future. However, it typically takes a few weeks for the body to produce T-lymphocytes and B-lymphocytes after vaccination. Therefore, it is possible that a person who was infected with a disease just before or just after vaccination could develop symptoms and get a disease, because the vaccine has not had enough time to provide protection. (Centers for Disease Control and Prevention Understanding How Vaccines Work 2013)

1.5 Types of Vaccines

Scientists take many approaches to designing vaccines. These approaches are based on information about the germs (viruses or bacteria) the vaccine will prevent, such as how it infects cells and how the immune system responds to it. Practical considerations, such as regions of the world where the vaccine would be used, are also important because the strain of a virus and environmental conditions, such as temperature and risk of exposure, may be different in various parts of the world. The vaccine delivery options available may also differ geographically. Today there are five main types of vaccines that infants and young children commonly receive:

- **Live attenuated vaccines:** It fights viruses. These vaccines contain a version of the living virus that has been weakened so that it does not cause serious disease in people with healthy immune systems. Because live, attenuated vaccines are the closest thing to a natural infection, they are good teachers for the immune system. Examples of live, attenuated vaccines include measles, mumps, and rubella vaccine (MMR) and varicella (chickenpox) vaccine. Even though these vaccines are very effective, not everyone can receive them. Children with weakened immune systems—for example, those who are undergoing chemotherapy—cannot get live vaccines

- **Inactivated vaccines:** Inactivated vaccine also fight viruses. These vaccines are made by inactivating, or killing, the virus during the process of making the vaccine. The inactivated polio vaccine is an example of this type of vaccine. Inactivated vaccines produce immune responses in different ways than live, attenuated vaccines. Often, multiple doses are necessary to build up and/or maintain immunity.
- **Toxoid vaccines:** It prevents diseases caused by bacteria that produce toxins (poisons) in the body. In the process of making these vaccines, the toxins are weakened so they cannot cause illness. Weakened toxins are called toxoids. When the immune system receives a vaccine containing a toxoid, it learns how to fight off the natural toxin. The DTaP vaccine contains diphtheria and tetanus toxoids.
- **Subunit vaccines:** Subunit vaccines include only parts of the virus or bacteria, or subunits, instead of the entire germ. Because these vaccines contain only the essential antigens and not all the other molecules that make up the germ, side effects are less common. The pertussis (whooping cough) component of the DTaP vaccine is an example of a subunit vaccine.
- **Conjugate vaccines:** It fights a different type of bacteria. These bacteria have antigens with an outer coating of sugar-like substances called polysaccharides. This type of coating disguises the antigen, making it hard for a young child's immature immune system to recognize it and respond to it. Conjugate vaccines are effective for these types of bacteria because they connect (or conjugate) the polysaccharides to antigens that the immune system responds to very well. This linkage helps the immature immune system react to the coating and develop an immune response. An example of this type of vaccine is the Haemophilus influenzae type B (Hib) vaccine. (Centers for Disease Control and Prevention Understanding How Vaccines Work 2013)

- **Polysaccharide vaccines:** Polysaccharide vaccines are a unique type of inactivated subunit vaccine composed of long chains of sugar molecules that make up the surface capsule of certain bacteria. Pure polysaccharide vaccines available include: pneumococcal, meningococcal, and *Salmonella typhi*. The immune response to a pure polysaccharide vaccine is typically T-cell independent, which means that these vaccines are able to stimulate B-cells without the assistance of T-helper cells. T-cell independent antigens, including polysaccharide vaccines, are not consistently immunogenic in children <2 years of age. Young children do not respond consistently to polysaccharide antigens, probably because of immaturity of the immune system. Repeated doses of most inactivated protein vaccines cause the antibody titer to go progressively higher, or “boost.” Repeat doses of polysaccharide vaccines do not cause a booster response. This is not seen with polysaccharide antigens. Antibody induced with polysaccharide vaccines has less functional activity than that induced by protein antigens. This is because the predominant antibody produced in response to most polysaccharide vaccines is IgM, and little IgG is produced.
- **Recombinant vaccine:** Vaccine antigens may also be produced by genetic engineering technology. These products are sometimes referred to as recombinant vaccines. There are four genetically-engineered vaccines are currently available:

 - ✓ Hepatitis B vaccines are produced by insertion of a segment of the hepatitis B virus gene into the gene of a yeast cell. The modified yeast cell produces pure hepatitis B surface antigen when it grows.
 - ✓ Human papillomavirus vaccines are produced by inserting genes for a viral coat protein into either yeast (as the hepatitis B vaccines) or into insect cell lines. Viral-like particles are produced and these induce a protective immune response.
 - ✓ Live typhoid vaccine (Ty21a) is *Salmonella typhi* bacteria that has been genetically modified to not cause illness.
 - ✓ Live attenuated influenza vaccine (LAIV) has been engineered to replicate effectively in the mucosa of the nasopharynx but not in the lungs (Immunisation Advisory Centre *Types of Vaccines* 2015)

1.6 Five Important Reasons to Vaccinate a Child

- I. **Immunizations can save a child's life.** Because of advances in medical science, a child can be protected against more diseases than ever before. Some diseases that once injured or killed thousands of children, have been eliminated completely and others are close to extinction— primarily due to safe and effective vaccines. One example of the great impact that vaccines can have is the reduction of polio in the Bangladesh. Polio is most-feared disease, causing death and paralysis across the country, but today, thanks to vaccination, there are a very few reports of polio in the Bangladesh.
- II. **Vaccination is very safe and effective.** Vaccines are only given to children after a long and careful review by scientists, doctors, and healthcare professionals. Vaccines will involve some discomfort and may cause pain, redness, or tenderness at the site of injection but this is minimal compared to the pain, discomfort, and trauma of the diseases these vaccines prevent. Serious side effects following vaccination, such as severe allergic reaction, are very rare. The disease-prevention benefits of getting vaccines are much greater than the possible side effects for almost all children.
- III. **Immunization protects others ones care about.** Children in the Bangladesh still get vaccine-preventable diseases. In fact, we have seen resurgences of measles and whooping cough (pertussis) over the past few years. In 2010 our country had over 21,000 cases of whooping cough reported and 26 deaths, most in children younger than 6 months. Unfortunately, some babies are too young to be completely vaccinated and some people may not be able to receive certain vaccinations due to severe allergies, weakened immune systems from conditions like leukemia, or other reasons.
- IV. **Immunizations can save ones family time and money.** A child with a vaccine-preventable disease can be denied attendance at schools or child care facilities. Some vaccine-preventable diseases can result in prolonged disabilities and can take a financial toll because of lost time at work, medical bills or long-term disability care. In contrast, getting vaccinated against these diseases is a good investment and usually covered by

insurance. The Vaccines for Children program is a federally funded program that provides vaccines at no cost to children from low-income families.

- V. **Immunization protects future generations.** Vaccines have reduced and, in some cases, eliminated many diseases that killed or severely disabled people just a few generations ago. For example, smallpox vaccination eradicated that disease worldwide. By vaccinating children against rubella (German measles), the risk that pregnant women will pass this virus on to their fetus or newborn has been dramatically decreased, and birth defects associated with that virus no longer are seen in the United States. (Centers for Disease Control and Prevention Five Important Reasons to Vaccinate Your Child 2015)

1.7 IMMUNIZATION IN BANGLADESH

Vaccination against some of the most lethal and debilitating diseases is one of the most cost-effective interventions of modern times. Smallpox which historically caused so much death and suffering is now a thing of the past. Poliomyelitis, another disabling disease, is now set to be eradicated. The single intervention that has made these to happen is vaccination. Recent studies have also documented the positive health equity effects of vaccinations. Analysing longitudinal data on mortality and measles immunization from Bangladesh, (Koenig *et al.* 2001) demonstrated that it was the most vulnerable children (in terms of socio-economic status) whose differential mortality risk was most reduced from vaccination.

Bangladesh has a long history of vaccinating its population. The British colonial papers suggest that variolation or inoculation, the predecessors of vaccination, was in practice in this part of the Indian Sub-continent as far back as 1731; *Tikadars*, a group of professional inoculators, provided inoculation against smallpox against a fee. The modern Expanded Programme on Immunization (EPI) was launched in 1979 but intensified in 1986. EPI programme is regularly conducting CES to find out the status of EPI coverage all over the country since last 10 years, the highest national valid coverage of fully vaccinated children found in 1994 was 62 percent. Otherwise the coverage was always below 59 percent. Although the coverage of BCG (First dose of vaccine children ever receives) is more than 94 percent for the last 4 years and it was never below 86 percent for the last 10 years (CES, 2002). It is also a concern for the programme that why we cannot reach 100 percent of the targeted children even for the single dose of BCG vaccination. Despite the continuing concerns and interests of all stakeholders on EPI, which has made remarkable success in Bangladesh, why half of the children are not fully immunized remains a key area of investigation

Bangladesh was never able to achieve the target of Universal Child Immunization (UCI) of 80 percent and the plateauing of the coverage rate is even more frustrating. Researchers have looked at the reasons for such plateauing in coverage and have identified factors which are both demand and supply related (H A SUFI 2005). In a recent field level review of routine EPI (routine EPI is distinguished from the others such as the National Immunization Days; whereas the former is a regular monthly activity that provides vaccination against the six diseases, the latter is a

campaign done twice a year for eradicating Polio) in northern Bangladesh, participants representing the government and development partners identified the challenges facing the programme. Most of the problems identified were supply-related. It was discovered later that of the previous four scheduled sessions only two were held. A less than adequate support for routine EPI from the higher levels of the government and development partners was also identified.

1.8 History of vaccination in Bangladesh

The first vaccination programme that was implemented in the geographical region of Bangladesh took place in the 1960s when Bangladesh was still a part of Pakistan. Vaccination against cholera through injection of killed cholera bacteria used to be an elaborate anti cholera programme in the 1960s. However, several studies, including an extensive study carried out by Pakistan SEATO Cholera Research Laboratory (PSCRL) (Now known as International Centre for Diarrheal Disease Research, Bangladesh (ICDDR,B)) proved that the vaccine had no efficacy in providing protection against cholera. As a result of this, WHO recommended discontinuation of this vaccine.

However, further trials were undertaken to find an effective vaccination against cholera. A large scale field trial of two new cholera vaccines was carried out in the Matlab field area of ICDDR,B. The efficacy of these vaccines are still questionable but one of these two vaccines was oral killed whole cell vaccine which is still used by ICDDR,B. This vaccine, with the help of preventive measures such as hand washing and home water treatment system, may have helped decrease annual deaths from cholera but overall morbidity remains high. It is estimated that there are at least 300,000 severe cases and 1.2 million infections in people in Bangladesh each year (Independent University 2012). Apart from this, a programme called Expanded Programme on Immunization (EPI) was initiated in 1980. It is considered the most successful public health intervention in Bangladesh, and has contributed significantly to reducing mortality and morbidity from vaccine-preventable.

1.9 History of EPI in Bangladesh

For prevention of diseases EPI started functioning officially on 7th April, 1979 in Bangladesh for vaccination against diphtheria, tetanus, whooping cough, tuberculosis, measles and poliomyelitis. Up to 1985 only 2% of children <23 months were immunized because there were limited number of EPI vaccination centers which does not cover whole Bangladesh. In the year 1985 Government of Bangladesh committed to share global universal child immunization programme. For this reason from 1985 to 1990 intensification of EPI began in phases and from 1990 to 1994 refresher training and introduction of EPI sentinel surveillance sites had been initiated. In 1995 first National Immunization Day (NID) was performed. Total eighteen NID was performed till date. So routine vaccination, NID, surveillance and outbreak response immunization is going on till date and EPI coverage was 86% up to 1998 in 12 months to 23 months old child.

EPI service was made available to all target groups in phases in 1995; AFP and NT Surveillance started in 1997. Introduction of Hepatitis- B vaccination in EPI programme was started in 2003. Tuberculosis is a disease of great significance associated with a high rate of mortality and morbidity especially in developing countries like Bangladesh.

Poliomyelitis is amongst the most feared of the communicable diseases, incidence is highest in developing countries, especially where immunization coverage is low and sanitation is poor. India, Pakistan and Bangladesh have accounted for 70% of reported polio cases worldwide. A major steps towards global eradication was made in 1994 and paralytic poliomyelitis decreased by 83%. The expanded programme on immunization of weekly epidemiological record has led to steady decline in the world incidence of poliomyelitis since 1973, and total eradication of poliomyelitis from America been one of the major health achievements of the 20th century.

In Bangladesh, the number of neonatal tetanus deaths has decreased substantially in the past 2 decades. In May 2008 the Health and family Welfare, carried out an evaluation using standard WHO protocol to determine whether neonatal tetanus had been eliminated in Bangladesh. According to the survey results Bangladesh has achieved Maternal and Neonatal Tetanus (MNT) elimination. WHO received report of 14,529 cases of tetanus globally in 2006 while 290,000 deaths were estimated by WHO during the period of 2000-2003. In Bangladesh total 828 cases of

tetanus were reported in 2007 while 824 cases of tetanus were reported after the neonatal period through passive surveillance. In the year 2007 total 86 cases of diphtheria was reported through AFP and EPI Diseases surveillance network in Bangladesh and 62% of these were 15 years of age. WHO received reports of 3,978 cases of diphtheria worldwide in 2006, a remarkable decrease from the epidemic years of 1994-95, when 54,811 and 56,966 cases were reported worldwide respectively (Islam Md. Darul et. Al., 2010).

1.10 Progress of vaccination

- More than 100 million infants are immunized each year, saving 2-3 million lives annually.
- Global mortality attributed to measles declined by 71 percent from an estimated 542,000 deaths in 2000, to 158,000 in 2011.
- The prevalence of polio has declined dramatically since 1988, from more than 350,000 cases to 223 confirmed polio cases in 2012. Only three countries remain endemic – Afghanistan, Nigeria and Pakistan – down from more than 125 countries in 1988.
- Immunization coverage against HepB and HiB has been increasing since 1990 – 180 and 177 countries now include HepB and HiB respectively into infant immunization schedules.

Benefits and risks of vaccination

All medicines have side effects. However, vaccines are among the safest and the benefits of vaccinations far outweigh the risk of side effects. When we're considering a vaccination for ourselves or our children, it's natural to think about the potential side effects.

The side effects of vaccination

Most side effects from vaccination are mild and short-lived. It's quite common to have redness or swelling around the injection site, but this soon goes away. Younger children or babies may be a bit irritable or unwell, or have a slight temperature. Again, this usually goes away within one or two days.

In much rarer cases, some people have an allergic reaction soon after a vaccination. This is usually a rash or itching that affects part or all of the body. On very rare occasions, a severe allergic reaction may happen within a few minutes of the vaccination. This is called anaphylactic reaction. It can lead to breathing difficulties and, in some cases, collapse. Anaphylactic reactions

are extremely rare (fewer than one in a million) and these reactions are completely reversible if treated promptly.

Vaccination versus medicine

Vaccination is different from giving medicine to an unwell child to make them better. The benefits of vaccination are invisible. It may be tempting to say "no" to vaccination and "leave it to nature". However, deciding not to vaccinate a child puts them at risk of catching a range of potentially serious, even fatal, diseases.

In reality, having a vaccination is much safer than not having one. They're not 100% effective in every child, but they're the best defense against the epidemics that used to kill or permanently disable millions of children and adults.

Misinformation (false or misleading information)

The timing and widespread use of vaccines make them easy scapegoats to be blamed for all sorts of serious illnesses. Of course not all vaccine safety concerns are misinformation—only those that persist despite the evidence against them. Even when the concern stops being an issue for most in the scientific community, it may remain an issue for many others with vested interests—whether politicians, lawyers, journalists or the group that concerns health professionals the most: well-intentioned but misinformed parents trying to understand and alleviate their child's afflictions. Many media stories use faulty reports and parental concerns to depict a “controversy” about vaccines, failing to mention that the scientific community does not feel that a controversy exists.

In spite of the substantial evidence now available that allows rejection of the hypotheses that vaccines cause autism, there are some who continue to state that there is a causal association. These claims, once based on missing information, now fall into the category of misinformation. Unfortunately, the misinformed person with a fixed opinion about vaccines has many sophisticated tools to disseminate misinformation, creating confusion about vaccine safety. Misinformation comes in many packages and may be widely publicized by the media and others causing lowered immunization levels and disease risk.

For example, a misinformed couple in Tennessee, confused about vaccine safety because of what they had read on the Internet, decided to delay their daughter's vaccinations. Sometime later, the baby girl was stricken with a form of meningitis that could have been prevented by a vaccine.

Misinformation about vaccines is frequently encountered on the Internet. Some Web sites, for instance, oppose the immunization of infants and children. They express a variety of claims that are largely unsupported by peer-reviewed scientific literature.

Misinformation Web sites tend to rely on emotionally-filled anecdotes about bad things that happened to children or were first recognized—*coincidental in time* with vaccine administration—while ignoring or distorting scientific studies.

Unfortunately for communities, anti-vaccination movements have also had a negative effect on public health through the years. One study, for example, showed that movements against the whooping cough vaccine caused whooping cough epidemics in several countries.

1.11 Dental care

According to the Academy of General Dentistry, there is a relationship between gum (periodontal) disease and health complications such as a stroke and heart disease. Women with gum disease also show higher incidences of pre-term, low birth-weight babies.

Other research shows that more than 90 percent of all systemic diseases (diseases involving many organs or the whole body) have oral manifestations, including swollen gums, mouth ulcers, dry mouth and excessive gum problems. Such diseases include:

- Diabetes
- Leukemia
- Oral cancer
- Pancreatic cancer
- Heart disease
- Kidney disease

Since most people have regular oral examinations, their dentist may be the first health care provider to diagnose a health problem in its early stages.

Poor oral health can lead to problems

- **Oral and facial pain.** According to the Office of the Surgeon General, this pain may be largely due to infection of the gums that support the teeth and can lead to tooth loss.
- **Problems with the heart and other major organs.** Mouth infections can affect major organs. For example, the heart and heart valves can become inflamed by bacterial endocarditis, a condition that affects people with heart disease or anyone with damaged heart tissue.
- **Digestion problems.** Digestion begins with physical and chemical processes in the mouth, and problems here can lead to intestinal failure, irritable bowel syndrome and other digestive disorders.

About eye glass

Eyes play a vital role in our day to day lives and are perhaps the most precious gift we have. This world is visible to us because we are blessed with eyesight. Clear and bright eye sight makes this world a better place to live in. Good eyesight is very important for our daily activities like reading, watching television, internet surfing, driving etc. However, there are many people amongst us who are affected by vision defects and hence are forced to use contact lenses or glasses to have clear vision. Poor vision can have an effect on ability to perform well at school, work and for daily activity. Some children are suffering more at their early stage. Bad eyesight can result his or her performance. Bad eyesight can reduce attention span or in difficult understanding printed material. I addition it can be difficult to clearly see a ball or even the position of someone.

ALIA MADRASAH IN BANGLADESH

Madrasah education is a system whereby Islamic branches of knowledge are taught besides the teaching of general branches of knowledge. Madrasahs are generally known as “religious schools”. According to Dr. Manaros B. Boransing, “*Madrasah* (pl. *madaris*) generally refers to Muslim private schools with core emphasis on Islamic studies and Arabic literacy.”

Madrasahs are usually privately-operated schools, which rely on the support of the local community or foreign donors and Governments, particularly from Islamic or Muslim countries.

1.12 History of Madrasah Education Board of Bengal (BMEB)

Alia Madrasah was established in 1780 by British government and formed Madrasah education Board of Bengal. Madrasah Education was then started formally. Consequently Madrasah Education was reformed. Especially late Fazlul Haq the prime minister declared in a prize giving be modernized and an Arabic University should be established”.

To materialize this declaration of share-E-Bangla a committee named Moula Box was formed. This committee, along with the advice of establishing a University for Madrasah students, advises in the following way for the entire development of Madrasah Education. In 1947 after having the independence of Pakistan many commissions was formed for the development of Madrasah Education. Among them in 1949 “West Bengal Educational System Reconstruction Committee” and in 1963-64 the name of Arabic University are especially mentionable.

In 1971 after having the independence of Bangladesh, step has been taken for the active modernization of Madrasah Education. Bengali, Mathematics, English, Social science, General Science are made compulsory. In 1978 Madrasah Education Board was formed under Ordinance for the Modernization of Madrasah Education. The Madrasah Education Board started its activity independently in 1979. With the passage of time of Madrasah Education, in 1978 humanity and science faculty are included in Alim level and in 1980, Fazil degree was given the standard of Education of H.S.C level.

In the successive step of Education in 1985 dakhil level was given the standard of education of S.S.C. and in 1987 Alim level was given the standard of education of H.S.C for massive reformation of entire education system. As a result the Madrasah student having learnt the root lesson of Islam against themselves with the modern education system. For the revolutionary development of modern science and technology, Bangladesh like other countries of the world, faces a very strong and tough challenge. For facing this challenge, boldly, humanity, science, business and technical education has been included with Madrasah Education. Mean while a law has been passed for the education & the standard of education of Fazil and kamil with those of B.A. and M.A. degree in general education. In fact, action steps are already taken to modernize this curriculum.

In fact, the dream that our noble leader Share-E-Bangla A.K. Fazlul Haq dreamt long before sixty seven years, is going to be materialized although it is very late. At present 30% are the Madrasah students of the total number of students.

So we can certainly say that after having crossed a very hazardous and very troublesome way, Madrasah Education has come to this qualified stage of standard of education. (Bangladesh_Madrasah_Education_Board 2015)

1.13 The Objectives of Madrasah Education

Islam has encouraged acquiring knowledge. The first such guidance is found in Sura al-Iqra of the Holy Quran where Allah orders believers, "باسم ربك الذي خلق اقرأ" (Read in the name of your Lord)". In one of Hadiths, the Prophet Muhammad (pbuh) said, "The seeking of knowledge is incumbent for every Muslim." In another Hadith, the Prophet Muhammad (pbuh) mentioned, "If anyone travels on a road in search of knowledge, Allah will cause him to travel on one of the roads of Paradise. The angels will lower their wings in their great pleasure with one who seeks knowledge. The inhabitants of the Heavens and the Earth and (even) the fish in the deep waters will ask forgiveness for the learned man. The superiority of the learned over the devout is like that of the moon, on the night when it is full, over the rest of the stars. The learned are the heirs of the Prophets, and the Prophets leave (no monetary inheritance), they leave only knowledge, and he who takes it takes an abundant portion." Since Allah SWT has encouraged all of us to read, now one might ask the question, "What should we read?" The answer is not provided in

this verse. Now the question might arise should we read only the Holy Quran? Or does it also refer to other source of knowledge?

The scholars have different views regarding the above concept of acquiring knowledge. There are also different approaches regarding which types of knowledge are obligatory for a believer. One of the most important views was put forward by the following Hadith narrated by Anas Ibn Malik (r): *الحيثان حتي شيء كل له يسـتغفر العلم طالب ان و مسلم كل علي فريضة العلم طلب*: “Seeking Knowledge is a Duty upon every Muslim, and everyone in the heavens and on earth prays for forgiveness for the seeker of knowledge, even the fish in the sea”. In its interpretation, majority jurists are on the views that every Muslim is obliged to acquire Islamic knowledge up to which a person can make a difference between haram and halal and he becomes able to lead his life according to the right path. On this point of view, it can be said that seeking Islamic knowledge is Ibadah.

1.14 Goals of Madrasah Educations:

This Madrasah was established for the sake of high noble goals which are as following:

- Spreading the message of Islam in Bangladesh as a whole through learning and Islamic education.
- Spreading pure Islamic science within the rising generations and ingraining the genuine Islamic creed in the hearts of people.
- Teaching Arabic language, the language of the Holy Quran, and the prophetic tradition and spreading it among the Muslims of Bangladesh.
- Streamlining religious and modern sciences under Islamic principles.
- Educating students who join the Madrasah from different angles, graduating scholars who specialize in Islamic sciences and Arabic language, and jurists in Islam equipped with knowledge that will qualify them to preach the faith and to solve the problems of Muslims in light of the Quran and Sunnah and in light of the practice of the previous companions.
- Planting the spirit of Islam, as well as deepening practical religion in the life of individuals and the society, through sincere worship of Allah and the practice of his prophet.

- Graduating orators and propagators of Islam, as well as preparing those who exert themselves for the sake of God, and bringing up leaders who strive to raise the religion in the nation and in the society.
- Preparing writers, editors, and Muslim thinkers in order for them to solve the urgent problems and correct the strayed society, as well as correct the wrong creeds.
- Guiding poor orphans and Muslim children, and educating them on the Islamic way.

1.15 Types of Madrasah in Bangladesh

There are two types of Madrasahs in Bangladesh. One is known as *Alia Madrasah* and the other is known as *Qawmi Madrasah*.

a) Alia Madrasahs

Alia Madrasahs offer both religious education and modern general education. The establishment of these Madrasahs, the appointment of teachers, and the curriculum all follow government regulations as mandated by the Madrasah Education Board.

b) Qawmi Madrasahs

Qawmi Madrasahs are non-governmental educational institutions. They represent a private system of Madrasah education. The equivalent of primary education in Qawmi Madrasahs has a duration of six years. It is important to note here that it was rather difficult to understand from Qawmi Madrasah officials the sequence of their primary educational system. This was due to the fact that they mainly use a subject-based system rather than a grade-based system. That is, students are taught subjects without a clear class-graduated system. It is not feasible to try to “impose” class-graduated terminology on their primary educational system. For example, a Nourani model of education (explained in further detail below) used in Qawmi Madrasahs entails teaching students about a variety of religious and linguistic subjects. The focus of Qawmi Madrasah officials is on delivering all the subjects included in the Nourani curriculum, but without a clear time-sequence that follows what is expected in a grade-based system.

The final stage of the Qawmi Madrasah education is called Daurah Hadith, in which Hadith certificates are awarded to the students after successful completion of the “Daurah” class. The Hadith certificate is somewhat equivalent to a Kamil degree in Alia Madrasahs. More specialized higher courses of a two- to three-year duration are also conducted in some of the Qawmi Madrasahs.

1.16 A short description of Alia Madrasah

Alia Madrasah was established in 1780 by British government and formed Madrasah education Board of Bengal. Madrasah Education was then started formally. Consequently Madrasah Education was reformed. Especially late Fazlul Haq the prime minister declared in a prize giving ceremony in Kolkata Alia Madrasah in 1939, “I want the spread of Madrasah Education should be modernized and an Arabic University should be established”. To materialize this declaration of share-E-Bangla a committee named Moula Box was formed. This committee, along with the advice of establishing a University for Madrasah students, advises in the following way for the entire development of Madrasah Education. In 1947 after having the independence of Pakistan many commissions were formed for the development of Madrasah Education. Among them in 1949 “West Bengal Educational System Reconstruction Committee” and in 1963-64 the name of Arabic University are especially mentionable. (Amin Muhammad Boni 2013)

Degrees Offered under Alia Madrasah System

Bangladesh Alia Madrasah education system consists of the following degrees/certifications:

- Ibtadayee or Junior Dakhil Certificate & Junior School certificate (JDC/JSC);
- Dakhil (SSC Equivalent)
- Alim, (HSC Equivalent)
- Fazil (BA Equivalent), and
- Kamil (Masters Equivalent).

At present, there are many registered Alia Madrasahs under Bangladesh Madrasah Education Board. The following table contains the total number of Alia Madrasahs under each degree/certificate programme in 2013:

Type of Madrasahs	Units
Ibtadayee	6,869
Dakhil	9,322
Alim	2,799
Fazil	1,256
Kamil	200
Total	20,446

Chapter Two

Literature Review

2. LITERATURE REVIEW

In the year 1982, Henderson et al. mentioned that from the early 1990s coverage evaluation surveys have been carried out regularly in Bangladesh. Done with technical assistance from World Health Organization (WHO), United Nations Children's Fund (UNICEF), and the Immunization and Other Child Health (IOCH) project, the surveys are carried out by the government of Bangladesh in association with selected non-governmental organizations (Henderson et al., 1982).

Clark & Chakraborty et al. observed that Government immunization service statistics in 1984 shows that the national coverage for BCG was 1.5 percent, D.P.T. (3 doses) was 14 percent, polio (3 doses) was 1.1 percent and measles was 0.9 percent (Government of Bangladesh, 1985's). Now WHO/UNICEF estimates, 2013 shows that the national coverage for BCG was 99 percent, DPT1 99 percent, DPT3 97 percent, polio 97 percent. Demographic studies of childhood immunization differential have often shown household Socio-economic factors and parental education as important factors in explaining different immunization levels among and within societies (Clark 1983; Chakraborty et al. 1987).

In 2001, a team of researchers have also documented the positive health equity effects of vaccinations. Analysing longitudinal data on mortality and measles immunization from Bangladesh, it was the most vulnerable children (in terms of socio -economic status) whose differential mortality risk was most reduced from vaccination (Koenig et al., 2001).

After 1 year later, Syed M. Akramuzzaman and team member have evaluated the vaccine effectiveness and to assess risk factors for measles in Dhaka, Bangladesh. To improve measles control in urban Dhaka missed immunization opportunities must be reduced in all health care facilities by following WHO guidelines. For measles elimination, more than one dose of vaccine would be required (Syed M. Akramuzzaman et. al., 2002)

In 2003, Chowdhury *et al.*, mentioned that vaccination is one of the most economical interventions of modern age, against some of the most lethal and debilitating diseases like

smallpox, poliomyelitis, influenza etc. Significant reduction of child mortality and finding a cost effective way to improve child health, particularly for poor households residing in high-disease prone regions, is the fundamental principle of childhood vaccination. (Chowdhury *et al.*, 2003).

Chowdhury A Mushtaque R has found that immunization coverage was higher for children whose mothers were more educated. Children whose fathers had a higher-status occupation (salaried employment) were two-and-a-half times more likely to be immunized than children whose fathers held a lower-status job, e.g. day-labourer. The coverage for the poorest quintile was 70% of the well-to-do. Children residing in urban areas were more likely to be fully immunized than their rural counterparts (70% vs 59% for children aged 12-23 months). Within urban areas, the situation in slums was worse. Large differences existed among the various administrative regions of the country. The study identifies children of various disadvantaged groups as having a lower coverage. Managers of immunization programmes must realize that only through removal of such disparities among groups will overall coverage be increased. (Chowdhury A Mushtaque R. 2003)

In the same year A. Mushtaque et. al published a paper, they examined inequalities in the use of, and access to, vaccination service in Bangladesh by analyzing national and small area-based datasets. The analysis showed that female children had a lower immunization coverage than male children—the difference persists for all antigens and widens against girls for higher doses. The immunization coverage was higher for children whose mothers were more educated. Children whose fathers had a higher-status occupation (salaried employment) were two-and-a-half times more likely to be immunized than children whose fathers held a lower-status job, e.g. day-labourer. (A. Mushtaque et. al., 2003)

In developing countries, immunisation programmes must compete with other strategies to improve public health and quality of life. Studies of long-term effects of immunisation programmes are rare. F Breiman Robert et. al assessed associations between vaccinations and mortality over 15 years after the introduction of routine infant immunisation programmes in Matlab, Bangladesh. By contrast with previous findings, they noted substantially reduced mortality among children who received DTP vaccine. This effect could be due to actual

protection against pertussis disease and secondary illnesses or to a non-specific benefit, although they cannot rule out epidemiological artifact. Our findings show the value of population-based health surveillance systems. (F Breiman Robert et. al., 2004)

In 2005, H A Sufi mentioned that after launching of Expanded Programme on Immunization (EPI) in 1974, against six killer diseases polio, diphtheria, tuberculosis, pertussis, measles and tetanus, today the coverage has raised nearly 75 percent from only 5 percent of all children of the world within their first year of life. About 34 million infants are not immunized against these killer diseases annually. (H A Sufi 2005)

Traditionally, madrasas are Islamic learning institutions, aimed at building a generation of Islamic scholars and leaders. The word ‘madrasa’ means ‘center of learning’ in Arabic. They provide free religious education, boarding and lodging. For these reasons, they are essentially schools for the poor. Although several studies have been undertaken to analyze the madrasa curriculum and its impact on the students, the role and attitudes of madrasa teachers, and the challenges they face, have largely been neglected. (Rahman & Burki et al., 2005).

Levin A et al. evaluated the incremental health and programmatic cost impacts of theoretical new vaccine products as compared to the standard vaccine products in multi-dose vials in Cambodia, Ghana, and Bangladesh. They use a cost-effectiveness model to estimate the impacts of introducing four thermostable vaccines with single-dose presentations: measles, yellow fever, bacille Calmette-Guerin, and diphtheria–tetanus–pertussis–hepatitis B. The effectiveness of all of the vaccines increases with the thermostable formats. The incremental costs associated with the introduction of thermostable vaccines increases for three out of four vaccines. (Levin A et al., 2007)

In 2008, Daniel A. Salmon & his team stated that immunizations have been remarkably successful in preventing disease. When high levels of immunization coverage are sustained, disease is reduced and public attention shifts to concerns about vaccine safety rather than fear of the diseases. The great majority of providers for exempt children had similar attitudes about vaccine safety, effectiveness and benefits as providers of non-exempt children. Effective

continuing education of providers about the risks and benefits of immunization and including in vaccine recommendations more information on pre and post licensing vaccine safety evaluations may help address these concerns (Daniel A. Salmon et. al., 2008)

In a study it has been found that inactivated influenza vaccine reduced proven influenza illness by 63% in infants up to 6 months of age and averted approximately a third of all febrile respiratory illnesses in mothers and young infants. Maternal influenza immunization is a strategy with substantial benefits for both mothers and infants. (K. Zaman et al., 2008)

In 2009, Rahman M et al., established the hypothesis that predisposing, enabling and household needs influence the complete vaccination status of children. Approximately 60% of the children in rural Bangladesh were fully immunized. They have found that the full vaccination rate increased with an increase in the previous birth interval and the education level of the mother. Women with the highest wealth index were significantly more likely to fully immunize their children. Distance from health facility, parity, mother's age, mass media, children's sex and tetanus toxoid injection were also significantly positively associated with full vaccination. (Rahman M et al., 2009)

In the same year, World Health Organization has found that in developing countries more vaccines are available and more lives are being saved. For the first time in documented history the number of children dying every year has fallen below 10 million – the result of improved access to clean water and sanitation, increased immunization coverage, and the integrated delivery of essential health interventions. Yet despite extraordinary progress in immunizing more children over the past decade, in 2007, 24 million children – almost 20% of the children born each year – did not get the complete routine immunizations scheduled for their first year of life (World Health Organization 2009)

Only a few works were done so far in Madrasas regarding the vaccination program. (Chowdhury et al., 2003) examined inequalities in the use of, and access to, vaccination service in Madrasas of Bangladesh by analyzing national and small area-based datasets. The analysis showed that

Madrasa students had lower immunization coverage than others students due to inadequate knowledge about the vaccination of the Madrasah teachers.

Islam Md. Darul and his team mentioned that vaccination against Hepatitis B and H. Influenzae have been introduced in vaccination programme recently. The success in EPI programme decreased the mortality and morbidity of the vaccine preventable diseases. Government of Bangladesh continues EPI programme to combat the infectious diseases and thus, to reduced the infant mortality rate, for which Bangladesh is appreciated recently by United Nation (Islam Md. Darul et. al., 2010)

David Canning et al. investigated the effects of ante-natal maternal vaccination against tetanus on the schooling attained by children in Bangladesh. They found that maternal vaccination prevents the child from acquiring tetanus at birth through blood infection and substantially reduces infant mortality and may prevent impairment in children who would otherwise acquire tetanus but survive. They also found that significant schooling gains from maternal tetanus vaccination for children whose parents had no schooling, showing a large impact on a small number of children (David Canning et. al., 2010)

In 2012, Afzal Nasrin Afzal & her team identify the characteristics that have an influence on the vaccination coverage of children and the determination of the pattern of such influence are very important since the government can reschedule the policy to immunize each and every child. They examined the factors that manipulate the vaccination coverage in terms of five major vaccines using the Bangladesh Demographic and Health Survey (BDHS)-2007 data. The results of their study strongly suggest that mother's education and economic status play a vital role significantly in improving the vaccination coverage (Afzal Nasrin Afzal et al., 2012)

J. Andrews-Chavez *et al.* have designed a study which was to investigate if the mothers' demographics and household characteristics—including type of use of cooking fuel, energy and toilet facilities—have any implication for complete immunisation rates among their children. Immunisation coverage was positively associated with the mother's education and with household characteristics such as toilet facility, electricity and involvement in a microfinance

group. Their findings indicate the need for further advocacy for increased knowledge on the importance of vaccination and affordable public immunisation programs focusing on higher risk households such as those with pit facilities, lack of electricity and no participation in a microfinance group. Such households warrant further attention and can be targeted for immunisation coverage. (J. Andrews-Chavez *et al.*, 2012)

Health education programs are not part of the regular school curriculum in developing countries including Pakistan. Many schools in the targeted townships participated in immunization activities but they were not carried out regularly. In the wake of low immunization coverage in Pakistan, schools can be used as a potential venue not only for non-EPI vaccines, but for a catch up vaccination of routine vaccines. The most common vaccination campaign in which schools participated was Polio eradication program. Cost of the vaccine, side effects, and parents' lack of information were highlighted as important limiting factors by school administration for school-based immunization programs. Permission from parents, appropriateness of vaccine-related information, and involvement of teachers were considered as important factors to improve participation (Soofi SB *et. al.*, 2012)

In 2012, FN Shoma has design a study, She want to know the Immunization (EPI) coverage, dropout rate and factors influencing dropout. The study findings suggested that despite the effort taken by Government and NGOs to expand coverage, dropout rates are unacceptably high. To combat this challenge counseling and motivation on EPI, improvement of information system, health education and training of health workers are required. (FN Shoma 2012)

After one year later, Md. Tanvir Haider Tanna *et. al.* conducted a study to evaluate the rate of vaccination and its impacts on the children in four upazilas which were Noakhali sadar, Begumgonj, Companygonj and Chatkhil of Noakhali district. It was found that all interviewed parents of all ages and educational levels are aware about vaccination of their child. The study conducted on the rate of giving vaccines, (Tuberculosis, Polio, DPT, Measles and Hepatitis B) showed serious reactions in a few children after taking vaccine and occurrences of disease after taking the corresponding vaccine. The rate of vaccination in the four upazilas- Noakhali sadar,

Begumgonj, Companygonj and Chatkhil were found to be 84, 86.6, 75.4 and 82%, respectively. (Md. Tanvir Haider Tanna et. al., 2013)

In the same year, M. Raysul Haque et. al. demonstrated the eventual influence of maternal education status on measles vaccination coverage among children of age 9 to 59 months in Bangladesh. A nationally representative data Bangladesh Demographic and Health Survey (BDHS) 2007 was used for this purpose. The result showed that mother's education level is positively and statistically significantly associated with the likelihood of a child being vaccinated for measles after controlling for all other potential factors (S. M. Raysul Haque et. al., 2013)

Iqbal Ansary Khan et. al. have studied the feasibility study of an oral cholera vaccine was carried out to test strategies to reach high-risk populations in urban Mirpur, Dhaka, Bangladesh. Their study was cluster randomized, with three arms: vaccine, vaccine plus safe water and hand washing practice, and no intervention. High risk people of age one year and above (except pregnant woman) from the two intervention arms received two doses of the oral cholera vaccine (Iqbal Ansary Khan et. al., 2013)

In 2004, Nelson CB mentioned that Cholera is an endemic and epidemic disease in Bangladesh. On 3 March 2013, a meeting on cholera and cholera vaccination in Bangladesh was convened by the Foundation Merieux jointly with the International Centre for Diarrhoeal Disease Research, Bangladesh (ICDDR, B). The purpose of the meeting was to discuss the investment case for cholera vaccination as a complimentary control and prevention strategy. Findings showed the oral vaccine to be highly cost-effective when targeting ages 1-14y, and cost-effective when targeting ages 1+y, in high-burden/high-risk districts. Regardless of cost-effectiveness (value), the budget impact (affordability) will be an important determinant of which target population and vaccination strategy is selected. Most importantly, adequate vaccine supply for the proposed vaccination programs must be addressed in the context of global efforts to establish a cholera vaccine stockpile and supply other control and prevention efforts. (Nelson CB 2014)

Dimitrov DT et. al concluded that continuous mass vaccination would be more effective against endemic cholera than periodic campaigns. Vaccinating children averts more cases per dose than

vaccinating all age groups, although vaccinating only children is unlikely to control endemic cholera in Bangladesh. Careful consideration must be made before generalizing these results to other regions. (Dimitrov DT et. al., 2014)

Recently, a study has done to see the effect of mother's employment on child vaccination. Mother's Employment, Father's Education, Mother's Age at First Birth, Birth Order and Gender of Household Head were taken as independent variables. The results executed that the mothers who were unemployed had less probability to immunize their children. They have found that the highly educated fathers had more likelihood to vaccinate their children compared to the uneducated fathers. Young mothers had fewer chances to vaccinate their children compared to the old mothers. The 1st born children had more chances to get vaccine compared to the children who had more than 4th -5th birth order. It was suggested that the male and female should give equal chances of employment in country. (Samra Subhani et al., 2015)

In 2015, J. Driessen has found that early childhood health interventions have long-term effects on cognitive development, educational achievement and adult productivity. From this study, it has been found that age-appropriate vaccination raises the probability that a boy has enrolled in school by 7.4 percentage points but appears to have no effect on girls' enrolment (J. Driessen 2015)

Chapter Three

Approach and Methodology

3. APPROACH AND METHODOLOGY

Study design: This study was designed to identify the knowledge & practice of vaccination program in Alia madrasah and know the Government & Non-Government organizational programs on vaccination and its implementation status. I also try to identify the status of dental & eye glass checkup in this madrasah.

Data were collected from principal of those institutions using structured questionnaire. The questionnaire was in two parts. The first part was respondent & institution details and the 2nd part was gathered demographic information of the madrasah such as number of students, yearly/monthly budget, boys or girls or combined madrasah so on. In 2nd part was also contained the vaccination related questions like vaccination & medical care (dental & eye glass checkup) status, vaccination record, cost of vaccination etc. The first part contains 06 questions. The second part collected information on attitude and practice about vaccination of the principals of Alia madrasah. There were 13 questions in the second part.

Study instruments and instruction manual

Based on objectives of the study, a structured questionnaire was developed and administered in the survey. While designing the questionnaire, specific objectives of the study were considered to ensure that information relevant to the purposes of the study and data could be collected with maximum reliability and validity. The questionnaire was prepared for the overall appropriateness of survey methodology, effectiveness of the field organization, length of the interview.

Study area: The study was done in the some Alia madrasah of the Dhaka districts.

Data collection: After preparing the questionnaire, the data were collected from the target sites during July, 2015 to October, 2015. The respondents were asked to verbally answer a structured set of questionnaires. The data were collected from the respondents through face-to-face or over the phone interview. The questions were asked systemically in a very simple manner in Bengali and the information was recorded on the survey schedule.

Chapter Four

Result and

Discussion

4. RESULT

To identify the knowledge & practice of vaccination program in Alia madrasah and know the Government & Non-Government organizational programs and its implementation status of vaccination & also identify the status of dental & eye glass checkup in this madrasah.

I have collected information for the survey from the principal/leaders of the Alia madrasah. Data were collected through structured questionnaires and present them in a percentage. I have found that among 24 (69%) madrasahs have taken vaccine & 11(31%) madrasahs have not taken vaccine. Government has given vaccine in 19 (79%) madrasah and Non-Government organizations have given vaccine in 5 (21%) madrasahs among 24 vaccinated madrasahs. I have summarized the finding of my questionnaires and found that vaccination programme has implemented in madrasahs but the number must be increased with the help of Government or Non-Government organization. I strongly believe that this study will provide valuable information for Government and non Government organization to expand their programme in near future.

4.1 Profile of the Alia Madrasah

- Principals of madrasah have madrasah degree & vast Islamic knowledge
- Most of the madrasahs are MPO listed and have government facilities as well
- Teachers of Alia madrasah have got their salary from Government and other sources to maintain Alia madrasah activities including tuition fees of students, in certain case from Zakat, Fitr during Ramadan.

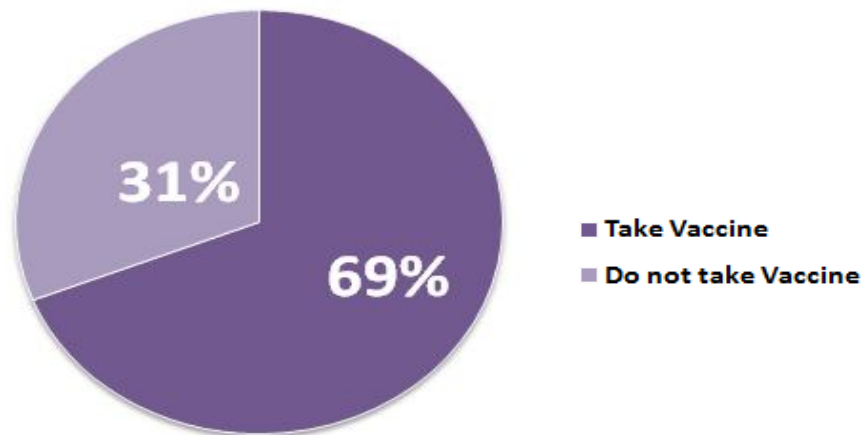
These are the most important answers about the profile of the principals of Alia madrasah.

4.2 Table No-1: Summary of Answers of the Leader of Alia Madrasahs

Particulars	Percentages of Madrasah
Percentages of Madrasah have taken vaccine.	69%
Percentages of Madrasah have not taken vaccine.	31%
Percentages of Madrasah have taken vaccine from Government those were accepted vaccine	79%
Percentages of Madrasah have taken vaccine from Non-Government organization those were accepted vaccine	21%
Percentages of Madrasah have taken vaccine from Government without cost among those were accepted vaccine	79%
Percentages of Madrasah have taken vaccine from Non-Government without cost among those were accepted vaccine	60%
Percentages of Madrasah want to take vaccine from Government among those were not taken vaccine	18%
Percentages of Madrasah want to take vaccine from any vaccination team among those were not taken vaccine	82%
Percentages of Madrasah have not taken vaccine for money problem among those were not received vaccine	18%
Percentages of Madrasah have not taken vaccine for absent of vaccination team among those were not received vaccine	73%
Percentages of Madrasah have not taken vaccine thought that vaccination is not important among those were not received vaccine	9%
Percentages of Madrasah have accepted eye glasses or dental treatment from any person.	3%
Percentages of Madrasah have not accepted eye glasses or dental treatment from any person.	97%
Percentages of Madrasah have kept vaccination records of their students	4%

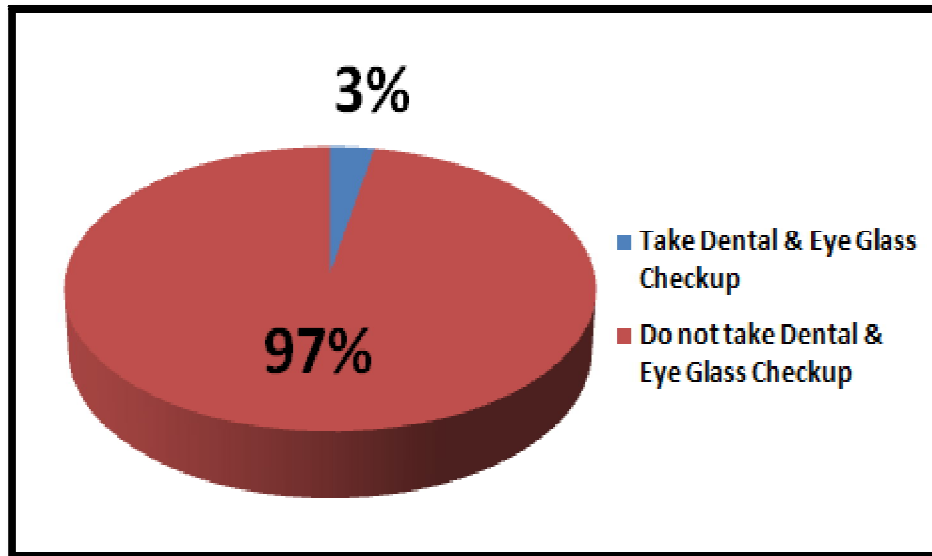
among those were received vaccine	
Percentages of Madrasah have not kept any vaccination records of their students among those were received vaccine	96%
Percentages of Madrasah have kept vaccination records of their students among those were received or not received vaccine	3%
Percentages of Madrasah have not kept any vaccination records of their students among those were received or not received vaccine	97%
Percentages of Madrasah leader want to take vaccination program without cost	100%

From the summary of the answer of leaders, it is clear that a one third number of madrasah are not vaccinated yet. In addition, some madrasah are not aware about vaccination & don't able to organize a vaccination for their student. Besides vaccination, they have not found other health care facilities like dental and eye glass checkup as well in most cases. The important finding of this survey, most of the leader's want vaccine for their students but they prefer vaccination program without cost.



4.4 Figure no-1: Percentage of alia madrasah those have taken vaccine and don't take vaccine

From the pie chart it has been found that among 24 (69%) madrasahs have taken vaccine & 11(31%) madrasahs have not taken vaccine. It is possible to vaccinate all the madrasah if Government & other Non-Government organization have taken necessary action. The leaders of Alia madrasah have certain knowledge on vaccination and want to give vaccine to their students.



4.3 Figure no-2: Percentage of alia madrasah those have taken dental & eye glass checkup and don't have dental & eye glass

Unfortunately, the scenario of dental and eye glass checkup is totally reversed from vaccination program in Alia madrasah. From the pie chart it has been found that only 01 (3%) madrasah has taken dental and eye glass checkup for their student which is arranged by Anguman Mufidul Islam. & 34 (97%) madrasahs have not found this checkup from Government or Non-Government organization although dental and eye glass checkup are very necessary for all human being.

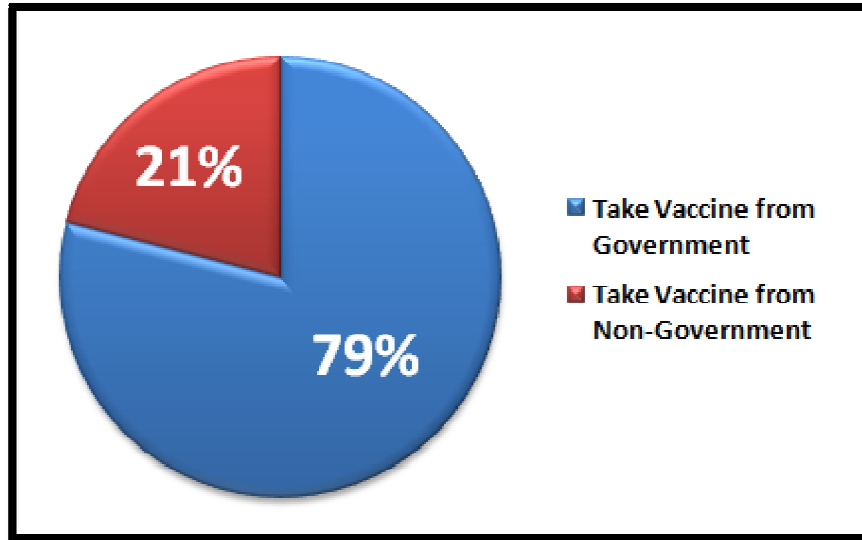
4.5 Table No-2: Financial Appearance from Smaller to Larger Budget of Per Student of Alia Madrasahs with Vaccine Acceptability Status

SL. No.	Name of Madrasah	No. of Student	Monthly Budget	Per Head (TK.)	Vaccination Program
1	Sarifbag Islamia Kamil Madrasah	1000	50000	50	Yes
2	Savar Islamia Fazil Madrasah	700	40000	57	Yes
3	Deonai Dakhil Madrasah	600	40000	67	Yes
4	Chistia Nuria Dakhil Madrasah	350	25000	71	No
5	Hazratpur Ammania Dakhil Madrasah	400	30000	75	Yes
6	Dasherhandi Darusunnah Alim Madrasah	300	22500	75	Yes
7	Kalatia Hazratpur Dakhil Madrasah	440	40000	91	Yes
8	Ujampur Dakhil Madrasah	400	40000	100	Yes
9	Mahmuda Khatun Mohila Kamil Madrasah	400	40000	100	No
10	Satarkul Din Mohhammad Girls Dakhil Madrasah	387	40000	103	No
11	Beraid Mohammadia Dakhil Madrasah	300	35000	117	Yes
12	Darul Islam Alim Madrasah	420	50000	119	Yes
13	Dogair Darussunnat Fazil Madrasah	1000	120000	120	Yes
14	Nazmul Haq Modinatul Ul. Fazil Madrasah	500	60000	120	No
15	Ashulia Hazera Khatun Dakhil Madrasah	600	75000	125	Yes
16	Fulmati Islamia Dakhil Madrasah	400	50000	125	No
17	Kalimullah Islamia Dakhil Madrasah	360	45000	125	No
18	Foidabad Azgarul Ulum Alim Madrasah	350	45000	129	Yes
19	Nayanagar Nesaria Islamia Dakhil Madrasah	350	45000	129	No
20	Muhammadbad Islamia Alim Madrasah	350	45000	129	Yes
21	M. I Dakhil Madrasah	325	42500	131	No
22	Nayatola A.U.N Kamil Madrasah	325	42500	131	Yes

23	Kawlar Islamia Dakhil Madrasah	225	30000	133	Yes
24	Madinatul Ulum Sonakanda Islamia Dakhil Madrasah	370	50000	135	No
25	Baonibad Islamia Alim Madrasah	420	60000	143	Yes
26	Matuah Islamia Alim Madrasah	400	60000	150	Yes
27	Muradpur Islamia Madrasah	350	55000	157	Yes
28	Abed Halim Islamia Dakhil Madrasah	300	50000	167	Yes
29	Dhaka Mohammadia Dakhil Madrasah	300	50000	167	Yes
30	Kazipara SL Fazil Madrasah	350	60000	171	Yes
31	Railway Hafezia Sunna Dakhil Madrasah	320	55000	172	Yes
32	Al-Amin Islamia Alim Madrasah	663	125000	189	Yes
33	Nababgonj Dakhil Madrasah	375	75000	200	No
34	Sonahajra Mofijia Fazil Madrasah	800	300000	375	No
35	Nodiabad Islamia Dakhil Madrasah	355	200000	563	Yes

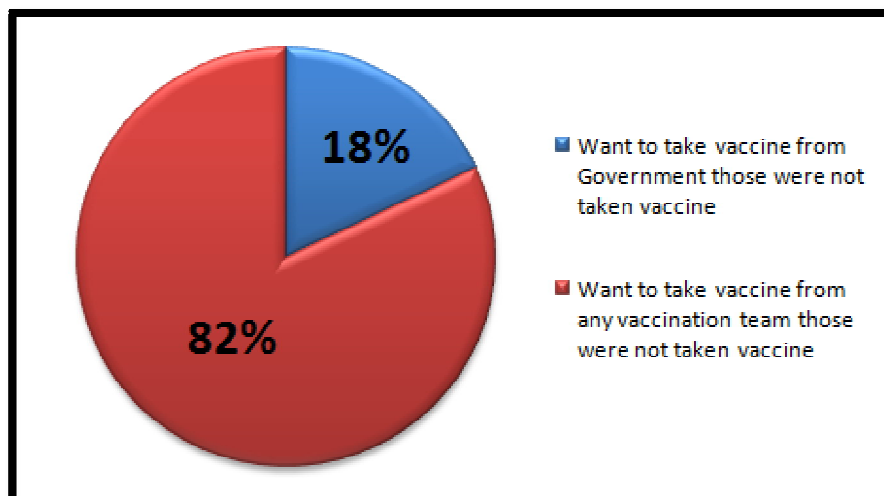
In the above table the Alia madrasah are written in order from smaller budget to larger budget. Here, I have to mention that MPO listed Alia madrasahs have got salary and other facilities from the Government. Monthly budget of Alia madrasahs would not included salary of institution personnel in most of the cases.

From the above table it can be said that financial conditions of Alia madrasahs have no effect on vaccine acceptability. But, most of the Alia madrasahs leader asked to arrange vaccination program without cost. It depends on the awareness of vaccination program.



4.6 Figure no-3: Vaccination acceptance from government and non-government organization those were taken vaccine

The above pie chart it has been shown 19 (79%) madrasahs have taken vaccine from Government and only 5 (21%) Alia madrasahs have taken vaccine from Non-Government organization like BRAC and Marie Stopes. Most of them are agreed that vaccine is important to prevent many diseases and they will take vaccine from any countries. They also mentioned that it will easy to accept vaccine when Non-Government Organization worked with University students or certain Islamic organization in Bangladesh.



4.7 Figure no-4: Vaccination acceptance from government and non-government organization those were not taken vaccine

4.8 Table No- 3: Comparative Study of Selected Questions between Different Alia Madrasahs

Name of Madrasah	Vaccine Status	Vaccination Related Questions (Part-2)									
		2	4	5	6	7	8	9	11	12	13
Foidabad Azgarul Ulum Alim Madrasah	Yes	Combined	Yes	Government	No	Government	No		Yes	No	
Nayanagar Nesaria Islamia Dakhil Madrasah	No	Combined	No	Any Team	No		No	Money Problem	Yes	No	
Nababgonj Dakhil Madrasah	No	Combined	No	Any Team	No		No	No one Come	Yes	Yes	Anjuman Mufidul Islam
Ujampur Dakhil Madrasah	Yes	Combined	Yes	BRAC	Yes	BRAC	No		Yes	No	
Dogair Darussunnat Fazil Madrasah	Yes	Combined	Yes	BRAC	No	BRAC	No		Yes	No	
Ashulia Hazera Khatun Dakhil Madrasah	Yes	Combined	Yes	Government	Yes	Government	No		Yes	No	
Sonahajra Mofijia Fazil Madrasah	No	Combined	No	Any Team	No		No	Have not thought it is important	Yes	No	
Abed Halim Islamia Dakhil Madrasah	Yes	Combined	Yes	BRAC	Yes	BRAC	No		Yes	No	
Fulmati Islamia Dakhil Madrasah	No	Combined	No	Any Team	No		No	Money Problem	Yes	No	
Dhaka Mohammadia	Yes	Combined	Yes	BRAC	No	BRAC	No		Yes	No	

Dakhil Madrasah											
Kawlar Islamia Dakhil Madrasah	Yes	Combined	Yes	Government	No	Government	No		Yes	No	
Nodiabad Islamia Dakhil Madrasah	Yes	Combined	Yes	Government	Yes	Government	No		Yes	No	
Savar Islamia Fazil Madrasah	Yes	Combined	Yes	Government	Yes	Government	No		Yes	No	
Sarifbag Islamia Kamil Madrasah	Yes	Combined	Yes	Government	Yes	Government	No		Yes	No	
Deonai Dakhil Madrasah	Yes	Combined	Yes	Government	Yes	Government	No		Yes	No	
Satarkul Din Mohhammad Girls Dakhil Madrasah	No	Girls	No	Any Team	No		No	No one Come	Yes	No	
Hazratpur Ammania Dakhil Madrasah	Yes	Combined	Yes	Government	Yes	Government	No		Yes	No	
Chistia Nuria Dakhil Madrasah	No	Combined	No	Any Team	No		No	No one Come	Yes	No	
Al-Amin Islamia Alim Madrasah	Yes	Combined	Yes	Merie Stopes	Yes	Merie Stopes	Yes		Yes	No	
Muhammadbad Islamia Alim Madrasah	Yes	Combined	Yes	Government	Yes	Government	No		Yes	No	
Kalatia Hazratpur Dakhil Madrasah	Yes	Combined	Yes	Government	Yes	Government	No		Yes	No	
Madinatul Ulum Sonakanda Islamia Dakhil	No	Combined	No	Any Team	No		No	No one Come	Yes	No	

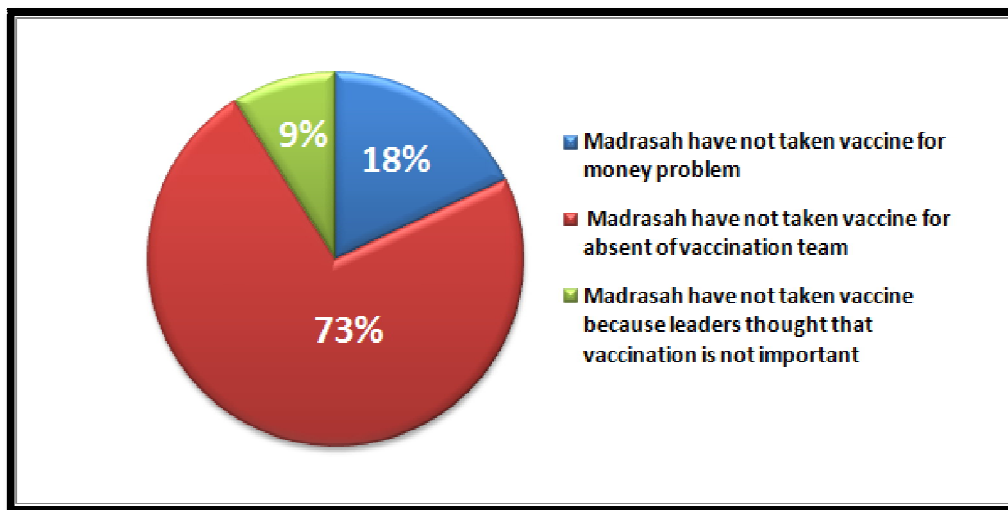
Madrasah											
Kalimullah Islamia Dakhil Madrasah	No	Combined	No	Government	No		No	No one Come	Yes	No	
Darul Islam Alim Madrasah	Yes	Combined	Yes	Government	No	Government	No		Yes	No	
DasherKandi Darusunnah Alim Madrasah	Yes	Combined	Yes	Government	No	Government	No		Yes	No	
Matuah Islamia Alim Madrasah	Yes	Male	Yes	Government	Yes	Government	No		Yes	No	
M. I Dakhil Madrasah	No	Combined	No	Government	No		No	No one Come	Yes	No	
Railway Hafezia Sunna Dakhil Madrasah	Yes	Male	Yes	Government	Yes	Government	No		Yes	No	
Nazmul Haq Modinatul Ul. Fazil Madrasah	No	Combined	No	Any Team	No		No	No one Come	Yes	No	
Mahmuda Khatun Mohila Kamil Madrasah	No	Female	No	Any Team	No		No	No one Come	Yes	No	
Nayatola A.U.N Kamil Madrasah	Yes	Male	Yes	Government	Yes	Government	No		Yes	No	
Baonibad Islamia Alim Madrasah	Yes	Combined	Yes	Government	Yes	Government	No		Yes	No	
Kazipara SL Fazil Madrasah	Yes	Combined	Yes	Government	Yes	Government	No		Yes	No	
Beraid Mohammadia Dakhil Madrasah	Yes	Combined	Yes	Government	Yes	Government	No		Yes	No	
Muradpur Islamia Madrasah	Yes	Combined	Yes	Government	Yes	Government	No		Yes	No	

4.9 Table no- 4: Overall Data on Attitude & Knowledge of Alia Madrasah Leader Toward Vaccination

Overview of Issue	No. of Madrasah
Percentages of Madrasah have taken vaccine.	24
Percentages of Madrasah have not taken vaccine.	11
Percentages of Madrasah have taken vaccine from Government those were accepted vaccine	19
Percentages of Madrasah have taken vaccine from Non-Government organization those were accepted vaccine	5
Percentages of Madrasah have taken vaccine from Government without cost among those were accepted vaccine	15
Percentages of Madrasah have taken vaccine from Non-Government without cost among those were accepted vaccine	3
Percentages of Madrasah want to take vaccine from Government among those were not taken vaccine	2
Percentages of Madrasah want to take vaccine from any vaccination team among those were not taken vaccine	7
Percentages of Madrasah have not taken vaccine for money problem among those were not received vaccine	2
Percentages of Madrasah have not taken vaccine for absent of vaccination team among those were not received vaccine	8
Percentages of Madrasah have not taken vaccine thought that vaccination is not important among those were not received vaccine	1
Percentages of Madrasah have accepted eye glasses or dental treatment from any person.	1
Percentages of Madrasah have not accepted eye glasses or dental treatment from any person.	34
Percentages of Madrasah have kept vaccination records of their students	1

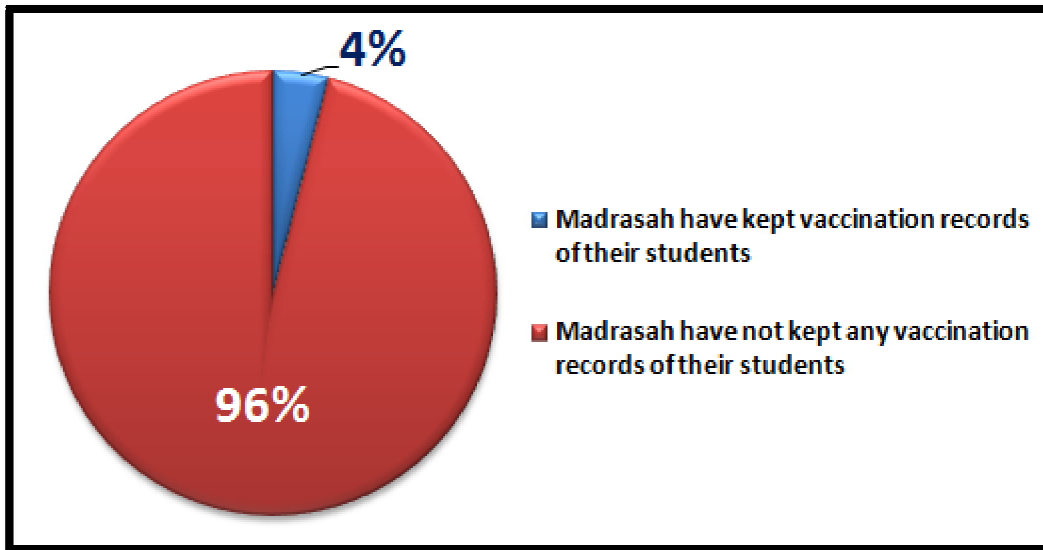
among those were received vaccine	
Percentages of Madrasah have not kept any vaccination records of their students among those were received vaccine	23
Percentages of Madrasah have kept vaccination records of their students among those were received or not received vaccine	1
Percentages of Madrasah have not kept any vaccination records of their students among those were received or not received vaccine	34
Percentages of Madrasah leader want to take vaccination program without cost	35

It is clear from the above data, majority portion of Alia Madrasah’s students were already accepted vaccine and leaders are positive toward vaccination program. From 35 Alia madrasahs, 24 Alia madrasahs have vaccinated which count 69% and rest madrasah leaders have positive thinking about vaccine & they want vaccination program for their students preferably without cost.



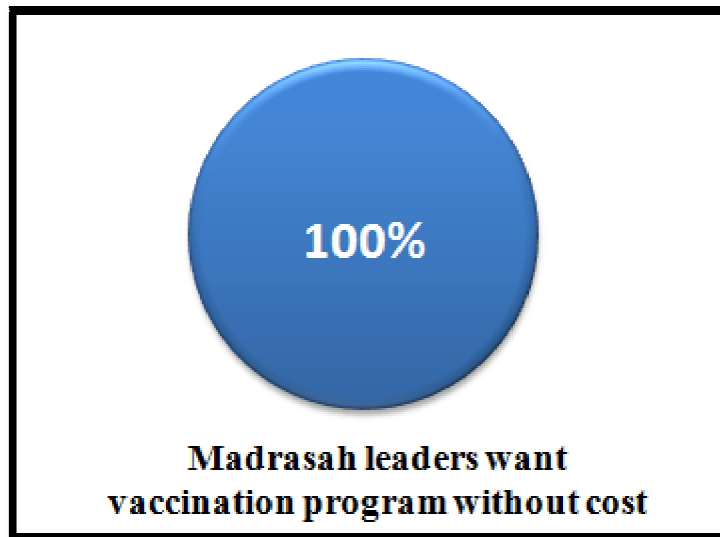
4.10 Figure no-5: Vaccination acceptance status of alia madrasah students those were not accepted vaccine

From above pie chart it is clear that madrasah leader did not arrange vaccination program for their students due to unavailability of vaccination team (73%) and few cases money problem have been raised.



4.11 Figure no-6: Vaccination acceptance records of alia madrasah students those were accepted vaccine

The scenario of vaccination records is very pathetic. Out of 24 Alia madrasahs only 1 madrasah have kept vaccination records which means they are not conscious about it. It clearly indicates that if any vaccination team comes to give vaccine leader cannot give the appropriate data who are being vaccinated and who are not being vaccinated. In my concern, madrasah leaders have to kept vaccination records for their children.



4.12 Figure no-7: Vaccination status of alia madrasah without cost

From above pie represents that every Alia Madrasah's leader has positive thinking about vaccine & they want vaccination program for their students preferably without cost. If any organization arrange vaccination program, they will take vaccine.

4.13 DISCUSSION

This study was designed to identify the knowledge & practice of vaccination program in Alia madrasah and know the Government & Non-Government organizational programs on vaccination and its implementation status. I also try to identify the status of dental & eye glass checkup in this madrasah.

I have collected information for the survey from the principal/leaders of 35 Alia madrasah. Data were collected through structured questionnaires and present them in a percentage. From figure no. 1, it has found that among 35 madrasah, 24 (69%) madrasahs have taken vaccine & 11(31%) madrasahs have not taken vaccine. Government has given vaccine in 19 (79%) madrasah and Non-Government organizations have given vaccine in 5 (21%) madrasahs among 24 vaccinated madrasahs. It is possible to vaccinate all the madrasah if Government & other Non-Government organization have taken necessary action. I have summarized the finding of my questionnaires and found that vaccination programme has implemented in madrasahs but the number must be increased with the help of Government or Non-Government organization.

From the summary of the answer of leaders, it is clear that a one third number of madrasah are not vaccinated yet. Madrasah leader did not arrange vaccination program for their student due to unavailability of vaccination team (73%) and few cases money problem have been raised among those are not take vaccine. It can be said that financial conditions of Alia madrasahs have no effect on vaccine acceptability. But, most of the Alia madrasahs leader asked to arrange vaccination program without cost. It depends on the awareness of vaccination program.

Another important finding of this study is the scenario of vaccination records. It is very pathetic. Out of 24 Alia madrasahs only 01 (One) madrasah has kept vaccination records which means they are not conscious about it. It clearly indicates that if any vaccination team comes to give vaccine, leader cannot give the appropriate data who are being vaccinated and who are not being vaccinated.

Besides vaccination, the scenario of dental and eye glass checkup is totally reversed from vaccination program in Alia madrasah. It has been found that only 01 (3%) madrasah has taken

dental and eye glass checkup for their student which is arranged by Anguman Mufidul Islam. & 34 (97%) madrasahs have not found this checkup from Government or Non-Government organization although dental and eye glass checkup are very necessary for all human being.

Findings from this study indicate that attitude & knowledge of the leaders of Alia madrasah are positive. In my concern Mass media exposure also has positive effect on vaccination coverage. In recent years, a number of governmental and non-governmental organizations have enriched their vaccination related programs on television, radio and newspapers which are likely to have increased the knowledge of general people on vaccination.

In conclusion, findings from this study indicate that attitude & knowledge of the leaders of Alia madrasah are positive toward vaccination. It can be said that if any organization create awareness program regarding vaccination & other health facilities and also generate demand for use of vaccine it is very much possible to vaccinate a society specially Alia madrasah and they can lead a healthy life. It can also be said that by improving the monitoring and supervision of vaccination activities especially in the madrasah of the rural area it is possible to vaccinate all. Enable people to exercise their rights and their right to make decision concerning freedom of movement, own health care and access to economic resources through special information, education and communication campaign. I strongly believe that this study will provide valuable information for Government and non Government organization to expand their programme in near future.

Chapter Five

Conclusion

5. CONCLUSION

Vaccination has greatly reduced the burden of infectious disease globally. Vaccines protect the vaccinated individual by direct immunization and can protect unvaccinated individuals through community protection or herd immunity. (Andre, F. E., et al. (Feb. 2008). Many life-threatening illnesses that once were responsible for killing thousands of children are now preventable by vaccination (Vaccine & Immunization, 2012). Vaccinating our children not only ensures their safety but also their future to come (Vaccine & Immunization, 2012). Without vaccinations, infectious diseases would have taken over the world. Bangladesh has achieved immense success in vaccination. Although 80.2% vaccination rate was achieved in 2011 still we have long run to go.

In my study it is obvious that appropriate awareness can play a very important role in vaccination. Parents and principals have to aware of vaccination and it's important but the awareness on vaccination is not satisfactory. Awareness on vaccination can increases the vaccination rate in children and also educates the parent and leaders as well. Besides vaccination, parents and leaders have to aware of the other health care like dental & eye glass checkup facilities as well. This study may be considered as representative of the other regions of Bangladesh. Government and other Non-Government organization must take initiative to educate people about vaccination and its importance. Active participation of the community members or university students can gear up the vaccination process which will result in better vaccination awareness and health empowerment.

Chapter Six

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