

Shendi University

Faculty of graduate studies and scientific research

**The knowledge and attitude towards childhood  
immunization among mothers attending  
immunization center in Shendi town 2012**

*A research submitted as complementary required for  
MSc degree in pediatric nursing*

Submitted by :

Amna Salim Ali Mohammed

Supervised by :

Dr. Ahmed AbdElbagy

MSc in MSN &PhD in MSN

## الاية



سورة البقرة الايه (32 )

# *Dedication*

*Just to*

*Who taught me what is the meaning of life  
dried my tear and filled my heart with delight*

*Dear Mother*

*To*

*Who have taught me a lot through the life  
Who trained me how I can change to better*

*Dear Father*

*To*

*The deepest feeling for who supported me &  
always learn me to give even without take*

*Dear sisters*

*To*

*Who have supported me on difficult steps of  
my life and taught me the meaning of hope*

*Dear husband*

*To*

*To my kids Dania and Aya*

*To*

*My friends and Colleagues*

# Acknowledgement

First of all my deep thanks and gratitude to Allah for giving me the ability to do and complete this research

I would like to express my deepest gratitude to my supervisor *Dr.ahmed abdelbagy ibrahem*

For her supervision, patience and skillful Guidance.

My thanks also extended to the dean of nursing faculty

Dr: Nabila Hassan

Furthermore, my thanks are extended to all nurses whom

working at shendi immunization centre for their

permeation supporting to fulfill this study

I would like to express my thanks and wishes to my

husband for his full assistance and long patience.

Finally, I would like to record my thanks to all these

support me in this long journey (research).

# ***List of contents***

<i>Subject</i>	<i>No</i>
Verse	I
Dedication	II
Acknowledgment	III
List of contents	IV
List of abbreviations	V
List of table	VI
English abstract	VII
Arabic abstract	VIII
<b><i>Chapter One</i></b>	
Introduction	1-2
Rationale & Justification	3
Objectives	4
<b><i>Chapter Two</i></b>	
Literature review	5-10
<b><i>Chapter Three</i></b>	
Material & Method	11-13
<b><i>Chapter Four</i></b>	
Result	14-20
<b><i>Chapter Five</i></b>	
Discussion	21- 23
Conclusion	24
Recommendation	25
References	26
Appendixes	27

### List of abbreviations

Abbreviation	meaning
BCG	Bacillus Clamette Guerin
EPI	Expanded programmed on immunization
GAVI	Global alliance of vaccine and immunization
MNT	Measles and maternal and neonatal tetanus
PCV	Pneumococcal Congate Vaccine
WHO	World health organization

## List of tables

<b>Tables</b>	<b>Page no</b>
<b>Table no1 : personal characteristic of study group</b>	<b>19</b>
<b>Table no 2: knowledge of mothers about immunization</b>	<b>20</b>
<b>Table no 3: knowledge of mothers about vaccination schedule</b>	<b>21</b>
<b>Table no 4: attitude of mothers towards immunization</b>	<b>22</b>
<b>Table no 5: knowledge of mothers about diseases that require immunization</b>	<b>23</b>
<b>Table no 6: knowledge of mothers about side effects of vaccination</b>	<b>24</b>
<b>Table no 7: home management carried out by mothers when their children experience side effects after vaccine shot</b>	<b>25</b>

## Abstract

This study is a descriptive cross-sectional, community based study conducted to assess the knowledge and attitude of mothers attending vaccination center in Shendi city towards childhood immunization between august and November, 2011. For this study the data was collected by questionnaire designed by researcher and revised by expertise and analyzed by SPSS. The results showed that most (70%) mothers were aware of immunization and that immunization could prevent childhood diseases. However vast majority of the mothers (82%) were recognize that vaccination has contraindications such as sick child and allergic c

Large percentage (84%) of mothers was preferred to vaccinate their children in governmental health institution. This study found that (36%) of responders were had adequate knowledge about side effects of vaccination. In addition to this study reveals that mothers have poor knowledge about vaccination schedule and the type of vaccines recorded on vaccination card. Moreover most (74%) of mothers their children are fully vaccinated. While (60%) of mothers were do nothings for their children if they developed wound in their hands as a result of BCG. While vast majority (94%) of mothers were seeking medical care if their children develop convulsion after vaccine shot. Finally the study recommended; Health care authorities have to assigned qualified staff for mothers educations and provide a suitable place for teaching supported by audiovisuals tools to promote teaching process and nurses have to teach the mothers about sensitivity of BCG vaccine.



## ملخص البحث

أجريت هذه الدراسة الوصفية بمدينة شندي في مركز التطعيم ، وامتدت من شهر أغسطس حتى نوفمبر 2012، وكان الهدف العام تقييم معرفة وسلوك الامهات تجاه تحصين الأطفال وكيفية التعامل مع الآثار الجانبية التي تحدث جراء التطعيم، شملت الدراسة الامهات اللاتي يأتين الي مركز التطعيم بمدينة شندي. تم جمع البيانات عن طريق استبيان مصممه من ثلاثون سؤال بواسطة الباحث يحتوي علي بيانات تشمل المميزات الشخصية للامهات مثل العمر الحاله الاجتماعيه المستوى التعليمي ،والجزءالثاني يحتوي علي معرفة وسلوك الامهات حول التطعيم ، ومن ثم تم تفرغ البيانات التي جمعت وعولجت عبر برنامج الحزم الاحصائية للعلوم الاجتماعيه؛ أظهرت النتائج أن معظم الأمهات (70٪) كن على علم بمعنى كلمة تحصين اذ انه يقى الاطفال من امراض الطفوله . ومع ذلك كانت الغالبية العظمى من الأمهات (82٪) علي علم بأن للتطعيم موانع مثل الحالات المرضيه والحساسية من الجرعه السابقه . كما تبين ان الامهات يفضلن تطعيم اطفالهن في المؤسسات الصحيه الحكوميه بنسبة كبيرة (84٪) وان(36٪) من الامهات عندهن معرفة كافية حول الآثار الجانبية للتطعيم. بالإضافة إلى ذلك اوضحت الدراره أن الامهات عندهن جهل كبير باللقاحات المسجله في جدول التطعيم. وعلاوة على ذلك معظمهن (74٪) تم تطعيم أطفالهن بصورة منتظمه. بينما (60٪) من الأمهات لا يقمن بأي تدخل عند حدوث ندبه او جرح ناتج عن لقاح شلل الاطفال. بينما الغالبية العظمى من الأمهات لديهن سلوك جيد عند حدوث تشجنات لاطفالهن التي تنتج كآثار جانبية من لقاح شلل الاطفال و الذي يتمثل في سرعة ايصالهم للمركز الصحي او المستشفى .

## **Introduction:**

Immunization has been one of the most significant and cost-effective public-health interventions to decrease childhood morbidity and mortality. Immunizing children against vaccine-preventable diseases is an important factor in saving lives, increasing productivity, and alleviating poverty.

By definition Immunization is the process by which an individual's immune system becomes fortified against an agent (known as the immunogen) <sup>(1)</sup>

A child's best chance at health often comes from vaccines that protect against life-threatening and ravaging diseases. <sup>(1)</sup>

Factors such as knowledge, attitude and practices of parents are known to contribute to success or failure of immunization program <sup>(2)</sup>.

Approximately three million children die each year of vaccine-preventable diseases. Recent estimates suggest that approximately 34 million children are not completely immunized, with almost 98% of them residing in developing countries <sup>(3)</sup>. The World Health Organization (WHO) launched the Expanded Program on Immunization (EPI) in 1974 with focus on the prevention of six vaccine-preventable diseases of the childhood by 2000. In Sudan the expanded program on immunization was launched in 1976. The program has introduced the six traditional EPI antigens with measles vaccine is the last antigen to be introduced in 1985. Polio, measles and maternal and neonatal tetanus (MNT) campaigns conducted by the program supplement the routine immunization activities. In early 2005 with support of Global Alliance of Vaccine and Immunization (GAVI) the program has introduced hepatitis B vaccine in a phased manner to complete national coverage by the end of 2006 <sup>(4)</sup>.

In most cases, vaccines cause no side effects, or only mild reactions such as fever or soreness at the injection site. But as general no vaccine is perfectly safe, Very rarely, people experience more serious side effects, like allergic reactions. <sup>(5)</sup>

Many parents worry when their child needs to receive more than one vaccine at the same time. Because they suspect that multiple vaccines can produce harmful side effects. The study was carried out to test the hypothesis, that better knowledge of mothers regard minor side effects of vaccination is associated with better minimization of these side effects?

The routine immunization programme in Sudan has good political support, which has been translated into modest financial support. Hence, the establishment of post-marketing surveillance of intussusceptions and Government co-sharing of the cost of new vaccines. <sup>7</sup>

**Rationale:**

Knowledge and attitude of mothers regard child immunization is so important . the percent of illiteracy is so high among shendi city mothers and most of them report that they were not aware about vaccination side effects and home management of these side effects. So this represent is conducted to determine to what extend that mothers were able to identify the vaccination schedule and how to deal with minor side effects of vaccination.

## **Research objectives:**

### ***General objective:***

- To assess the mother's knowledge and attitude about child minimization.

### ***Specific objectives:***

1. To assess concept of mothers toward vaccination schedule
2. To determine the mother's attitude/action when their children experiences side effects after vaccination shot.

## Literature review

Immunization of infants and young children against serious infectious diseases is among the most successful and cost-effective interventions in preventative health care. The success of these programs relies on sufficiently high coverage to maintain herd immunity<sup>6</sup>.

Sudan has witnessed a remarkable improvement in routine vaccination coverage during the last few years. The coverage rate of pentavalent vaccine third dose reached 93% and measles coverage rate was 87%. This was a result of the stable implementation of routine immunization for the prevention and control of vaccine-preventable childhood diseases. In 2011, rotavirus vaccine was introduced in Sudan, the first country in Africa to introduce rotavirus vaccine with support from the Global Alliance of Vaccine and immunization (GAVI). Rotavirus vaccine addresses severe diarrhoea disease in infants and young children caused by rotavirus. Rotavirus gastroenteritis surveillance was established to measure the impact of rotavirus vaccine among children under one year of age<sup>7</sup>.

Childhood immunization is an act of inducing immunity to a child by applying a vaccine that almost guarantees protection from many major diseases.<sup>8</sup>

Previous studies have shown that uptake of vaccination services is dependent not only on provision of these services but also on other factors including knowledge and attitude of mothers<sup>9</sup>

Vaccination can prevent the child from getting serious diseases that can kill or cause long-term health problems. Vaccinated babies are much less likely to suffer the devastating consequences of these diseases. Vaccines contain a tiny part of the virus or bacteria that causes a disease. The vaccine cannot cause the disease itself. When the vaccine is given, the body's immune system reacts towards it and produces antibodies against it. These antibodies remain in the body and will be ready to recognise that virus or bacteria and protect your child should he or she ever come into contact with that infection. Immunisation also helps to prevent outbreaks and epidemics of these infectious diseases.<sup>10</sup>

Vaccination is appealing in the progressive view it offers – eradication of disease and proactive control of health; it is a part of the modern and industrial attitude, based on seeing the body as a machine and diseases as enemies that should be fought with all possible means. However, the truth about health, disease and prevention is more complex: both because disease and health have to be considered in a wider, holistic, context and because the application of vaccines is rife with problems.<sup>11</sup>

Whether talking with mothers during an immunization session or a group health discussion the nurse have to communicate five pieces of essential information. The date and time of the next immunization. Where to attend for the next immunization. · The number of visits the child needs to make to the health facility in order to be fully immunized, and/or the number of visits the mother needs to make in order to receive a full course of tetanus toxoid. What side-effects may occur? What the mother can do about these side-effects.

The nurse have to be specific about the date, time and place and tell the mother the specific time the nurse want her to bring her child back or to return herself for her own immunization. The nurse will tell her to come back to the health facility or, to attend elsewhere, indicate the place. Inform her what time the health facility is open and remind her to bring the immunization cards. The nurse have to be specific about the number of visits needed. During immunization sessions and group health discussions you have to check the immunization cards so that you can tell each mother how many immunizations she and her child still need and how many times she needs to return. Congratulate her frequently on the number of immunizations she and her child have received, and encourage her to complete the schedules.<sup>11, 12</sup>

When the child is born, a nurse will give him/her the BCG vaccine at the maternity hospital. This vaccine protects against Tuberculosis (TB). This vaccine is given in the left arm. Three to six weeks after the BCG vaccine, a small red pimple usually appears at the site of the injection. The pimple will remain for a number of weeks and there may be a slight discharge. A scab may form over the injection site. This is normal. The scab will heal and leave a small scar. What happens next? The nurse will tell the mother to arrange to visit the nearest immunizations center when the child is two months old. Nurses in immunization center should remember the mothers that child needs five visits to complete his/her course of vaccines and be fully protected against serious diseases. And remember her to bring the child's immunisation card for each next visit. When the child is two months of age he/she will get two vaccines: the 6 in 1 vaccine (to protect against diphtheria, , hepatitis B, pertussis (whooping cough), polio and tetanus; and the pneumococcal conjugate vaccine(PCV )vaccine to protect



against pneumococcal disease. The vaccines are given in your child's legs – one in the right leg and one in the left leg.<sup>14</sup>

The nurse has to be specific about possible side-effects. Advise mothers on what side-effects can be expected, on what is normal, and on what to do about side-effects if they occur. This shows that mothers care about their children's comfort and that The nurse want to ensure that the mothers can cope.

Nurses, play a key role in establishing and maintaining a practice-wide commitment to communicating effectively about vaccines and maintaining high vaccination rates: from providing parents with educational materials, to being available to answer their questions, to making sure that families who may opt for extra visits for vaccines make and keep vaccine appointments.<sup>12</sup>

Some parents may have a general concern that there are too many vaccines. With respect to timing and spacing of vaccines, the childhood vaccine schedule is designed to provide protection at the earliest possible time against serious diseases that may affect infants early in life. The Childhood Immunization Schedule fact sheet may be useful for those parents, as well as for parents who have specific questions. Some parents may be able to specify their concerns: whether each vaccine is needed, whether giving several vaccines at one time can cause harm, whether vaccine ingredients are harmful, or how well each vaccine works. For these parents, The nurse can specifically reinforce the seriousness of the diseases prevented by vaccines, and share the knowledge that no evidence suggests that a healthy child's immune system will be damaged or overwhelmed by receiving several vaccines at one time. Understanding Vaccine Ingredients can help the nurse counter myths that have circulated about vaccine ingredients. The nurse may need to share with some parents that not only should each vaccine series be started on

time to protect infants and children as soon as possible, but each multi-dose series must be completed to provide the best protection. Every mother who brings her child to be immunized has done at least one thing right: she has brought her child to the health facility. The nurse should thank and praise every mother whom comes in contact with for doing this.<sup>12</sup>

It is unlikely that mothers will do everything exactly as they should, possibly because of a lack of information. Some may even perform harmful actions. The nurse have to advise carefully against undesirable behaviour and suggest alternatives. For example, a mother might give her child antibiotics in response to fever following immunization. The nurse could say: "Your child doesn't need that medicine if she has a reaction to immunization. The nurse could advice the mother to give a quarter of a tablet of paracetamol, lots of liquids and to continue breast-feeding at take home . It is important to give advice in a way that shows respect for the mothers rather than making them feel they have done something wrong. The nurse have remember to use words and phrases which mothers in your health catchment area would use, and give only one message for each action.<sup>13</sup>

It usually takes a few weeks for vaccines to work, so the child will not be protected immediately. Also, most vaccines need to be given several times to build up long-lasting protection. For example, a child who gets only one or two doses of the whooping cough vaccine is only partly protected against that disease and may still catch whooping cough.

More than one dose of the same vaccine is given in the first few years of a child's life. The extra doses improve the antibody response and give better long term protection. Booster doses of some vaccines are also given to school children to give better long term protection.

Immunisations will still work if the child doesn't get them at the right time: Most of these vaccines can be given at any age, and a child who misses one injection in a course of injections does not have to start again. The vaccines already given will still work and the child will still develop protection. Just ask the nurse this child needs to get the vaccines at the right age so that they are protected from serious diseases when they are most vulnerable.<sup>14</sup>

## **Research Methodology**

This chapter is exploring the methodology followed by researcher to Carrey out this study. It includes research design, setting and the tools and technique used to collect data. Also this chapter involves the way by which the tools are validate and reliable. In addition to these this chapter describes the statistical method used to formulate the results.

The methods and material of this study will be presented in three main designs as follows:

- 1- Technical design.
2. Operational design.
- And 3. Statistical design.

### **Technical Design:**

Technical design of the study includes Study design, study area, setting, study population, and tools of data collection.

#### **Study design:**

This is observation (descriptive study) conducted at vaccination center (Shendi city) to assess the mother's knowledge and attitude about child minimization

#### **Study area:-**

The study is carried out at Shendi town which is 176km north to Khartoum and 110 km south to Eldamer, the capital of River Nile State; Shendi lies on the eastern bank of the River Nile with a total area about 14596 Km<sup>2</sup>. The total population of Shendi 'locality' are about 197589. 116713 of whom are live in rural areas and 80876 in urban centers, most of population are farmers. Shendi University was established in early 1990s and stands as a landmark institution in Higher Education

**Setting:-**

This study was conducted at Shendi immunization center its main center concerns with immunization services for children in Shendi locality. This center was established since 1976, it provides immunization services for all children from urban and rural ears. The averaged number of children receive immunization per day is about twenty child. There is only three ordinary nurses deliver vaccination for children this center.

**Study population:**

This study involves mothers who bringing their children to center receive vaccine shoot.

**Sampling:****1- Sample techniques:-**

The sample was taken from all mothers who came to the center during Saturday, Monday and Thursday. Children whose presented by another persons rather than mothers are excluded

**2- Sample size: -** 50 mothers were participated in this study.

**Tools of Data Collection:**

The data was collected by questionnaire designed by researcher based on reviewing of literature, it consists of three sections; the first section was designed to collect data about personal characteristics of mothers. The second was designed to collect data about knowledge

of mother regard childhood immunization and the third one collect data about mother`s attitude toward immunization.

**Validity and real ability:-**

The questionnaire have been investigated/revised by three expertise they indicated that some items needed to be modified, and they assured that the tool was achieved the aim of the study.

**Operational Design:**

Operational design includes data collection technique and ethical consideration

**Data collection technique:-**

In this study the data was collected in one month the questionnaire was dispensed for mothers and each one of them is allowed sufficient time to fill it, some of mothers are illiterate , the researcher explain the questionnaire items for them then late them to choose the item according their knowledge.

**Ethical considerations:**

The study was approved by ethical committee of research in the faculty of post graduate and scientific research.

Before conducting the study, permission was taken verbally from immunization center administration and from staff delivering vaccination for children. The purpose of study was explained to each one of mother and the researcher assured them that the data collected from the questionnaire will remain confidential and it`s not allowed for any person to identify it.

### **Statistical Design:**

The collected data, organized, categorized, tabulated in tables using frequencies and figures. The statistical package for social sciences was used for statistical analysis.

**Table No (1) personal characteristic of study group**

Item	Study group N=50	
	N	%
<b>Age of mothers</b>		
15-25 years	21	42%
35-45 years	24	48%
25-35 years	5	10%
<b>Marital status of mothers</b>		
Married	47	94%
Divorced	1	2%
Widowed	2	4%
<b>level educational of mothers</b>		
Illiterate	7	14%
Primary	20	40%
Secondary	14	28%
University	8	16%
post graduate	1	2%
<b>Occupation</b>		
Professional	5	10%
house wife	40	80%
free labour	5	10%
<b>Family in come</b>		
Less than 250 SDG	2	4%
250 – 400 SDG	12	24%
401 - 549 SDG	13	26%
Over 550 SDG	23	46%

This table illustrates that 40% of study group at primary education level and 80% of them were housewives, whereas 46% study group their monthly income was over five hundred Sudanese pounds.



**Table No (2):** knowledge of mothers about immunization:

<b>vaccination refer to</b>	<b>n</b>	<b>%</b>
Curative of diseases	3	6%
Prevention of diseases	35	70%
Curative and prevention of diseases.	10	20%
Don't know	2	4%
<b>Vaccination hazards</b>		
vaccine has contraindications	41	82%
vaccine hasn't contraindications	9	18%
<b>These contraindications are</b>		
Sick child	10	20%
Allergic from previous vaccine shot	40	80%
Congenital anomalies	0	0%

This table explains that 70% of mothers are aware about the meaning of vaccination and 82% of them are identifying that vaccination is associated with hazards.

**Table No (3): knowledge of mothers about vaccination schedule**

<b>vaccines given at birth</b>	<b>n</b>	<b>%</b>
HBV vaccine	11	22%
BCG vaccine	6	12%
Oral polio vaccine	1	2%
don't know	32	64%
<b>vaccines that given at six weeks</b>		
Oral Polio vaccine	7	14%
PENTA vaccine	9	18%
Rota virus vaccine	2	4%
don't know	32	64%
<b>vaccine that given at ten weeks</b>		
Oral Polio	4	8%
PENTA	4	8%
Rota virus	3	6%
don't know	39	78%
<b>vaccine that given at fourteen weeks</b>		
Oral Polio vaccine	3	6%
PENTA vaccine	4	8%
Rota virus vaccine	4	8%
don't know	39	78%
<b>vaccine given at nine month</b>		
Measles	39	78%
don't know	11	22%
<b>vaccine given at eighteen month</b>		
Measles	20	40%
don't know	30	60%

This table illustrates that 64% of mothers were didn't know the vaccine that given at birth and six weeks respectively. 78% of mothers are aware that the measles vaccine is given at nine months.

**Table No (4):** attitude of mothers toward immunization:

Where should you prefer to receive vaccination	n	%
Governmental health institution	42	84%
Private health sectors	8	16%
<b>child vaccination</b>		
Completely immunized	37	74%
Partially immunized	8	16%
Not immunized at all	5	10%
<b>Reasons for unimmunization</b>		
Vaccination is unnecessary	32	64%
Your husband refuse vaccination program	13	26%
Lack of transportation	5	10%
<b>Immunization is complete on schedule</b>		
Yes	32	64%
No	18	36%
<b>Are allowing of unimmunized children to mix with your children</b>		
Yes	47	94%
No	3	6%

This table shows that 84% of mothers were prefer governmental health sector for vaccination rather than private sector. 74% of the mothers their children are complete vaccination schedule.94% of mothers allow their children to mix or play with unimmunized children

Table No (5) home management carried out by mothers when their children experience side effects after vaccine shot

<b>If the child develop wound after BCG vaccine what is to action be do?</b>	<b>n</b>	<b>%</b>
- dressing with gauze	3	6%
- dressing with cotton	2	4%
- using with traditional substance	5	10%
- seeking medical services	10	20%
- do nothing	30	60%
<b>If the child not develops swelling after BCG vaccine what is to action be do</b>		
- return him to immunization center	1	2%
- do no things	49	98%
<b>If the child develops pimple after BCG vaccine do you continue on vaccination process?</b>		
- Yes	47	94%
- No	3	6%
<b>If the child become crying and refuse breast feeding after vaccine shot what is to action be do?</b>		
- hold and cuddle the child	18	36%
- put child against affect side	19	38%
- try to feed more time	9	18%
- bring the child to the hospital	4	8%
<b>If your child develops convulsion after vaccination shot what is to action be do?</b>		
- bath the child with tap water after convulsion	3	6%
- seeking medical care	47	94%
- do no thing	0%	0%

This table illustrates 60% of mothers do no things if their children develop wound after receive BCG, while 98% them will not return their children if not develop swelling/pimples after BCG also 94% of mothers seeking the medical care for their children after convulsion occur .

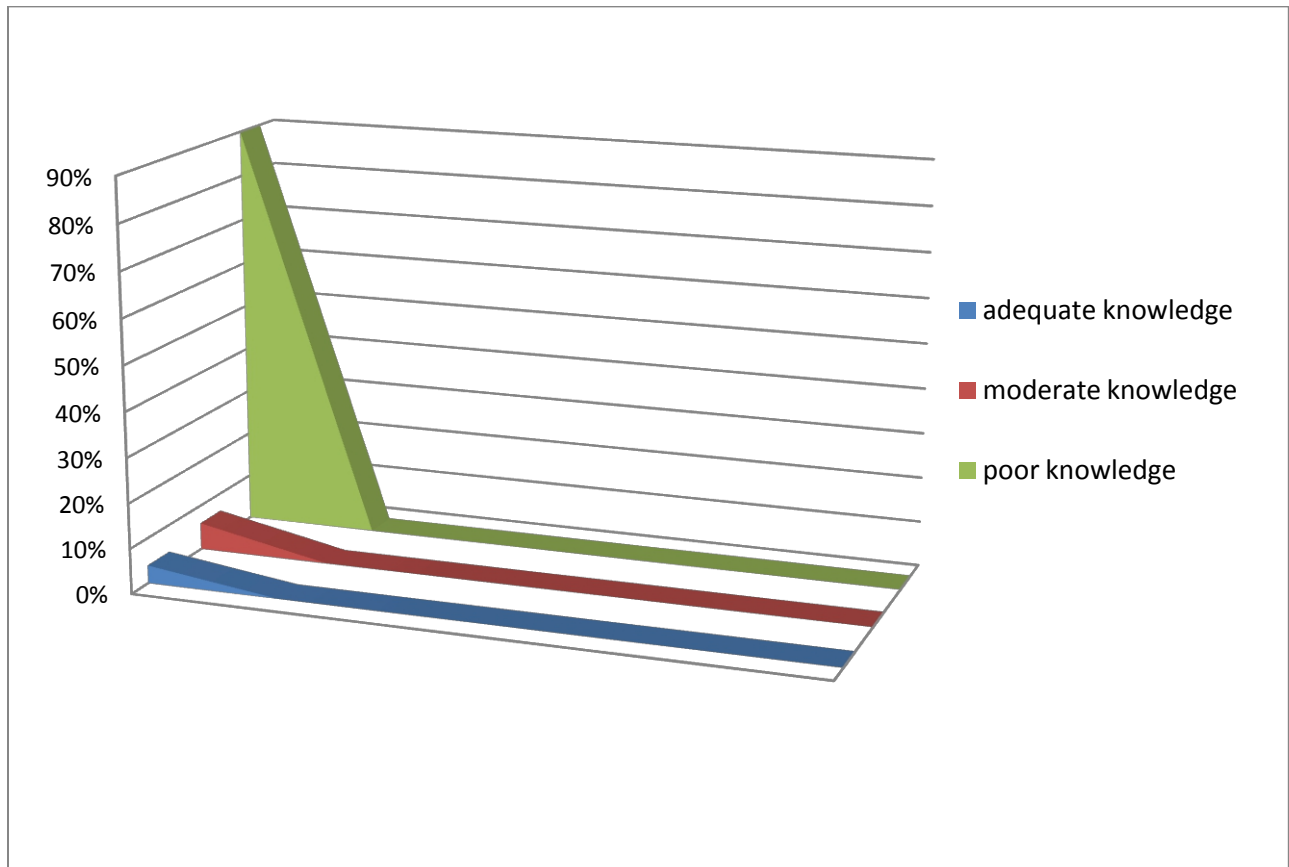


Figure No (1) knowledge of mothers about diseases that require immunization.

*This figure shows that 90% of study group had poor knowledge about diseases that require immunization.*

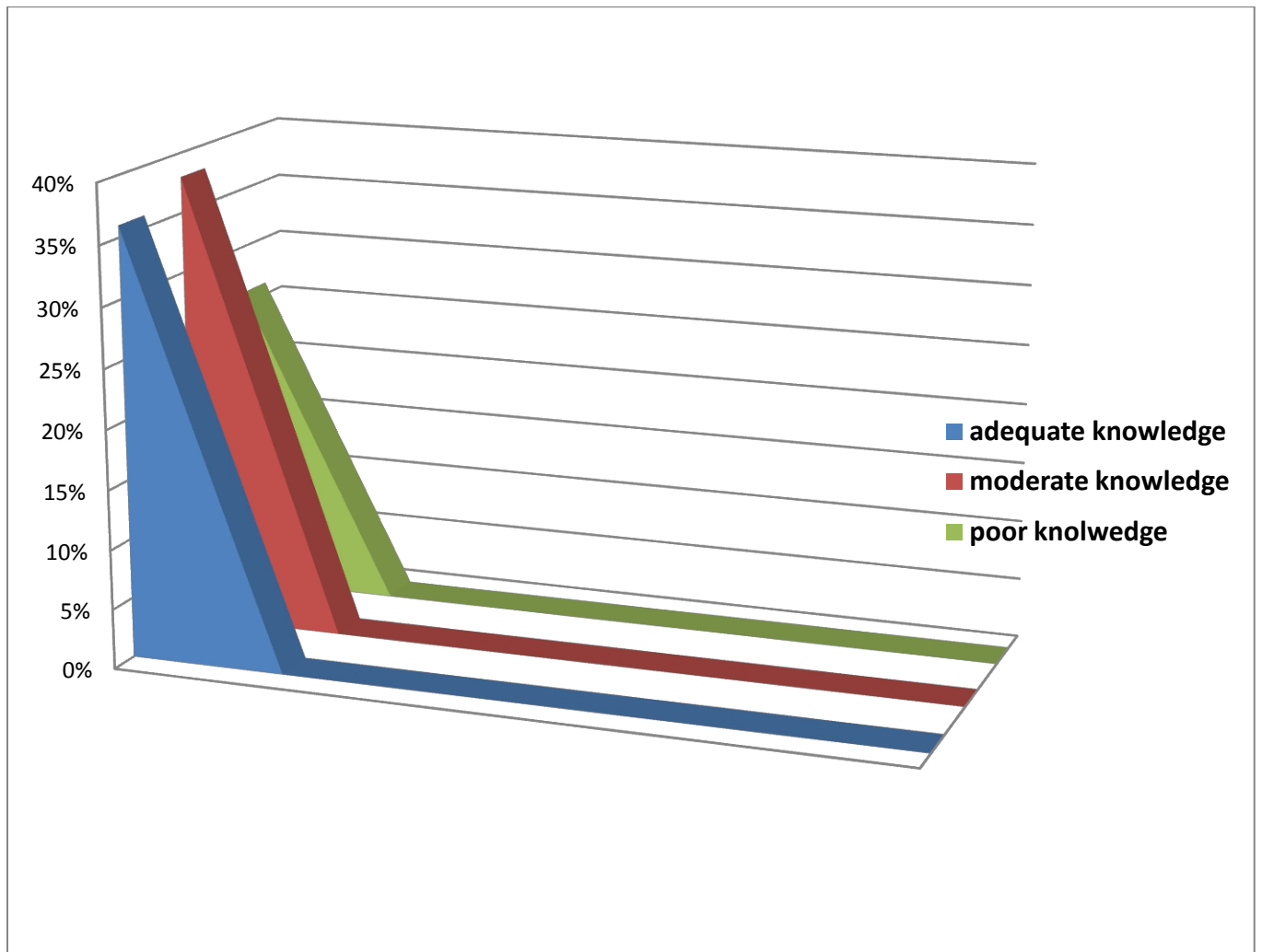


Figure No (2) knowledge mothers about side effects of vaccination  
*In this figure 38% of mothers had acceptable knowledge about side effects of vaccination.*

## Discussion

Immunization remains one of the most important public health interventions and a cost effective strategy to reduce both the morbidity and mortality associated with infectious diseases. Childhood immunization is an act of inducing immunity to a child by applying a vaccine that almost guarantees protection from many major diseases. However, 2.5 million deaths a year continue to be caused by vaccine-preventable diseases, mainly in Africa and Asia among children less than 5 years old <sup>8</sup>.

This present study aims to assess the knowledge and attitude of mothers attending vaccination center in Shendi city towards childhood immunization as the findings obtained may serve as the basis for effective intervention.

This study shows that most (70%) the mothers were aware of immunization and that immunization could prevent childhood diseases. However vast majority (82%) of the mothers were recognize that vaccination has contraindications such as sick child and allergic from previous vaccine shot. This point is important because awareness of mothers about contraindication will led mothers to tell nurses who give vaccine about this contraindication. Although most of mothers were about definition of immunization, majority of them were had poor knowledge diseases which their children were vaccinated against which. This poor knowledge reveals that mothers were not receiving information about these diseases.

This founds that more than one third of responders were had adequate knowledge about side effects of vaccination, but all mothers have to know the side effects of immunization because knowledge of them about these side effects will increases the possibility of overcoming these side effects and reduce the serious complication which result from them. The nurse has to be

specific about possible side-effects and advice mothers on what side-effects can be expected, on what is normal, and on what to do about side-effects if they occur<sup>12</sup>.

This study reveals that mothers have poor knowledge about vaccination schedule and the type of vaccines recorded on vaccination card. The found that more than two –third of responders were didn't know the vaccine that should be given at birth and six weeks after birth respectively. In addition to these 78% were didn't aware about the vaccines that are given at ten weeks and fourteen weeks respectively, however most mothers were identify that measles vaccine is given at nine months, this may be due to recurrent appearance of measles attack which stimulate the mothers to increase curiosity to ask about the age at which measles vaccine was to be given.

In regard to attitude of responders about immunization; the study clears that vast majority of mothers were prefer to vaccinate their children in governmental vaccination center rather than private health institute, this may due to cost free of governmental center and high trustful allocate by this mothers on these governmental one. Moreover most of mothers their children are fully vaccinated, whereas few mothers were not immunized their children at all and 64% of those not immunized their children are indicated that immunization is unnecessary. In spite of smallest number of unimmunized children but it consider dangerous because if only one child of those unimmunized children develop poliomyelitis he/she may spread it to many children particularly those whom not fully immunized, moreover the country will repeat Vaccination campaign against polio.

This study shows that vast majority (94% )of mothers were agree to their children to play with children whom not immunized, but this point also associated with dangerous because unimmunized child can transmit infection to other children specially if they were not complete



the immunization schedule. Nurses at vaccination center have to explain for mothers not to allow their children to mix with those not receiving vaccination

In regard to action carried out by the mothers when their children experience side effects after vaccination shot; this study shows that, 60% of mothers were do no things for their children if they were developed wound in their hands as a result of BCG . While vast majority of mothers were seeking medical care if their children develop convulsion after vaccine shot. This is good attitude because child convulsion is serious condition and may associate with other complications.

## **Conclusion**

During the twentieth century, scientific innovations led to the development of improved vaccines for several infectious diseases.

The present study elicits that mothers were aware of immunization and that immunization could prevent childhood diseases and most of mothers their children are fully vaccinated. However vast majority of the mothers were recognize that vaccination has contraindications.

In addition to these mothers have adequate knowledge about side effects of vaccination while most of them were do no things for their children if they were developed side effects, except in case of convulsion mothers were return their children to hospital for treatment of convulsion.

## Recommendations

1. Health care authorities have to assigned qualified staff for mothers educations and provide a suitable place for teaching supported by audiovisuals tools to promote teaching process
2. Nurses have to teach the mothers about sensitivity of BCG vaccine
3. Health care providers have to emphasis for mothers not to allow their children to mix with unimmunized children

## Reference:

1. <http://www.path.org/our-work/immunization.php>
2. Adhikari P, Dhungel S, Shrestha R et al. Knowledge, attitude and practice (KAP) study regarding facts for life. Nepal Med Coll J 2006; 8: 93-6.
3. Frenkel LD, Nielsen K. Immunization issues for the 21st century. Ann Allergy Asthma Immunol 2003;90(Suppl 3):45-52.
4. Federal ministry of health . expanded program on immunization. GAVI. Progress report . khatrom 2005.
5. [http://www.healingarts.org/children/vaccines/index.htm#Introduction to Children's Vaccines](http://www.healingarts.org/children/vaccines/index.htm#Introduction_to_Children's_Vaccines). Access on 14.4
6. Boëlle PY. Theoretical epidemiology and vaccine. Rev Med Interne 2007; 28: 161-5.
7. <http://www.emro.who.int/sdn/programmes/epi-sudan.html> **Access on 22/10/2012** .
8. GIVS (2005) *Global Immunization Vision and Strategy 2006-2015*. Geneva: WHO/UNICEF. Available from: <http://whqlibdoc.who.int/hq/2005/WHO> .
9. Matsumura, T., Nakayama, T., Okamoto, S. & Ito, H. (2005) Measles vaccine coverage and factors related to uncompleted vaccination among 18-month-old and 36-month-old children in Kyoto, Japan. *BMC Public Health* 5, 59.
10. [http://www.netdoctor.co.uk/health\\_advice/facts/childhoodvaccinations.htm](http://www.netdoctor.co.uk/health_advice/facts/childhoodvaccinations.htm) access on 23/10/2012
11. Noam Bar, RSHom CHILDHOOD VACCINATIONS – A HOMEOPATHIC VIEW. **E: noam1965@hotmail.com, M: 07813 924 953 .**
12. American academy of pediatrics 2010.
13. WHO/EPI/TRAM/97.06 . Module 2: How to communicate with mothers about immunizations
14. **(Health Protection Surveillance Centre Website: [www.hpsc.ie](http://www.hpsc.ie)).**

Shendi university

Faculty of postgraduate studies

Department of MSc paediatric nursing

The knowledge and attitude towards childhood immunization among  
mothers attending immunization center in Shendi town

SN.....

**Socio-demographic characteristics of respondents:**

1. Age (year) a. 15- 25 years ( ) b. 25- 35years ( ) c. 35-45years ( ) e. over 45years ( )
2. Marital status a. Married ( ) b. Divorced ( ) c. Widowed ( )
3. Education: a. Illiterate ( ) b. Primary ( ). c. Secondary ( ). University ( )
4. Occupation: a. Professional ( ) . b house wife( ) . free labour ( )
5. Family income per monthly  
a. Less than 250 SDG b. 250 – 400 SDG ( ) c. 401 - 549 SDG ( ) d. Over 550 SDG ( )

**Knowledge of respondents about immunization**

6. Vaccination is refer to  
b. Curial of diseases ( ) b. Prevention of diseases ( ) c .Both( ) d. Don,t know ( )
7. The child must be immunized against the following diseases:  
a. Poliomyelitis ( ) b. Measles ( ) c. Diphtheria ( ) d. Tuberculosis ( ) e. Hepatitis BV ( ) f. Tetanus ( ) g. pertisus (whooping cough) ( ) h. diahorreal diseases ( ) i. Influenza ( )
8. At birth the child receive the following vaccine?  
a. HBV ( ) b. BCG ( ) c. polio ( ) d. don't know ( )
9. At 6 weeks the child receive the following vaccine  
a. Polio ( ) b. PENTA ( ) c. rota virus d. don't know ( )
10. At 10 weeks the child receives the following vaccine.

a. Polio ( ) b. PENTA ( ) c. rota virus ( ) d don't know ( )

11. At 14. Week the child receive the following ( )

a. Polio ( ) b. PENTA ( ) c. rota virus ( ) d. don't know ( )

12. At 9months the child receive the following vaccine a.Measles ( ) b. don't know ( )

13. At 18 months the child receive the following vaccine

a. Measles ( ) b. don't know ( )

14. vaccination can result in the followings side effects

a. Fever ( ) b. Pain & tenderness( ) c. Discomfort , crying and irritability( )  
d. Convulsion( ) e. Breast feeding refuse ( )f. Diseases from life attenuated vaccine( )

15. Are these side effects dangerous? a. Yes ( ) b. no ( )

16. Vaccination has contraindications? a. Yes ( ) b. no ( )

17. If yes what are them?

a. sick child ( ) b. Allergic from pervious vaccine shot ( )

**Attitude of mothers towards vaccination**

18. Are you in favour of vaccination? a. Yes ( ) b. No ( )

19. Is it important to follow vaccination schedule a. Yes ( ) b. No( )

20. Where should you preferably receive vaccination?

a. Government health institution ( ) b. Private health facility

21. Are all of your children vaccinated?

a. Ccompletely immunized ( ) b. Partially immunized( )  
c. Unimmunised ( ).

22. Was immunisation completed on schedule? Yes( ) b .no ( )

23. If Unimmunised why?

a. Vaccination is not necessary ( ) b. Your husband refuse  
vaccination program ( ) c.Lack of transportation ( ) d. No clear  
reasons

24. Are allow the unimmunised children to mix with your children?  
 a. Yes ( )      b. no ( )
25. If the child not develops swelling after BCG vaccine do you continue the next vaccination? Yes ( ) no ( ).
26. If the child develop wound after receiving BCG vaccine do you continue the next vaccination?      a. Yes ( )      b. no ( )
27. If the child develops fever, pain and tenderness after vaccination shot what to action you do?  
 a. Apply cold compress ( ) b. light & wide cloths ( ) c. try to avoid touching the affected area. ( ) d. give paracetamol ( ) e. Bring him/she to hospital( )
28. If the child develops crying and refuse breast feeding after vaccination shot what to action you do?  
 a. I hold and cuddle him/she( ) b. put him/she against affect side( ) c. Try to feed him/she more times( )d. bring back to the hospital( )
29. If the child develops convulsion after vaccination shot what to action you do?  
 a. bath him/she with tap water after convulsion ( ) b. call for ambulance ( )
30. if the child develop wound after receiving BCG vaccine what is your action;  
 a. dressing with gauze   b. dressing with cotton   c. using with traditional substance   d. seeking medical services   e. do nothing