



**University of Malawi  
KAMUZU COLLEGE OF NURSING**

**HEALTH SURVEILLANCE ASSISTANTS (HSA's) KNOWLEDGE AND  
MANAGEMENT OF IMMUNIZATION ADVERSE EFFECTS AT KAWALE  
AND AREA 25 HEALTH CENTRES IN LILONGWE**

**BY  
RONALD NACHIPO MLERA**

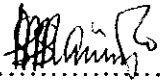
**SUPERVISED BY  
MRS. J.L CHIMANGO (Senior Lecturer)  
Msc, Bsc (Hons) RPH, RN/M**

**DISSERTATION SUBMITTED TO THE UNIVERSITY OF MALAWI,  
FACULTY OF NURSING IN PARTIAL FULFILLMENT OF BACHELOR OF  
SCIENCE DEGREE IN NURSING**

**December, 2009**

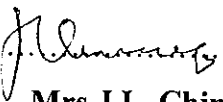
### DECLARATION

I declare that this study is solely the result of my own work, it has never been done anywhere for this purpose.

  
.....


02/12/09  
.....

Ronald Nachipo Mlera    DATE  
(Student researcher)

  
.....

4/12/09  
.....

Mrs.J.L. Chimango    DATE  
(Supervisor)

University of Malawi  
Kamuzu College of Nursing  
  
31050000521517

## **DEDICATION**

I dedicate this project to my mum who has done a recommendable job for my life.

Without her efforts life could have been so tough.

## ACKNOWLEDGEMENT

I would like to thank God for the love that He has shown during the whole period writing this dissertation.

Many thanks to Mrs. J.L.Chimango, senior lecturer in community and mental health department for her precious time she has spent giving me directions on what to do since the time I was writing the proposal and this dissertation.

I would also like to thank Mrs. Kumvula Senior health surveillance assistant of Area 25 Health centre for the assistance she gave during the time of data collection

Finally, I would like to thank my Mum and my brother Mr.Issah & M.E Nachipo, for the financial support that has been rendered for this project.

May God bless them all.

## TABLE OF CONTENTS

CONTENT	PAGE
Declaration.....	I
Dedication.....	II
Acknowledgement.....	III
Table of contents.....	IV
List of abbreviations.....	VI
Abstract.....	VII

### CHAPTER ONE

1.0 Introduction.....	1
1.1 Background.....	2
1.2 Statement of the problem.....	3
1.3 Significance of the study.....	4
1.4 Objectives of the study.....	4
1.4.1 Broad objective.....	4
1.4.2 Specific objectives.....	4

### CHAPTER TWO

2.0 Literature review.....	5
2.1 Introduction.....	5
2.2 Studies done outside Africa.....	5
2.3 Studies done in Africa.....	7
2.4 Studies done in Malawi.....	7
2.5 Conclusion of literature review.....	8

### CHAPTER THREE

3.0 Conceptual framework.....	9
3.1 Diagrammatic form of Health belief Model.....	10
3.2 Application of the conceptual framework.....	11

## **CHAPTER FOUR**

4.0 Methodology.....	12
4.1 Introduction.....	12
4.2 Research design.....	12
4.3 Setting and sample size.....	12
4.4 Pilot study.....	13
4.5 Data collection instrument.....	13
4.6 Plan for data analysis.....	13
4.7 Ethical consideration.....	13
4.8 Limitation of the study.....	14
4.9 Dissemination of results.....	14

## **CHAPTER FIVE**

5.0 Presentation of findings.....	15
-----------------------------------	----

## **CHAPTER SIX**

6.0 Discussion of findings.....	25
6.1 Conclusion.....	29
6.2 Recommendations.....	29
6.3 Area of further studies.....	29
Reference.....	30

## **APPENDICES**

Appendix 1 Budgetary estimates.....	32
Appendix 2 Time table .....	34
Appendix 3 Consent Form.....	35
Appendix 4 Questionnaire English version.....	36
Appendix 5 Questionnaire Chichewa version.....	41
Appendix 6 Approval certificate .....	46
Appendix 7 Letter to the District Health Officer .....	47
Appendix 8 Letter to in charge Kawale health centre.....	48
Appendix 9 Letter to in charge Area 25 health centre.....	49

## LIST OF ABBREVIATIONS

AEFI	Adverse Effects Following Immunization
BCG	Bacillie Calmette Guerin
CCAP	Church of Central African Presbyterian
DPT	Diphtheria, Pertusis, Tetanus
EPI	Expanded Programme of Immunization
HepB	Hepatitis B
Hib	Hemophilus influenza b
HAS	Health Surveillance Assistants
JCE	Junior Certificate of Examination
MSCE	Malawi School Certificate of Examination
OPV	Oral Polio Vaccine
PSLCE	Primary School Leaving Certificate of Examination
SPSS	Statistical Package for Social Sciences
UNICEF	United Nations Children Fund
VAERS	Vaccine adverse effects reporting system
WFFC	World Fit for Children
WHO	World Health Organization

## ABSTRACT

Immunization services are provided by Health surveillance Assistant's who at first were recruited as chicken pox vaccinators around 1960s. They are responsible for about 60% of all vaccinations provided to children under five both in rural and urban areas. Although this is the case, literature has shown that these people are not well trained and some did not pass through any training before they started working and parents have been reporting to the hospital with different adverse effects following immunizations.

This research therefore wanted to find out Health surveillance assistant's knowledge and management of immunization adverse effects. The objectives of the study were; to assess knowledge that HSAs have on immunization adverse effects, finding out the effects observed by HSAs following immunization and finding out ways used by HSAs in managing immunization adverse effects.

The study used a descriptive quantitative method to describe the HSAs knowledge and management of immunizations adverse effects. Non-probability quota sampling of 30 HSAs from Kawale and Area 25 Health centres was used to collect data from 27<sup>th</sup> August to 28<sup>th</sup> August, 2009. Analysis of quantitative data employed Statistical package for Social Science (SPSS) Version 11.5 while qualitative data was analysed by content analysis. Permission was sought from Kamuzu college of Nursing research and publications committee, Lilongwe district health office and the in charges of Kawale and Area 25 health centres.

The findings of the study were that 60% of the respondents had junior certificate as their highest qualification while 40% had Malawi School certificate of examination. 100% of the respondents worked more than one year. 66.7% of the respondents had training before they started working and 80% of those who had training covered the full course of immunizations. It has also been found that 93.3% have never attended an in service training on immunizations since the time they started.

The findings of the study were that 83.3% of the respondents had adequate knowledge on immunizations adverse effects. They were able to indicate factors that can lead to immunizations adverse effects development, and how to prevent its development. It has also been found that 63.3% of the HSAs came across immunizations adverse effect abscesses being the commonest. Almost all those who came across these effects refer children to the hospital to be seen by the clinicians for better management.

The conclusion is that; the level of knowledge of some HSAs on immunisations adverse effects is low and some even do not know so HSAs have to be provided with adequate knowledge on the whole course of immunizations including adverse effects before they start working.

HSAs should be provided with in-service trainings on immunizations so as to increase their knowledge on the subject since things are changing. These trainings will also help in updating knowledge they gained during their initial trainings.

HSAs should also be trained on how to manage minor effects following immunizations such as fever and body rash.

## 1.0 INTRODUCTION

Immunization is the process by which an individual's immune system becomes fortified against an agent known as immunogen ([www.en.wikipedia.org/wiki/immunization](http://www.en.wikipedia.org/wiki/immunization)). It uses the body's natural defense mechanisms the immune response to build resistance to specific infections thereby reducing morbidity and mortality.

Once a person has been immunized, the body produces an immune response in the same way the body would after exposure to a disease. When a person comes in contact with that disease in the future, his immune system responds fast enough to prevent him from developing the disease. Vaccines have some effects that can either be mild and some cases severe that are also referred to as adverse effects following immunization (AEFI). Detecting and managing side effects and AEFI is the responsibility of everyone involved in child care such as health workers providing clinical treatment, immunization or other preventive services in the government or private sector, parents and care takers who report AEFI or other side effects affecting their children and health surveillance officers and researchers.

Malawi provides these services through the ministry of health by the Health Surveillance Assistants. The goal is to reduce morbidity and mortality rates from vaccine preventable diseases such as tuberculosis, measles, poliomyelitis, diphtheria, pertusis (whooping cough), tetanus haemophilus influenza b and hepatitis B infections (Expanded programme immunization, Malawi field operational manual, 2002, p 5). Between 1999 and 2004, Malawi's immunization health plan had an objective of attaining and sustaining more than 95% coverage of BCG, DPT-Heb hib, OPV and measles vaccine by 2005.

The researcher therefore thought it wise to find out Health surveillance assistant's knowledge and management of immunization adverse effects.

## 1.1 BACKGROUND

Immunizations protect people against harmful infections that can cause harmful complications including death during the early period of life.

According to United Nations Children's Fund and World Health Organisation guidelines, before reaching one year, a child should receive a BCG vaccination to protect against tuberculosis, three doses of DPT-HepB +Hib (pentavalent vaccine) to prevent against diphtheria, pertusis, tetanus, hepatitis B and haemophilus influenza b bacteria such as meningitis and pneumonia, three doses of polio vaccine and a dose of measles vaccine.

The Millennium development goal number 4 sets out a goal to reduce child mortality by two thirds between 1990 and 2015. One of the goals of World Fit for Children in Malawi (WFFC) is to achieve full immunization of 90% of children less than 12 months of age at 90% nationally with at least 80% coverage in every district or equivalent administrative unit (Multiple Indicator Cluster System, 2006).

Almost all the vaccines stated above, at some point in time they come with side effects which can be life threatening while others can be mild. Responsibility of detecting these effects lies in the hands of the provider, parents and caretakers who report effects affecting their children and surveillance assistance.

In Malawi, immunization services are provided by the health surveillance assistants (HSAs) who at first were recruited as temporally small pox vaccinators in around 1960s and Cholera assistance in the mid 1970s. Over time, they have formed an extensive network of ground staff bridging the formal health services and the community. In addition to this they are responsible for about 60% of all vaccinations provided to children under five in rural areas. Their contribution has enabled Malawi to virtually reduce the prevalence rates of the highly infectious preventable infections such as measles, polio, diphtheria, pertusis, small pox and tetanus.

## **1.2 PROBLEM STATEMENT**

Although HSAs have been reported to have contributed a lot to the implementation of immunizations in Malawi, various reports show that there are some areas that need to be looked into. The report on the Expanded Programme of immunization in the African region strategic plan 2002-2005 reports that, a large proportion of health centers that provide immunization services show that 15% to 60% did not meet sterility standards. 25% to 55% recorded abscesses as adverse effects following injectable immunizations.

Kadzandila & Chilowa (2001) in a survey to assess the role of Health surveillance assistants in the delivery of health services and immunization in Malawi reported that there was a high drop out of immunizations due to adverse effects of most vaccines. They also reported that out of 121 HSAs 19% were untrained and were having irregular and inadequate supervision.

In view of this, the researcher thought of assessing the Health Surveillance Assistants' knowledge and management of AEFI.

## **1.3 SIGNIFICANCE OF THE STUDY**

The study will help in evaluating the level of knowledge and management that HSAs have on AEFI. In addition to these, it will help policy makers to draw appropriate plans in the promotion of immunization services so as to prevent AEFI. Finally, the study will provide relevant literature for future research on adverse effects following immunization.

## **1.4 OBJECTIVES OF THE STUDY**

### **1.4.1 BROAD OBJECTIVE**

To assess Health Surveillance Assistant's knowledge and management of immunization adverse effects (AEFI).

#### **1.4.2 SPECIFIC OBJECTIVES**

- To assess knowledge that HSAs have on AEFI
- To find out the effects observed by HSAs following immunization
- To find out ways used by HSAs in managing AEFI

## **CHAPTER TWO**

### **2.0 LITERATURE REVIEW**

#### **2.1 INTRODUCTION**

Literature review provides readers with a background for understanding current knowledge on a topic and illuminates the significance of the new study. It orients to what is known and not known about an area of enquiry to ascertain what research can best make a contribution to the existing base of evidence (Beck & Polit, 7th).

#### **2.2 STUDIES DONE OUTSIDE AFRICA ON ADVERSE EFFECTS FOLLOWING IMMUNIZATION**

Turnbull et al (2002), in a prospective national study of adverse reactions after vaccination with BCG at Alexandra hospital, found that among 918 subjects (aged 1 day to 54 years) over a 14 months period, 45 vaccines 5% reported AEFI; 23 injection site abscess, 14 severe local reaction, 10 cases of lymphadenitis and 6 other reactions. Reactions particularly lymphadenitis were significantly less common in infants less than 6 months old but were common in subjects aged 6 months or more than 6 months vaccinated by trained versus untrained providers.

Zhou et al (1991-2001), in the Vaccine adverse events reporting system (VAERS), between 1991 and 2001, 128,717 describing AEFI were reported where more than 1.9 billion net doses of vaccines were distributed. Overall, 14% of all reports received during this period described serious adverse events. During this period reports of death ranged from 1.4% to 2.3% and reports of life threatening illnesses ranged from 1.4% to 2.8% of all adverse event reports.

Long et al (1990) in a longitudinal study of adverse reactions following DPT Vaccine. A prospective study of immunogenicity and adverse effects of 1,553 doses of diphtheria, tetanus toxoid and whole cell pertusis vaccine was performed in 538 children who were

observed longitudinally from two months to twenty months of age. Compliance for completing a clinical observation form in 48 hours following immunization was more than 99%. Fever, local reactions or adverse behavioral effects were described in association 96% DPT doses and 36% of placebo injections. Contraindications to DPT immunization developed in 3% of study children, behavioral and local inflammatory effects occurred 6 hours following immunization but fever peaked later.

According to Annanari et al 1996, in their report on serious adverse events after measles, mumps -rubella vaccination during a fourteen year prospective follow up in Finland, immunization of 1.8 million individuals and consumption of almost 3 million vaccine doses by the end of 1996 gave rise to 173 potentially serious reactions caused by measles, mumps – rubella vaccination. In all, 77 were neurological, 73 allergic, 2 miscellaneous reactions and one death were reported, febrile seizures being the most common event, 45% of these events provided to be probably caused or contributed by some other factor giving an incidence of serious adverse events with possible or indeterminable causal reaction with measles, mumps-rubella vaccination.

Mass et al (2005), in their report on adverse effects following immunization in the national vaccination programme in Netherlands, reports were received from child health professionals, parents, general practitioners, paediatricians and other professionals. Over 1.4 million vaccinations, 1036 AEFI were reported. Out of these, 5 % were unclassified because of insufficient information. 73 % of classifiable events were related to vaccines. 47 % were major adverse reactions while 53 % were minor reactions.

### **2.3 STUDIES DONE IN AFRICA**

Die-Kacou et el (2005) also conducted similar research as above on post vaccine adverse effects monitoring during national campaign of vaccination against measles in Cote d'Ivoire from 18<sup>th</sup> August to 25<sup>th</sup>, 2005 .The objective was to determine the incidence of AEFI in this vaccinated population. It concerned children from 9 months to 15 years old.

Were included all events occurred between August 18 and September 18<sup>th</sup>, 2005 on vaccinated children. These events were analyzed according to WHO criteria. 75 cases of AEFI were notified. The incidence of AEFI was estimated at 1.91 cases per 105 vaccinated children. Children from 5 months to 59 months represented 57.33% with a sex ratio of 1.33. 20% of AEFI after vaccination were serious. The 69.33% of AEFI had occurred in the first three days after vaccination. The cutaneous-mucous allergies were represented more than half of AEFI representing 53.33% followed by feverish syndrome 24%. 67% of causes were the vaccine reactions, 29% coincidental and errors of programme representing 4%.

Dicko et al (1995) conducted a study on safety of immunization injection in Africa. The findings are as follows; between 1989 and 1994, unsafe injection practices were widespread in West and East Africa. In West Africa in 1989, the annual rate of injection associated abscess was 231 per 100 000 population. In East Africa in 1994, 37% of households had at least one member who had developed an abscess following injection. In 1997-1998, injection associated abscess were reported from 40% of health centers in Swaziland where only disposable syringes and needles were used and 55% of health centers in Chad.

#### **2.4 STUDIES DONE IN MALAWI**

Kadzandila & Chilowa, 2001 conducted a research on the role of Health Surveillance Assistance (HSAs) in the delivery of health services and immunization in Malawi. The study used 121 HSAs from different health centers in Salima, Nkhosokota, Ntchisi and Dowa. More than 30% of the sampled HSAs said they enjoyed doing health talks and giving immunizations but they reported to have lacked skills on how to administer vaccines such as BCG and DPT. HSAs also reported that they were meeting hurdles due to high drop outs because of side effects following immunization. 19% of the sampled HSAs were untrained and their supervision was inadequate and irregular.

## **2.5 CONCLUSION OF LITERATURE REVIEW**

The literature has reflected different studies that have been conducted worldwide on adverse effects following immunization. This shows that AEFI is an important area in immunization that need to be given attention because leaving it without doing anything will make more immunization dropouts. Because of this, there is a need for the government to take proper actions so as to prevent these occurrences. This is so because studies that have been conducted here in Malawi focuses on the coverage of immunizations and the knowledge of mothers on immunizations but research on AEFI are not done.

## CHAPTER THREE

### 3.0 CONCEPTUAL FRAMEWORK

Burns & Grooves 2001 defined conceptual framework as an abstract, logical structure of meaning that guides the development of the study and enables the researcher to link the findings to the body of knowledge under study. Polit & Beck, 2003 conceptual framework allow researchers to knit together observations and facts into an orderly scheme, they draw together accumulated facts, sometimes from separate and isolated investigations and they provide a basis for predicting the occurrence of phenomena (Polit & Beck, 2003).

The research used Health belief model (HBM) as the conceptual framework. The model was developed by Rosenstock & Becker in 1978. It postulates that health seeking behavior is influenced by a person's perception of a threat posed by a health problem and the value associated with actions aimed at reducing the threat. The major components of the HBM include perceived susceptibility that is a person's perception that a health problem is personally relevant or that a health problem is personally relevant or that the diagnosis is accurate.

Even when one recognizes personal susceptibility, action will not occur unless the individual perceives the severity to be high enough to have serious organic or social implications.

A perceived benefit is another component, which is the patient's belief that a given treatment will cure the illness or help prevent it. Perceived cost is complexity, duration and accessibility of the treatment. Motivation is the desire to comply with treatment. Among the modifying factors that have been identified are personality variables, patient satisfaction and sociodemographic

Factors

### 3.1 THE HEALTH BELIEF MODEL

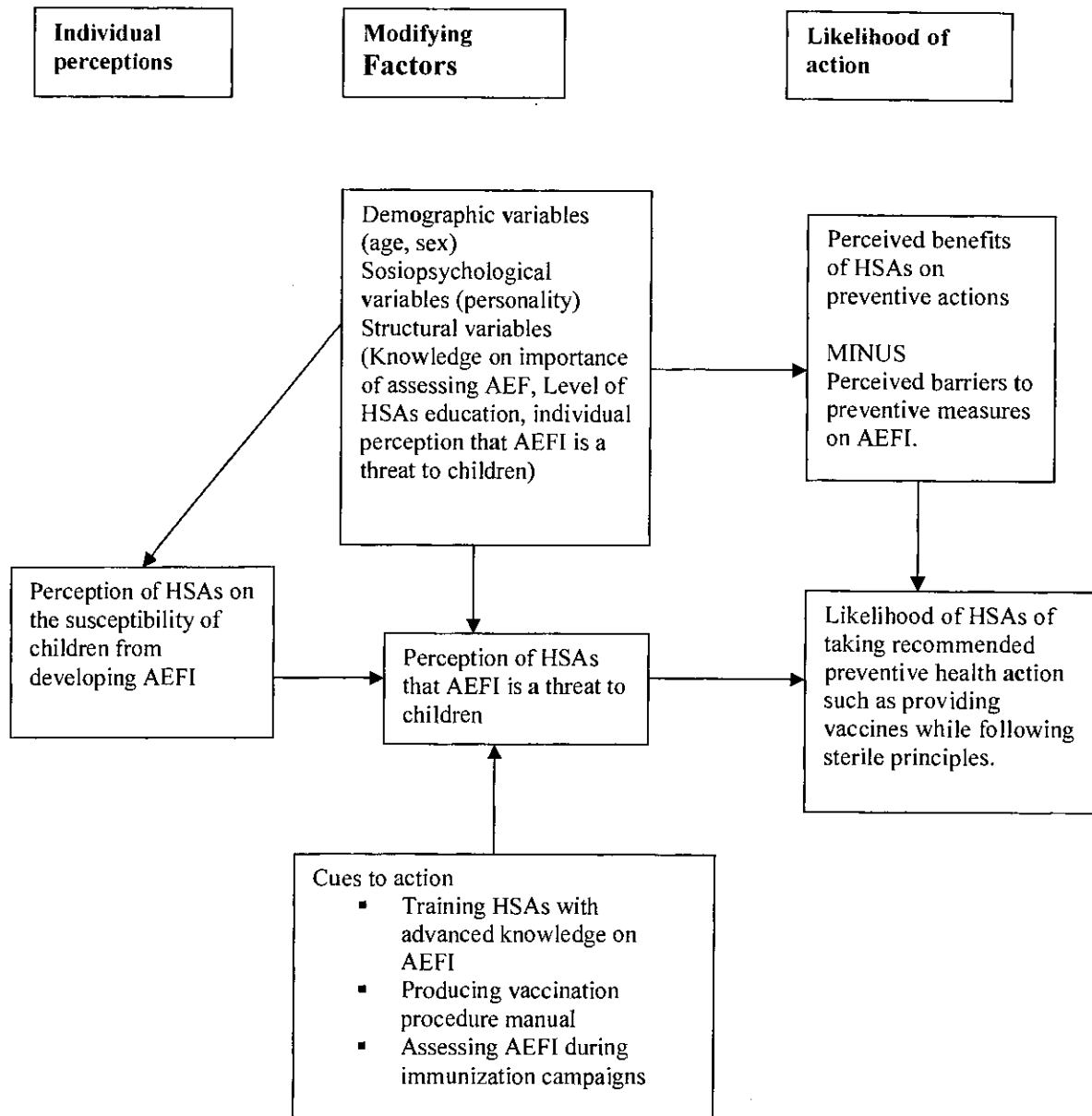


Figure 1. Showing Health Belief Model, Adapted from Kozier & Blais, 1995

### 3.2 APPLICATION OF THE MODEL TO THE STUDY

HSA's will find it difficult to assess or prevent AEFI development unless they perceive that children are susceptible to AEFI if no proper actions are done during immunization sessions.

Perceived susceptibility means HSA's perception that children are at risk of developing AEFI and are relevant to be investigated by each and every HSA as he or she provides the service and afterwards.

Making follow up of children after immunization for identification of AEFI by HSA's is influenced by their perception of a threat that AEFI pose to children and the values associated with actions that can be taken with the aim of reducing them.

When an HSA recognizes susceptibility of children, he/she will take an action since he/she will have perception that severity of AEFI can be high enough to have serious implications on the children including death.

Knowledge and management of AEFI by the HSA's will influence them to realize the benefits of taking preventive measures such as maintaining sterility and all other measures that are supposed to be followed when providing immunization services so as to prevent AEFI.

However, assessment and identification of AEFI may be affected by the HSA's knowledge on the importance of assessing AEFI, level of education and their perception of the whole issue.

HSA's that are knowledgeable enough regarding AEFI and their implications are more likely to take proper actions so as to prevent them.

## **CHAPTER FOUR**

### **4.0 METHODOLOGY**

#### **4.1 INTRODUCTION**

Methodology for the study defines the way pertinent information will be gathered in order to answer the research question or analyze the research problem (Polit & Beck, 2003). It includes detailed discussion on the selection of subjects who will participate in the study and description of the data collection procedures and techniques. It also includes a plan for analyzing the data after they have been collected, limitations of the study to identify particular aspects of the study over which the researcher has no control.

#### **4.2 RESEARCH DESIGN**

Research design represents the major methodological thrust of the study, being the distinctive and specific research approach which is best suited to answering the research questions (Cormack, 1991).

The study used descriptive quantitative research to describe the Health surveillance assistants' knowledge and management of immunization adverse effects. Burns & Groove 1987 defined quantitative research as a formal, objective and systematic process in which numerical data are utilized to obtain information about the world. It is used to describe, test relationship and examine cause and effect relationship.

#### **4.3 SETTING AND SAMPLE SIZE**

The study was conducted at two health centres. Kawale health centre and Area 25 health centre. It used non-probability quota sampling where by the researcher identified 30 HSAs from these health centres from the total number of HSAs at the centres.

The sample only used those subjects who gave informed consent to participate in the study.

#### **4.4 PILOT STUDY**

Before the actual research, a pilot study was conducted at Bwaila hospital where 2 HSAs who volunteered themselves after explanation were used to answer the research questions. This was done to find out whether the instrument was clearly developed and was free from biases. It also helped in soliciting areas that needed some adjustments. This helped the researcher to correct the questionnaire since it had some questions which were not clear by then.

#### **4.5 DATA COLLECTION INSTRUMENT**

A questionnaire containing both open ended and close ended questions was used to collect data on a one to one basis in order to examine the objectives of the study.

Open ended questions allowed respondents to respond in their own words, while closed ended questions offered them a number of alternative replies from which the subjects chose the one that most closely matches the appropriate answer (Polit & Becker, 2003).

#### **4.6 DATA ANALYSIS**

Before analyzing the data, identification numbers were assigned to the respondents. Data was then analyzed by the use of a computer using statistical package for social sciences (SPSS) Version 11.5. The findings have been presented in the form of bar charts, tables and pie charts.

#### **4.7 ETHICAL CONSIDERATION**

Since the study was involving human beings as subjects, care was taken into consideration so as to ensure that the rights of the subjects were protected. Ethical approval was sought from Kamuzu college of Nursing research and ethics committee. Permission was also sought from Lilongwe district health officer and the in-charges of Area 25 and Kawale health centre in order to conduct the study at the centres.

Before asking any question, participants were being explained to on the purpose of the study, importance of the study, methods of data collection and benefits of participating in the study so as to facilitate participating voluntarily after making an informed consent.

The questionnaire did not have names so as to ensure anonymity and confidentiality; there was just a space where the participants were being asked to sign. Finally, the participants were being explained to that participating in the study was voluntary so those wishing not to participate were free to do so.

#### **4.8 LIMITATIONS OF THE STUDY**

The study had some limitations because it used non-probability quota sampling where there were few respondents that cannot give a true representation of the whole nation. Because of this, results will not be generalized at a national level.

#### **4.9 DISSEMINATION OF THE RESULTS**

Results for this study will be disseminated to various places. Written reports will be submitted to Kamuzu college of Nursing, Lilongwe District Health office, Kawale Health centre, Area 25 Health centre and other institutions in partial fulfillment of my Bachelor of Science degree in Nursing.

## **CHAPTER FIVE**

### **5.0 PRESENTATION OF RESULTS**

#### **5.1 INTRODUCTION**

This chapter presents the findings of the study. The study about Health Surveillance assistant's knowledge and management of immunization adverse effects was conducted at area 25 and Kawale health centres. Data has been interpreted in a quantitative method.

#### **5.2 DEMOGRAPHIC DATA**

Below is the distribution of demographic data which encompassed age, gender, marital status, education level, tribe, Religion.

##### **5.2.1 Age of respondents**

Figure.1 shows that, n= 13 (43.3 %) were between the age of 20-29, n=15( 50% ) age range of 30-39 and 2(6.7%) were those 40 years and above.

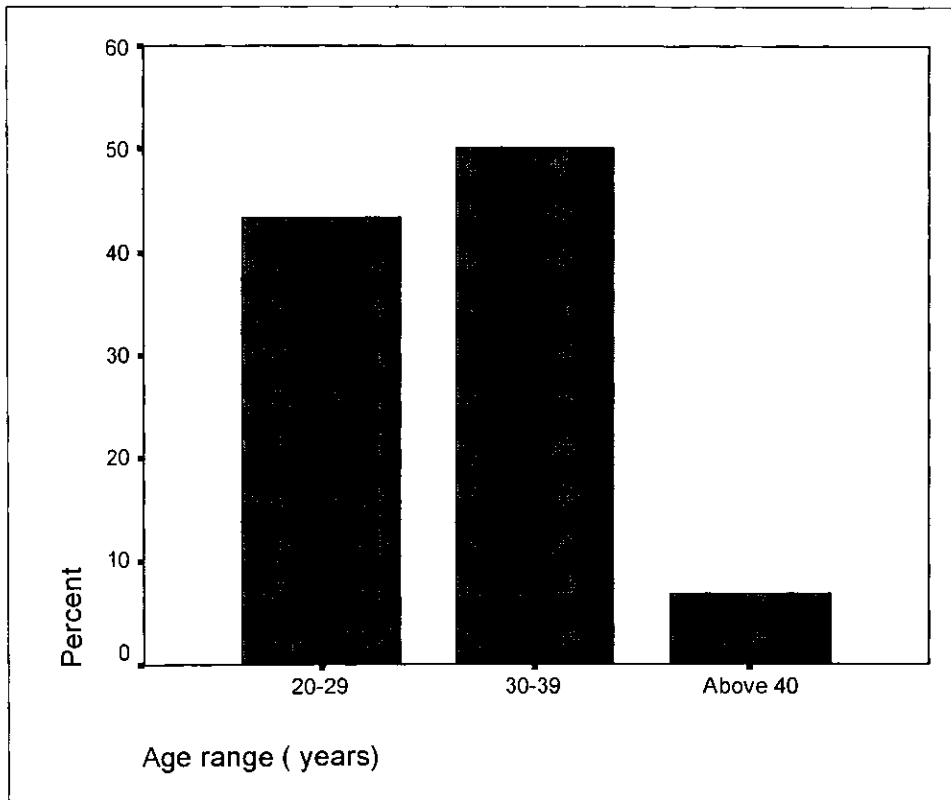


Figure 1. Age distribution of respondents

### 5.2.2 Gender of respondents

Figure 2 shows that n=10 (33.3%) of the respondents were male and n=20 (66.7%) of the respondents were females.

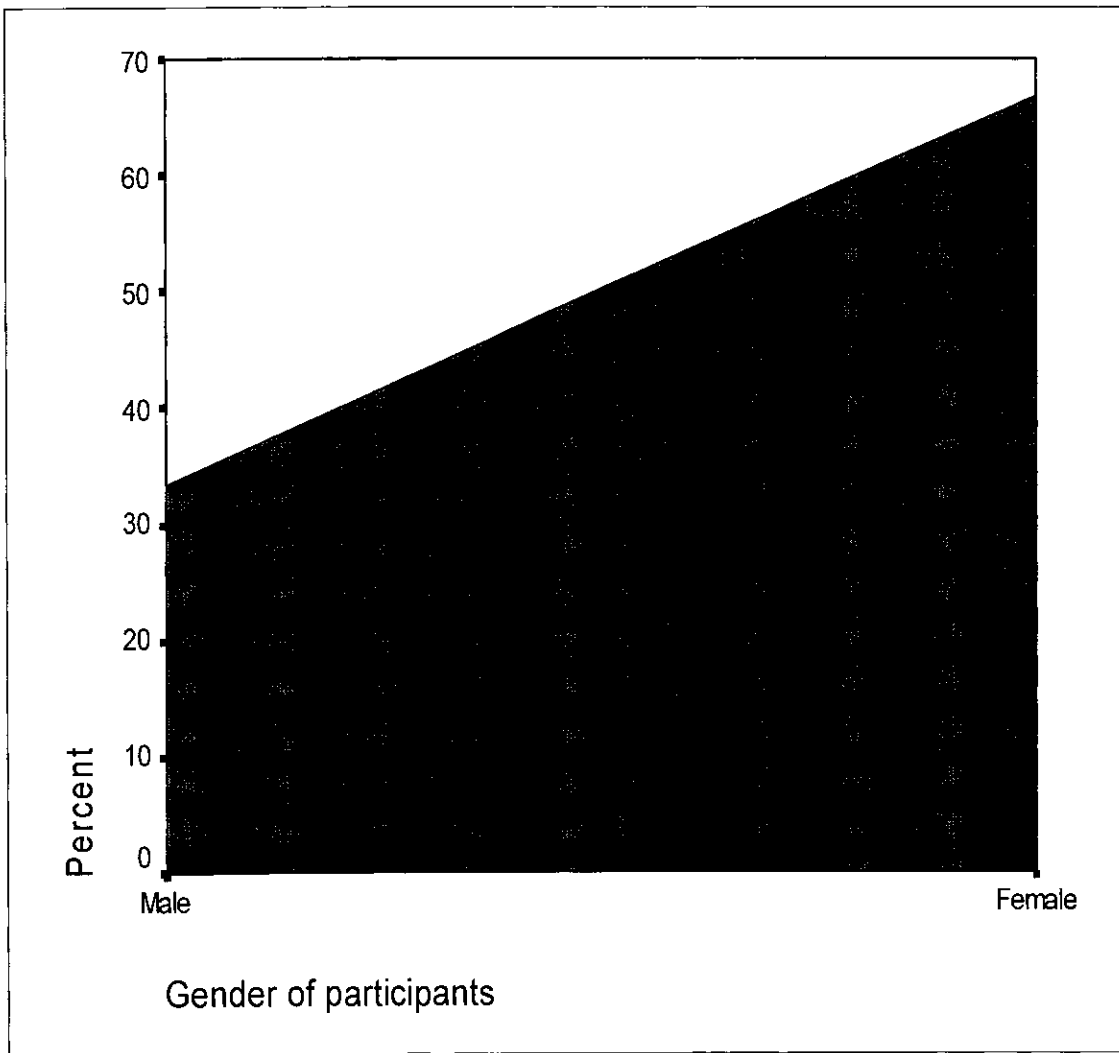


Figure 2. Gender distribution of participants

### 5.2.3 Marital status of respondents

The figure 4 below shows that  $n=8$ (26.7%) of the respondents were single,  $n=20$  (66.7%) were married while  $n=2$ (6.7%) were widows.

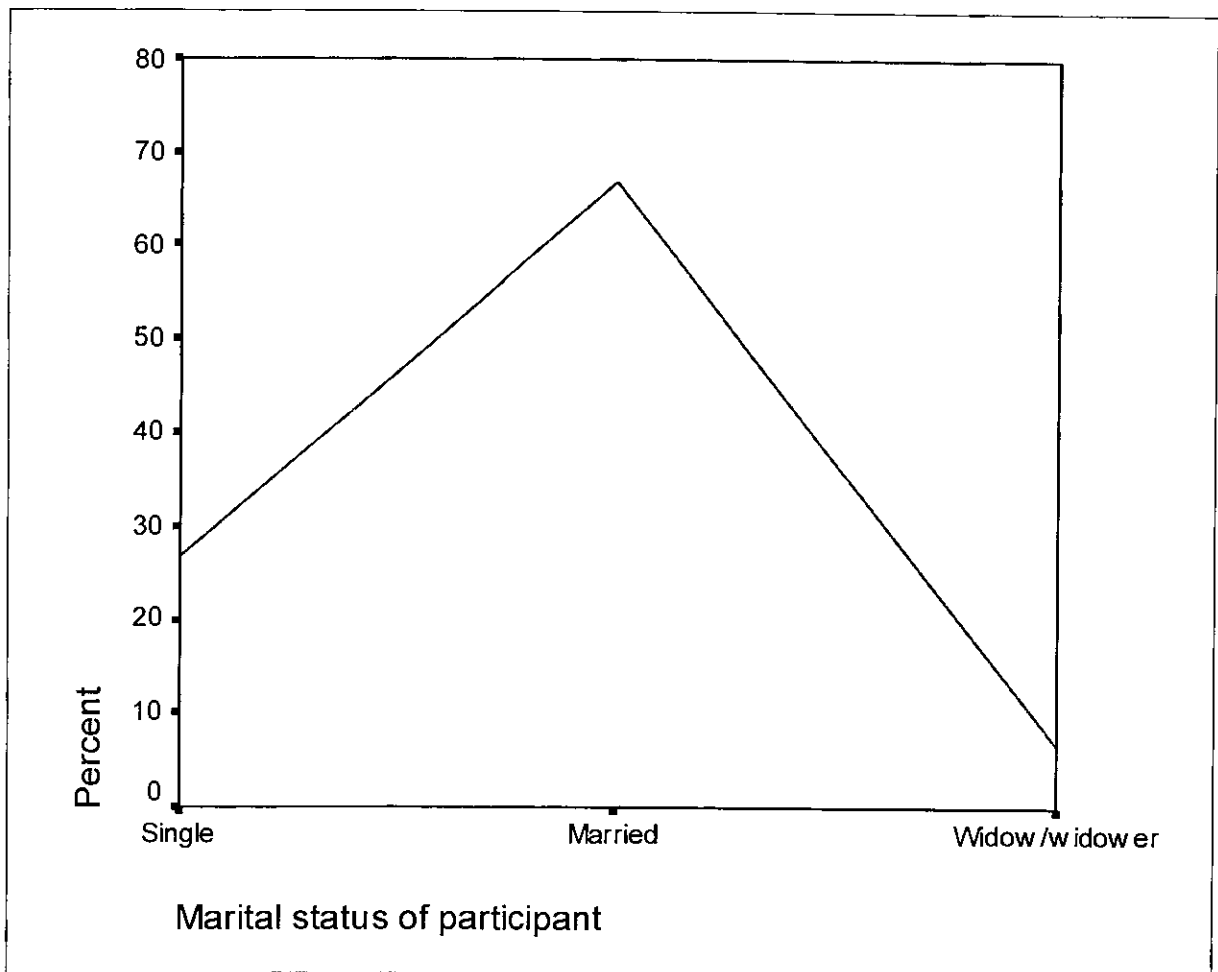


Figure 3 .Marital statuses of participants

#### 5.2.4 Tribes of respondents

The study has shown that majority which is 17 representing 56.7% belong to Chewa tribe followed by Tumbuka 6 representing 20% then Lomwe 4 (13.3%) Yao 2(6.7%) and others 1 representing 3.3% as shown in figure 5 below

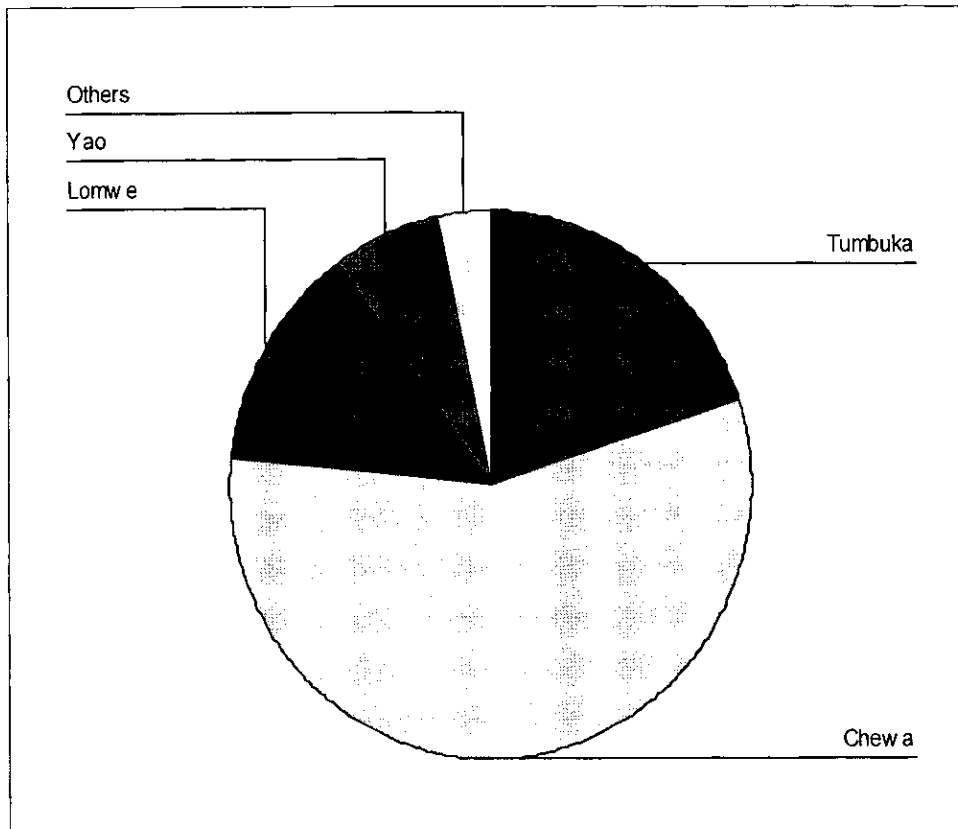


Figure 4. Tribes of participants

### 5.2.5 Religion of participants

The table below shows distribution of religion of the participants where the majority were C.C.A.P members representing 40% followed by Others 30%, Roman catholic 23.3% and finally the Moslems 6.7%

RELIGION	FREQUENCY	PERCENTAGE
Roman Catholic	7	23.3
C.C.A.P	12	40
Moslem	2	6.7
Others	9	30

Table 1. Representing religion of participants

### 5.2.6 Highest education level

The findings has shown that many of the respondents had Junior Certificate of Examinations 18(60% )while12( 40%) had Malawi School Certificate of Examination as shown in figure 6 below.

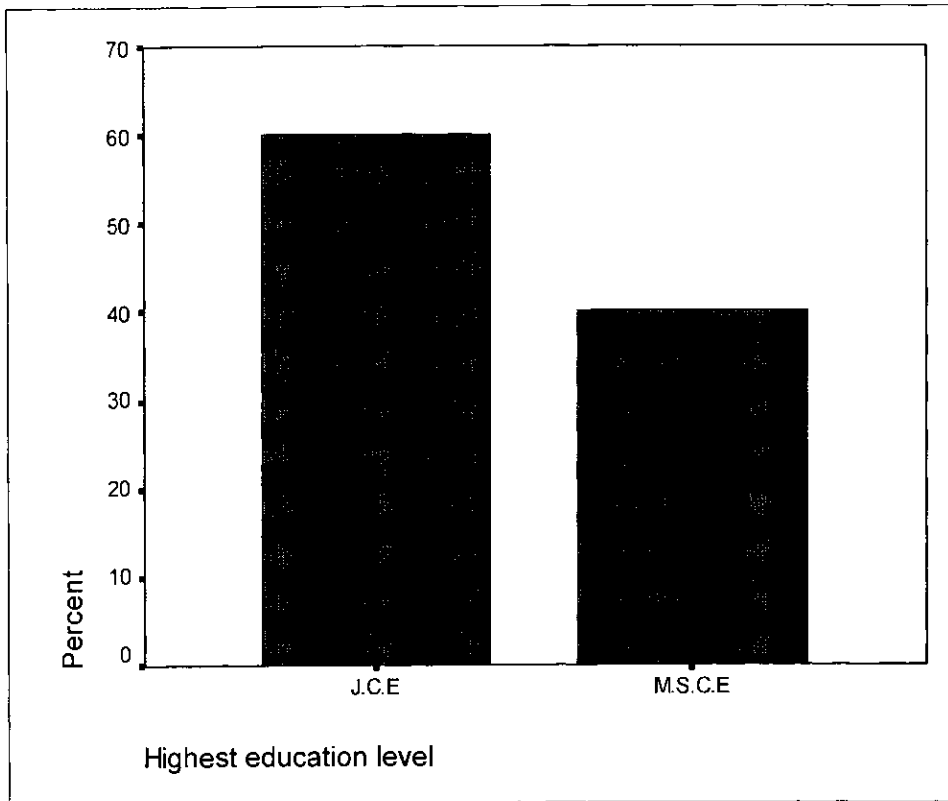


Figure 5. Showing highest education of participants

### 5.3. Training on immunizations before start working as an HAS

The results have shown that 20 (66.7%) of the participants had training before they started working as HSAs while 10 (33.3%) had no training before they started working as shown in the table below.

	Frequency	Percentage
Had training	20	66.7
No training	10	33.3

Table 2. Showing respondents who had undergone training on immunization of under five children

### **5.3.1 Period of training**

The findings have shown that (n=16) 80% of those who had training took more than a month to complete while (n= 4)20% who had training took a month.

### **5.4 Work experience of respondents**

The findings show that all the participants have been working as Health Surveillance assistant for more than one year representing 100%.

### **5.5 Areas covered in the Immunisations course**

85% ( n=17) of those who had training on immunization covered the full course on immunization such as: definition, types of vaccines, how vaccines work and how to administer vaccines and immunization adverse effects while (n= 3) 15% of those who had training did not cover immunization adverse effects as shown in Table 6 below.

### **5.6 Knowledge on immunization adverse effects**

From the findings, 83.3% (n=25) of the respondents said that they know immunizations adverse effects while 16.6% (n=5) do not know what immunization adverse effects are. Some of the respondents said: *Immunisation adverse effects are undesirable effects that come when vaccines were not administered properly.*

### **5.7 Knowledge on factors that can lead to immunization adverse effects development**

The findings has shown that n-25 (83.3%) of the respondents knows different ways that can lead to immunization adverse effects development such as wrong route of administration of vaccines, wrong diluents used, poor storage of vaccines and use of expired vaccines while n=5 (16.7%) does not know factors that can lead to AEFI development.

### **5.8 Knowledge on Prevention of Immunisation adverse effects development**

The results have shown that many respondents know how to prevent immunization adverse effects, n =25 (83.3%) said AEFI can be prevented by storing vaccine at an appropriate temperature, avoid using expired vaccines, proper route of administration of

vaccines which means they know how to prevent while (n=5 )16.7% does not know as shown in table 6 below.

	Frequency	Percentage (%)
Maintaining cold chain all the time	25	83.3
Use of unexpired vaccines	25	83.3
Use of correct diluents	25	83.3
Avoid overexposure of vaccines	25	83.3
Doesn't know anything	5	16.7

Table 3. Showing frequency and percentage of HSAs who know preventive measures for AEFI

### 5.9 In service Training

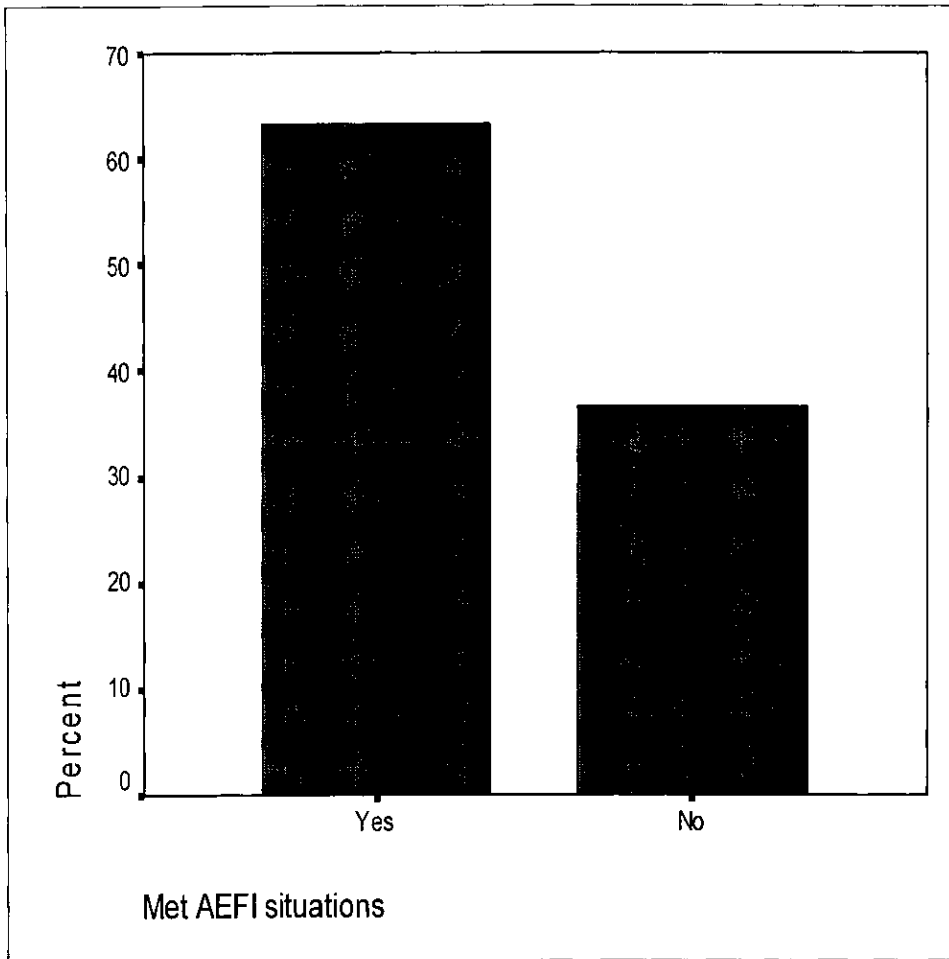
Respondents were asked whether they go for in-service training and frequency of in service training so as to add knowledge on immunization. Table 5. below shows percentages of respondents who have undergone refresh course for immunization.

	Frequency	Percentage	frequency
Had in-service training	2	6.7	< 6months
No in-service training	28	93.7	None

Table 4 .showing percentage of participants attending in service training immunisations

### 5.10 Management of immunizations adverse effects

The results have shown that n=19 (63.3%) have ever met with immunizations adverse events while n=11 (36.7%) have never come across immunizations adverse effects as shown in figure 8 below.



**Figure 6.** Above showing percentage of HSAs who have come across AEFI situations. It has been found that those who have come across Immunisations adverse effects, n=11 (57.9%) met with abscess and n=5 (generalized body rash as immunizations adverse events, but many reported abscess as shown in table 7 below.

AEFI	Frequency	Percentage (%)
Abscess only	11	57.9
Generalized body rash only	5	26.3
Abscess +Body rash	1	5.3
Paralysis	1	5.3
Others	1	5.3

**Table 5.** Showing common immunizations adverse effects as seen by HSAs

The results have shown that many HSAs teach parents after vaccinations on what to do at home. One said *I teach them not to rub on the injection site, to bring the child to the hospital if he/she develops fever, abscess or even convulsion so as to be managed by health personnel.*

The findings have also shown that almost all health surveillance assistants refer children with immunization adverse effects to the clinicians which are 100% of HSAs who were involved in this research as part of their management.

### **5.11 Supervision**

The research has found that all, 100% of participants responded that they have supervisors when they are giving the vaccines. Out of these n=19 (63.3%) said that they do have supervision daily, n=4(13.3%) once a week, n=4(13.3%) once in a month and n=3(10%) said once in a while.80% of the respondents said they have ever been supervised when administering vaccines while 20% said they have never been supervised.

## **CHAPTER SIX**

### **6.0 DISUSSION OF FINDINGS**

#### **6.1 Introduction**

This chapter discusses the study findings showing the significant areas in relation to Health surveillance assistants' knowledge and management of immunizations adverse effects. The discussion describes the demographic data, HSAs knowledge of immunization adverse effects, management of immunizations adverse effects and supervision they have as they are administering vaccines.

#### **6.2 Education level of HSAs**

The results have also shown that n=18(60%) of the respondents had their highest educational qualification as junior certificate of examination while n=12 (40%) had Malawi school certificate of examination as their highest qualification. This question was used in this study because HSAs qualifications can determine how one can understand things like immunization adverse effects than taking people with primary school leaving certificate of examination than those with primary education that may not understand or read well.

#### **6.3 Work experience**

HSAs were also asked on their work experience and it was found that n=30 (100%) responded by said that they have worked for more than one year. This question was used because the more an HSA works, the more the chances of meeting with immunizations adverse effects.

#### **6.4 Training of Health surveillance assistants**

Respondents were asked on whether they had undergone a training on immunization before they started working, n =20 (66.7 %) of the respondents had attended a training while n=10 (33.3%) did not have training before they started working. This is similar to the findings of Kadzandila & Chilowa (2001) in a survey to assess the role of Health surveillance assistants in the delivery of health services and immunizations where they found that 19% of the respondents were untrained.

This was asked because an HSA who has been trained can know how immunizations adverse effects develop and how to prevent them as well as how to manage them. It is of great importance that before an HSA starts he /she working should firstly complete the course so as to know in advance what they will meet in the field.

#### **6.4.1 Period of training**

The respondents were asked on the period they took to finish their training. Findings have shown that n=16 (80%) of those who had training had it for more than one month while n=4 (20%) of the respondents had a one month training. This was asked because HSAs have an extensive network of ground staff bridging the formal health services and the community so they need to have adequate time of training to cover all the important areas such as immunizations and counseling clients among others.

#### **6.5 Areas covered on immunization training**

Results have shown that n=17 (85%) of the respondents covered the full course of immunisations which comprises of definition of immunizations, how vaccine work, how to keep the vaccines, how to administer vaccines, immunization adverse effects of immunization and what to do when they have met a child develops immunizations adverse effect. Though this is the case n= 3 (15%) did not cover immunizations adverse effects in their training. By not covering such a part of the course can make HSAs continue giving the vaccines happily without knowing that adverse effects may develop. So it is good that the whole course should be covered so as to impart them with adequate knowledge on what to do so as to prevent immunizations adverse effects development and what to do if they have developed.

#### **6.6 Knowledge on Immunisation adverse effects**

Results have shown that n=25 (83.3%) of the respondents know immunisation adverse effects while n=5 (16.7%) did not know. Those who said they know explained that *Immunisation adverse effects are undesirable effects that come when vaccines were not administered properly. They cited some such as abscesses, convulsions, paralysis, generalized body rash and fever.* This is good because knowing what immunization

adverse effects will make them know how to prevent their development and how to manage them. Unlike those who do not know. It might also happen that those who do not know contribute to high rates of immunization adverse effects that make mothers of children drop immunizations services as reported by Kadzandila & Chilowa (2001) .

### **6.7 Factors that can lead to development of immunization adverse effects and their prevention**

Results of the study have shown that all those who know immunizations adverse effects n=25 (83.3 %) also know factors that can lead to their development. The following were some of the responses that were given, use of wrong diluents, wrong route of administration, use of expired vaccines, contraindications ignored in case of BCG poor storage( lack /blockage of cold chain ), giving injections without following aseptic techniques and overexposure of vaccines can lead to immunization adverse effects development. Knowledge of these factors can make HSAs know how to prevent them so as to prevent immunizations adverse effects to develop and the they responded by saying that prevention is by preventing factors that can lead to the development of immunization adverse effects.. Although this was the case those who do not know immunization adverse effects n=5 (16.7%) also did not know factors that can lead to their development.

### **6.8 In service training on immunisation**

Respondents were asked whether they go for refresher courses on immunisation so as to keep updated on new things. Results show that n=28 (93.3%) have never gone for a refresh course since they started their job while n=2 (6.7%) attended once .Having refresher courses helps in updating knowledge since things are changing now and then. It could have been good if HSAs were being provided with such courses because they may act as reminders on what they learnt during the initial trainings. In addition to that, these courses could also give those who were not trained have access of knowing the ideal things thereby promoting immunization services that will prevent immunization adverse effects.

## **6.9 Management of immunization adverse effects**

The results have shown that n=19 (63.3%) of the respondents have ever come across immunizations adverse effects while n=11 (36.7%) have never met with them. Abscesses and generalized body rash have been reported to be the commonest immunizations adverse effects reported. This is similar to studies conducted by Turnbull et al (2002) in a prospective study of adverse reactions following BCG vaccinations which found that 0.03% of the population developed abscess and 0.02% developed severe local reaction. In addition to these studies, the report on expanded programme on immunisation in the Africa region strategic plan in 2002-2005, 20%-55% of the health centres recorded abscesses as immunisation adverse effects.

High rates of abscess as an immunisation adverse effect can come in as a result of contamination of vaccines or injection equipment. They may also develop mostly from aluminum containing vaccines especially DPT. Inadequate shaking before use, superficial injection and use of frozen vaccines increase the risk of abscess and local reaction (. HSAs have to ensure that aseptic techniques are followed, they shake vaccines thoroughly. Adequate supervision should always be there because 100 % of the participants reported that they have supervisors at their work place but 63.3% said they have these supervisions daily. Adequate supervision can help those who did not attend training to know the ideal things.

When asked on management they do for the children affected, n=19 (100%) of those who came across immunization adverse effects refer children to the hospital for clinician review. The researcher found this as good because clinicians conduct good assessment that can identify whether the problem is related to vaccine injection or not since some may come to complain that an abscess has developed due to vaccination yet it was something else. In addition to this, HSAs need to be taught on other measures of managing these problems like fever such as doing tepid sponging, and giving paracetamol in case of fever.

## **7.0 CONCLUSION**

This descriptive quantitative study has established Health surveillance assistant's knowledge and management of immunizations adverse effects. It has identified some areas that have to be taken care of.

There are some health surveillance assistants who were not trained so they do not know immunization adverse effects, factors that can lead to immunization adverse effects and how to prevent its development.

The results have also shown that abscess is an immunization adverse effect most HSAs have come across. This can be due to failure of Health surveillance assistants to apply aseptic techniques when giving injectable vaccines. In addition to these, there are supervisors for immunization but they do not supervise HSAs regularly.

## **8.0 RECOMMENDATIONS**

- HSAs have to be provided with adequate knowledge on the whole course of immunizations including adverse effects before they start working although they are rarely common
- HSAs should be provided with in-service trainings on immunizations so as to increase their knowledge on the subject since things are changing. These trainings will also help in updating knowledge they gained during their initial trainings.
- HSAs should also be trained on how to manage minor effects following immunizations such as fever and body rash.

## **9.0 AREAS OF FURTHER STUDY**

- Further studies should be conducted on factors that lead to development of abscess as an immunization adverse effect.

## REFERENCES

- Annamari P; Irja D & Tapio K (1996). *Serious adverse events after measles, mumps-rubella vaccination*, Paediatric infectious journal, December, 2000.
- Burns N. & Grove S.K. (2005). *The practice of Nursing Research conduct, critique and utilization*. St Louis: Elsevier Saunders
- Clemen-Stone S.M; McGuire L.S & Eigst D.G (2002). *Comprehensive community health nursing, family and aggregate community practice* (6<sup>th</sup> edition). Mosby's Inc. St Louis
- Cormack D.F.S; Landaff B.M & Simpson M (1991). *The research process in nursing*, (2nd edition), Blackwell scientific publications, London
- Dicko M et al (1995). *Safety of immunization injections in Africa: not simply a problem of logistics*. Bulletin of World Health Organization 2000.
- Die Kacou et al (2005). *Post vaccine adverse effects monitoring during national campaign of vaccination against measles in Cote d'Ivoire*.
- Expanded programme of immunization in African region strategic plan of action* (2001-2005).
- Expanded programme of immunization, Malawi field operation manual* (2002)
- Kadzandila, J.M. & Chilowa, W.R. (2001). *The role of Health surveillance assistants in the delivery of health services and immunization in Malawi*, University of Malawi centre for research.
- Kozier B, Erb G & Blais K, (1995), *Fundamentals of Nursing: Concepts; process and practice* (5th edition), Redwood, Commings publishing company

Long, S.S, Deforest, A. & Smith (1990). *Longitudinal study of adverse reactions Diphtheria, pertusis and Tetanus vaccine in infants*. Pediatrics journal volume 85.

Malawi Multiple indicator cluster system, (2008). *Monitoring the situation of children and women*. National statistic office.

Mass V; Phaff C & Dzaferagic A (2005). *Adverse events following immunization*. The National vaccination programme of Netherlands

Mercae, A. (2003). *From immunology to social policy: Epistemology and ethics in the creation and administration of paediatric vaccine*. University of Tasmania

Polit, D.F. & Beck, C.T. (2003). *Nursing research, principles and methods* (7<sup>th</sup> edition). Lippincott, Philadelphia.

[www.en.wikipedia.org/wiki/immunization](http://www.en.wikipedia.org/wiki/immunization) downloaded on 15/04/2009 at 1800hours

Turnbull, F.M, McIntyre, P.B & Achat H.M (2002). *National study of adverse reactions after vaccination with Bacillie Calmette-Guerin*. Royal Alexandra hospital, Australia

Zhou, W, Pool, V & Iskander J.K. (2002). *Surveillance for safety after immunization*. Vaccine adverse effects reporting system. United States

## APPENDIX 1

**BUDGETARY ESTIMATES FOR RESEARCH PROPOSAL**

<b>ITEM</b>	<b>COST IN MALAWI KWACHA</b>
<p><b><u>1. STATIONARY</u></b></p> <p>2 Reams of paper @ K750.00 Per ream</p> <p>5 Pens @ K30.00 each</p> <p>2 flash Disks @K3000.00 Each</p> <p>4 Large envelops @K 40.00 Each</p> <p><b>SUB TOTAL</b></p>	<p>1,500.00</p> <p>150.00</p> <p>6,000.00</p> <p>160.00</p> <p><b>K 7,810.00</b></p>
<p><b><u>2. SECRETARIAL SERVICES</u></b></p> <p>Printing Proposal 3 copies @ K400 Each</p> <p>Binding Proposal 3 copies @ K200 Each</p> <p>Printing dissertation 3 copies@K400 Each</p> <p>Binding dissertation 3copies@K200 Each</p> <p>Internet services @K500</p> <p><b>SUB TOTAL</b></p>	<p>1,200.00</p> <p>600.00</p> <p>1,200.00</p> <p>600.00</p> <p>500.00</p> <p><b>K4,100.00</b></p>
<p><b><u>3. TRANSPORT &amp; COMMUNICATION</u></b></p> <p>Transport for data collection K1, 000.00</p> <p>Cello phone @K1, 500.00</p> <p>Phone calls @ K1000.00</p> <p><b>SUB TOTAL</b></p>	<p>1,000.00</p> <p>1,500.00</p> <p>1,000.00</p> <p><b>K 3,500.00</b></p>

<b>CONTINGENCY 10%</b>	<b>K1541.00</b>
<b>GRAND TOTAL</b>	<b>K 16,951.00</b>

### **JUSTIFICATION OF BUDGET**

Stationary was needed for writing both proposal and the dissertation. This required papers, pens, pencils.

Envelops were being used to deliver documents to the supervisor and carry questionnaires and consent forms to data collection areas.

Flash disks were used for keeping electronic information since relying on one disk was risky because information could miss due to viruses in computers.

Printing and binding of both proposal and dissertation were done before submission to Kamuzu College of Nursing and desermination to other areas.

Money allocated to transport was used during data collection.

A Cello phone was used for communication with the supervisor and other resource people.

**APPENDIX 2**

**TIME TABLE FOR RESEARCH PROJECT: FEBRUARY TO NOVEMBER 2009**

	JAN	FEB	MAR	APR	MAY	JUN	JULY	AUG	SEPT	OCT	NOV	DEC
Selection of topic		■	■									
Proposal writing				■	■	■						
Submitting proposal						■						
Pre test questionnaire							■					
Data collection								■	■			
Data analysis									■	■	■	
Writing report										■	■	
Submitting dissertation												■
Disseminating results												■

**APPENDIX 3**  
**CONSENT FORM**

I am Ronald Nachipo Mlera a fourth year student at Kamuzu college of Nursing doing Bachelor of Science degree in Nursing. To fulfill my degree programme, I am required to conduct a research.

The aim of the research is to explore Health Surveillance Assistants' knowledge and management of Immunization Adverse Effects. I would like to ask you to participate in the research by responding to the questions on the questionnaire that has been developed by the researcher. It will only take 45 minutes or less to finish.

To participate is voluntary and there is no risk associated with the research. You will be free to withdraw from the research at any time that you may wish to do so.

All information that you will provide will be treated as confidential and no name will be indicated on the questionnaire. The information will only be used by the researcher and the supervisor.

The research will help in identifying factors that will promote immunization services so as to prevent adverse effects following immunization.

I understand the information about the research; I hereby give full consent to participate in the research.

.....  
Subject signature

.....  
Date

.....  
Researcher signature

.....  
Date

**APPENDIX 4  
QUESTIONNAIRE**

**TITLE: HEALTH SURVEILLANCE ASSISTANT'S KNOWLEDGE AND  
MANAGEMENT OF IMMUNIZATION ADVERSE EFFECTS**

**ID Number**.....

**Date of interview**.....

**Place of interview**.....

**Time of interview: Time start:**.....

**Time finish**.....

**Instructions:** Tick the appropriate response in the box or write the appropriate answer on the space provided.

**Part A**

**Demographic Data**

1. Age                    (a) below 20 years    [ ]  
                              (b) 20-29 years        [ ]  
                              (c) 30-39 years        [ ]  
                              (d) 40 and above      [ ]
  
2. Marital status    (a) Single              [ ]  
                              (b) Married             [ ]  
                              (c) widow/widower    [ ]  
                              (d) Divorced            [ ]
  
3. Tribe                (a) Tumbuka            [ ]  
                              (b) Chewa                [ ]  
                              (c) Lomwe                [ ]

- (d) Yao [ ]
- (e) Others specify.....

4. Religion
- (a) Roman Catholic [ ]
  - (b) CCAP [ ]
  - (c) Moslem [ ]
  - (d) Others specify.....

5. Highest education level
- (a) PSLCE [ ]
  - (b) JCE [ ]
  - (c) MSCE [ ]
  - (d) Others specify.....

6. How many years have you been working as an HAS?
- (a) Less than one year [ ]
  - (b) One year [ ]
  - (c) More than one year [ ]

**Part B**

**Knowledge on adverse effects following immunization (AEFI)**

7. Did you have training of immunization before you started working as an HSA?
- (a) Yes [ ]
  - (b) No [ ]

8.1-. If yes, how long did the training take?

- (a) One week [ ]
- (b) Two weeks [ ]
- © One month [ ]
- (d) More than a month [ ]

9. Do you have some refresher courses on Immunization?

- (a) Yes [ ] (b) No [ ]

9.1 If yes, how often?

- (a) Less than six months [ ]  
(b) Every six months [ ]  
© Every year [ ]

10. What areas did you cover on immunization during your training?

- (a) Definition of immunization [ ]  
(b) Types of vaccines [ ]  
© How vaccines work [ ]  
(d) How to administer vaccines [ ]  
(e) Side effects of immunizations [ ]

8. Have you ever heard of AEFI?

- (a) Yes [ ] (b) No [ ]

11. If yes, what do you know about AEFI?

.....  
.....  
.....

11.1 What are some of the factors that can lead to AEFI development?

- (a) Use of expired vaccines [ ]  
(b) Lack of cold chain [ ]  
© Wrong diluents used [ ]  
(d) Wrong route of administration [ ]  
(e) Failure to follow aseptic technique when giving injectable vaccines [ ]  
(f) All the above [ ]

11.2. What do you do so as to prevent immunization adverse effects development?

- (a) Maintaining cold chain [ ]
- (b) Use of unexpired vaccines [ ]
- (c) Use of correct diluents [ ]
- (d) Following aseptic technique when giving injectable vaccines [ ]

**Part C**

**Management of AEFI**

12. Have you ever met a situation where a child presented with AEFI?

- (a) Yes [ ]
- (b) No [ ]

12.1. If yes, what did the child present with?

- (a) Convulsions [ ]
- (b) Abscess [ ]
- (c) Generalized body rash [ ]
- (d) Paralysis [ ]
- (e) Any other, specify.....

12.4. What did you do so as to manage them?

- a) Put a warm compress on the injection site [ ]
- (b) Gave medication to the child [ ]
- (c) Referred the child to the clinician [ ]

**Part D**

**Supervision**

13. Is there a supervisor for immunization here at the centre?

- (a) Yes [ ]
- (b) No [ ]

13.1. How often does he/she supervise you?

- (a) Daily [ ]
- (b) Once a week [ ]

(c) Monthly

(d) Any other specify.....

13.2 Have you ever been supervised?

(a) Yes  (b) No

14. Is there anything that has not been tackled that you feel you can share on AEFI?

(a) Yes  (b) No

14.1 If yes, explain.....

.....

.....

**THANK YOU FOR VOLUNTEERING TO PARTICIPATE**

## APPENDIX 5

### CHICHEWA VERSION OF QUESTIONNAIRE

**MUTU: Zomwe ma HSA akudziwa komanso zomwe amachita pofuna kuthana ndi zovuta zobwera chifukwa cha katemera**

Number .....

Tsiku .....

Malo .....

Nthawi.....

**Malangizo:**Chongani malo oyenera mu kabokosi kapena longosolani mayankho anu pamalo omwe mwapatsidwa.

### GAWO LOYAMBA

#### Za mbiri yanu

1. Kodi ndinu aamuna kapena aakazi

2. Muli ndi zaka zingati?

- (a) Zochepera makumi awiri [ ]
- (b) Pakati pa makumi awiri ndi atatu [ ]
- (c) Pakati pa makumi atatu ndi anayi [ ]
- (d) Kuposera makumi anayi [ ]

3. Mbiri yanu ya banja

- (a) wokwatiwa/Wokwatira [ ]
- (b) wosakwatiwa/wosakwatira [ ]
- (c) banja linatha [ ]
- (d) mkazi/mwamuna anamwalira [ ]

4. Ndinu ntundu wanji wa anthu

- (a) Tumbuka [ ]

- (b) Chewa [ ]
- (c) Lomwe [ ]
- (d) Yao [ ]
- (e) Zina tchulani.....

**5. Mumapemphera mpingo wanji?**

- (a) Katolika [ ]
- (b) CCAP [ ]
- © Chisilamu [ ]
- (d) Zina tchulani.....

**6. Mbiri ya maphunziro**

6.1. Pomwe munalekezera maphunziro

- (a) sitandade 8 [ ]
- (b) Fomu 2 [ ]
- © Fomu 4 [ ]
- (d) Zina tchulani .....

**7. Mwachira ntchito zaka zingati ngati HSA?**

- (a) Osaposera chaka chimodzi [ ]
- (b) Kwa chaka chimodzi [ ]
- © Kupitilira chaka chimodzi [ ]

**8. Muli ndi udindo uliwonse?**

- (a) Eya [ ]
- (b) Ayi [ ]

8.1. Ngati eya, muli ndi udindo wanji? .....

**GAWO LACHIWIRI**

**Zokhuzana ndi zovuta zobwera chifukwa cha katemera**

9. Kodi munachitapo maphunziro a katemera?

- (a) Eya [ ] (b) Ayi [ ]

9.1. Ngati eya, munaphunzira kwa nthawi yaitali bwanji?

- (a) Mulungu umodzi [ ]  
(b) Milungu iwiri [ ]  
© Mwezi umodzi [ ]  
(d)Kuposera mwezi umodzi [ ]

9.2. Kodi mumakhala ndi maphunziro a padera okhuza katemera?

- (a) Eya [ ] (b) ayi [ ]

9.3. Ngati eya, ndi nthawi ziti?

- (a) kuchepera miyezi isanu ndi umodzi [ ]  
(b) Miyezi isanu ndi umodzi uliwonse [ ]  
©Pa chaka kamodzi [ ]  
(d)Zina tchulani.....

10. Ndi ziti zomwe munaphunzirapo zokhuza katemera?

- (a) Kagwiridwe ntchito ka katemera [ ]  
(b) Mitundu ya katemera [ ]  
© Kaperekedwe ka katemera [ ]  
(d)Zina tchulani.....

11. Kodi munamvako za zovuta zomwe zimabwera chifukwa cha katemera?

- (a) Eya [ ] (b) Ayi [ ]

11.1 Ngati eya, mumadziwa zotani za zovita zimenezi?.....

.....  
.....  
.....

11.2 Ndi zinthu ziti zimene zingapangitse kuti zovuta zimenezi zibwere?

- (a) Kugwiritsa ntchito katemera oonongeka [ ]
- (b) Kusunga katemera malo osayenera [ ]
- (c) kusukunula katemera ndi madzi olakwika [ ]
- (d) kupereka katemela malo olakwika

**11.3 Kodi mumatani pofuna kupewa zovuta zimenezi?**

- (a) kusunga katemera malo oyenerera [ ]
- (b) kuwonetsesa kuti katemera ndi wosatha mphamve ndisanapereke kwa mwana [ ]
- © Kutsukunula katemera ndi madzi oyenerera [ ]
- d) kupereka katemera malo oyenera [ ]

**GAWO LACHITATU**

**Zomwe zimachitika pofuna kuthana ndi zovuta zobwera chifukwa cha katemera**

12. Munakumanapo ndi mwana ali ndi zovuta zobwera chifukwa cha katemera?

- (a) Eya [ ]
- (b) Ayi [ ]

**12.1. Ngati eya,ndi ziti zomwe anali nazo ?**

- (a) Anakomoka [ ]
- (b) Anatulua chithupya [ ]
- © Anatuluka zilonda thupi lonse [ ]
- (d) Anapuwala mwendo [ ]
- (e) Zina tchulani.....

**12.2. Nanga inu munamusamalira bwanji?**

- a) Ndinamuthowa ndi madzi ofunda [ ]
- b) ndinamupatsa mankhwala [ ]
- c) Ndinamutumiza kwa a dokotala [ ]

**GAWO LACHINAYI**

**13. Kodi pali yemwe amayang'anira m'mene katemera amaperekeredwa?**

- (a) Eya [ ]
- (b) Ayi [ ]

**13.1. Ngati eya, amakuyang'anirani nthawi ziti?**

- (a) Tsiku lililonse [ ]
- (b) Kamodzi pa mlungu [ ]
- © Pamwezi kamodzi [ ]
- (d) Zina tchulani.....

**13.2. Inuyo, anayamba akuyang'anirani popereka katamera?**

- (a) Eya [ ]
- (b) Ayi [ ]

**14. Pali china chomwe mungaonjezere chimene sichinakambidwe mkatimu?**

- (a) Eya [ ]
- (b) Ayi [ ]

14.1 Ngati eya, fotokozani.....  
.....  
.....  
.....

**ZIKOMO POTENGA NAWO MBALI MU KAFUKUFUKUYU**



University of Malawi  
Kamuzu College of Nursing

RESEARCH AND PUBLICATIONS COMMITTEE

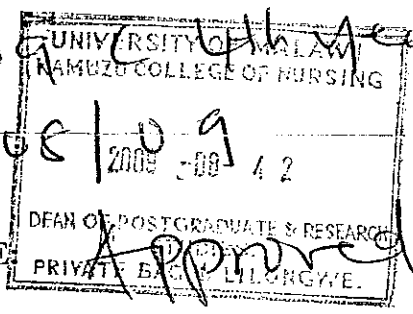
APPROVAL CERTIFICATE

TITLE: Health surveillance Assistants Knowledge  
and Management of immunization Advers.  
Effects in Karonga + AREA 25  
INVESTIGATOR(S):

Ronald Mlera -

YEAR OF STUDY: 2009 (both year)

REVIEW DATE: 24/08/09



DECISION OF THE COMMITTEE: Approved

SIGNATURE: [Signature] DATE: 24/08/09  
DEAN OF POSTGRADUATE STUDIES AND RESEARCH

CC: supervisor: Mrs T. Chimango

DECLARATION OF INVESTIGATOR(S)  
I/We fully understand the conditions under which I am/we are authorized to carry out  
the above mentioned research and I/We guarantee to ensure compliance with these  
conditions. In case of any departure from the research procedure as approved, I/We  
will resubmit the proposal to the committee.

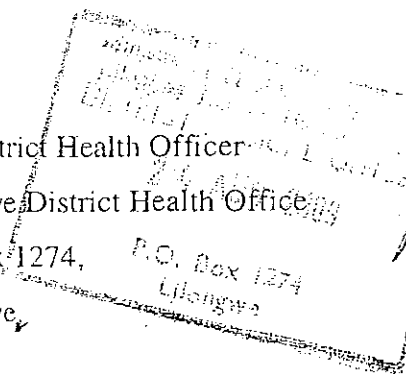
DATE: 24<sup>th</sup> August, 2009 SIGNATURE(S): [Signature]

APPENDIX 7

University of Malawi,  
Kamuzu College of Nursing,  
P/bag 1,  
Lilongwe

25<sup>th</sup> August, 2009

The District Health Officer  
Lilongwe District Health Office  
P.O Box 1274,  
Lilongwe



Through:  
Mrs. J Chimango  
Kamuzu college of Nursing.  
P/Bag 1  
Lilongwe.

Dear Sir/Madam,

REQUEST FOR PERMISSION TO CONDUCT A RESEARCH AT KAWALE AND  
AREA 25 HEALTH CENTRES

I am Ronald Nachipo Mlera a 4<sup>th</sup> year student at Kamuzu college of Nursing.

In partial fulfillment of my Bachelors of Science degree in Nursing, I am required to conduct a research.

Therefore I have written this letter asking for permission to conduct a research at the sites mentioned above.

The title of the study is Health surveillance assistant's knowledge and management of immunization Adverse Effects.

**APPENDIX 8**

University of Malawi,  
Kamuzu College of Nursing,  
P/bag 1,  
Lilongwe.

25<sup>th</sup> August, 2009.

The In-Charge,  
Kawale Health Centre,  
P/Bag 201,  
Kawale.

**Through:**

Mrs. J Chimango  
Kamuzu college of Nursing,  
P/Bag 1  
Lilongwe.

Dear Sir/Madam,

APPLICATION FOR PERMISSION TO CONDUCT A RESEARCH AT KAWALE  
HEALTH CENTRE

I am Ronald Nachipo Mlera a 4<sup>th</sup> year student at Kamuzu college of Nursing.

In partial fulfillment of my Bachelors of Science degree in Nursing, I am required to conduct a research.

Therefore I have written this letter asking for permission to conduct a research at the sites mentioned above.

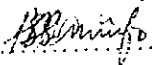
The title of the study is **Health surveillance assistant's knowledge and management of immunization Adverse Effects.**

The study will use Health surveillance assistants who will be required to answer the structured questionnaire. All ethical issues will be taken into consideration

The participants of the study will only be Health Surveillance Assistants who will be required to answer the structured questionnaire. All ethical issues will be taken into consideration.

I will be grateful if my request meets your favourable consideration.

Yours Faithfully,

  
.....

Ronald Nachipo Mlera

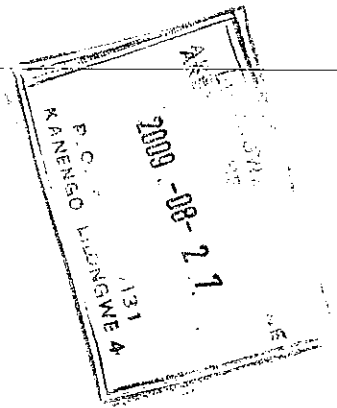
University of Malawi,  
Kamuzu College of Nursing,  
P/bag 1,  
Lilongwe.

25<sup>th</sup> August, 2009

The In-Charge,  
Area 25 Health Centre,  
P.O Box 40131,  
Lilongwe.

**Through:**

Mrs. J Chimango  
Kamuzu college of Nursing.  
P/Bag 1  
Lilongwe.



**APPLICATION FOR PERMISSION TO CONDUCT A RESEARCH AT AREA 25  
HEALTH CENTRE**

I am Ronald Nachipo Mlera a 4<sup>th</sup> year student at Kamuzu college of Nursing.

In partial fulfillment of my Bachelors of Science degree in Nursing, I am required to conduct a research.

Therefore I have written this letter asking for permission to conduct a research at the sites mentioned above.

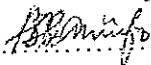
The title of the study is **Health surveillance assistant's knowledge and management of immunization Adverse Effects.**

The study will use Health surveillance assistants who will be required to answer the structured questionnaire. All ethical issues will be taken into consideration

The participants of the study will only be Health Surveillance Assistants who will be required to answer the structured questionnaire. All ethical issues will be taken into consideration.

I will be grateful if my request meets your favourable consideration.

Yours Faithfully,

  
.....

Ronald Nachipo Miera