



**KNOWLEDGE AND PRACTICE OF WOMEN IN THE
CHILD BEARING AGE ON TETANUS TOXOID
IMMUNISATION IN LUSAKA DISTRICT**

By

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UNIVERSITY OF ZAMBIA

SCHOOL OF MEDICINE

DEPARTMENT OF POST BASIC NURSING

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2009

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**A Research Study submitted to the Department of Post Basic Nursing,
School of Medicine, University of Zambia in partial fulfillment of the
requirements for the Bachelor of Science Degree in Nursing**

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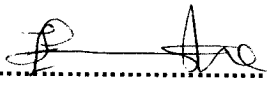
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LIST OF ABBREVIATIONS

1.	AIDS	-	Acquired Immune Deficiency Syndrome
2.	ANC	-	Antenatal Care
3.	CBoH	-	Central Board of Health
4.	CSO	-	Central Statistical Office
5.	DHMT	-	District Health Management Team
6.	EPI	-	Expanded Programme on Immunisation
7.	GRZ	-	The Government of the Republic of Zambia
8.	IEC	-	Information Education and Communication
9.	LDHMT	-	Lusaka District Health Management Team
10.	MCH	-	Maternal and Child Health
11.	MNT	-	Maternal and Neonatal Tetanus
12.	MOH	-	Ministry of Health
13.	MMD	-	Movement for Multiparty Democracy
14.	NLH	-	National Library for Health
15.	NHR	-	National Health Reforms
16.	NT	-	Neonatal Tetanus
17.	PHC	-	Primary Health Care
18.	PBN	-	Post Basic Nursing
19.	SIAs	-	Supplemental Immunization Activities
20.	TT	-	Tetanus Toxoid
21.	WHO	-	World Health Organisation
22.	UNICEF	-	United National International Children's Fund
23.	UNZA	-	University of Zambia.

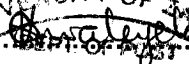
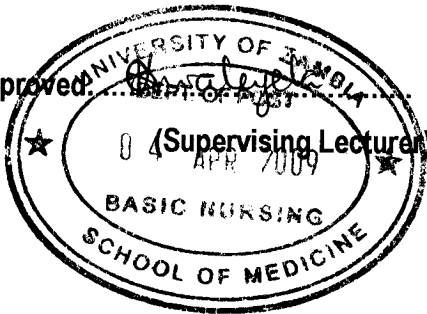
DECLARATION

I, Emmelia Chileshe, hereby declare that the work presented in this study for a Bachelor of Science Degree in Nursing has not been presented either wholly or partially for any other Degree and is not being currently submitted to any other Degree.

Signed: .....

(Candidate)

Date: 04/05/09.....

Approved: .....


Date: 05/05/09.....

STATEMENT

I, Emmelia Chileshe, hereby certify that this study is entirely the result of my own labour and independent investigations. The various sources to which I am indebted are clearly indicated in the text and reference.

Signed: Emmelia Chileshe

Date: 04 / 05 / 09

DEDICATION

To my husband Bright Kaonga,
whose love, support, encouragement and care sustained me through the years of my studies

To my daughters; Shupiwe and Towela for their understanding.

You give me a reason to move on

To My late mother; Foster Chileshe and my late grandmother; Telesa Chanda Emmelia Kaoma.

I miss you.

To my lovely sister; Foster Mungu Chileshe,
whose love and affection inspired all my life endeavours

To my niece; Mwenya, Foster, Miriam and Chanda and to my nephew, Danial Bwalya Chileshe

To Uncle Mike for the support during my studies

To the children who died from Neonatal Tetanus and the mothers devoted to the prevention of
neonatal tetanus by practicing TT immunisation.

ABSTRACT

Zambia is among the 49 countries world wide that still have to eliminate MNT. Although it is well controlled through immunization activities the concentrated is still among pregnant women during Antenatal Care (ANC). For the nation to reach a substantial reduction in the incidence of neonatal tetanus, all females who are aged between 15 and 49 years; pregnant or not pregnant should be immunized with TT using all contacts with the health services.

The study aimed at determining the knowledge and practice of women in the child bearing age on TT immunisation in Lusaka district. Literature review on TT immunisation in many parts of the world including Zambia was obtained and discussed according to different surveys on tetanus that has been carried out world wide. It covered a general insight on prevention of tetanus, TT immunisation practices, coverage of TT immunisation, knowledge of TT immunisation among health provider and women, as well as coverage of TT on women in the child bearing age.

The study was conducted on 50 women in the child bearing age attending MCH services at Kalingalinga health centre in Lusaka district. A descriptive non-interventional research design was used in this study. Simple random sampling was used to select the sample. Data was collected over a period of 10 days using a structured interview schedule and was analysed manually with the aid of a scientific calculator. It was then presented using frequency and cross tabulations tables.

The study findings demonstrated that most of the respondents had moderate knowledge on TT immunisation and their practices were generally good towards TT immunisation. TT immunisation is still mostly conducted during ANC and therefore, most women were immunised when they fell pregnant. Even if the respondents had moderate knowledge and good practice towards TT immunisation, only 14 respondents had more than 3 doses which were received inconsistently. Education level did not seem to have a big impact on knowledge regarding TT immunisation; regardless of the level of knowledge education one had attained knowledge was still moderate. Similarly, the respondents' number of pregnancies had no influence on the level of knowledge. It is important to note that most women acquired their information on TT immunisation from the health facility during ANC services, thus this immunisation is widely associated with pregnancy. Therefore

the researcher recommends that IEC on TT immunisation be spread to all women who come to the health facility for other services and not necessary MCH ones.

CHAPTER ONE

1.0. INTRODUCTION

1.1 BACKGROUND

Immunisation programmes have traditionally focused on preventing diseases in infants or older children (WHO, 2008). These programmes can safeguard the health of babies not only by vaccinating newborns during the postnatal period, but by administering the vaccines to the mother, thereby impacting the newborn. Most immunizations that target newborn health, such as Tetanus Toxoid (TT) and the rubella vaccine, are administered to the mother. Of these, TT has the greatest impact.

TT vaccine has the potential to save newborn lives by preventing tetanus through the immunisation of women in the child bearing age, between 15 and 49 years as well as pregnant women. High coverage with TT has proved to be remarkably successful in preventing neonatal tetanus in many parts of the world (WHO, 2008). TT coverage in the African region, was 37 percent in 1990, 44 percent in 2000, and has been increasing recently to around 58 percent in 2005 (WHO, 2008). In addition to increased coverage, more governments are now committed to reducing Maternal and Neonatal Tetanus (MNT), as exemplified by the development of national action plans.

Since World Health Organization (WHO) recommended immunisation programme to be integrated into Maternal and Child Health (MCH) clinics through out the world, progress MNT elimination and Supplemental Immunization Activities (SIAs) has been implemented, targeting all women in the child bearing age in high risk areas with three doses of TT (WHO, 2008). The women in the child bearing age are women ranging from 15 years of age to 49 years. Currently a five-dose TT schedule is administered to previously un immunized women of childbearing age through MCH clinics, School Health programmes or special outreach services as recommended by the Expanded Programme on Immunisation (EPI) Global Advisory Group since 1987 (Core group, 2008).

One approach to the prevention of this problem is through improving the quality of antenatal, postnatal and child health services. This approach has allowed the immunisation of over 20 million women in 21 African countries living in underserved areas (WHO, 2008). These women and their children would have otherwise remained at risk of MNT.

In sub-Saharan Africa, up to an estimated 70,000 newborns die each year in the first four weeks of life due to neonatal tetanus (WHO, 2008). This predicament exists, even though neonatal tetanus is eminently preventable through two injections of TT during pregnancy or hygienic practices at birth. The immunisation of newborns and future mothers as part of programmes such as the EPI provide opportunities to strengthen or deliver other maternal, newborn, and child health interventions.

Overview of Zambia

Zambia is a country in the sub Saharan region of Africa. It has a total population of 10, 285, 631 out of which 5,070,891 are males and 5,214, 750 are females (CSO 2003). The fertility rate is 6.0, with the current average being 5.9 children per woman while life expectancy is at 37 years for both male and female (CBOH, 2002). The population of the country, however, is expanding tremendously.

The country is divided into 9 Provinces and 72 administrative Districts (CSO, 2003). Of the nine provinces two are predominantly urban, namely Lusaka and Copper belt provinces. The remaining provinces Central, Eastern, Northern, Luapula, North-Western, Western and Southern are predominantly rural provinces.

Lusaka is the capital city of Zambia, and is located within Lusaka Province. It has a population density of 65.4 persons per square kilometers (CSO, 2003). Of which 836,703 are male while 906,428 are females in the child bearing age. The growth rate remains at 2.9% for the District while that for Lusaka Province is 4.0 %, making it the second highest in the country after Northern Province which is 4.3% (LDHMT, 2006).

In this task of TT immunisation, Zambia has not remained behind. It is among the 49 countries world wide, 31 countries in Africa and 11 countries in UNICEF's East and Southern African region that still have to eliminate MNT (UNICEF- Zambia, 2004). Neonatal Tetanus (NT) is a threat to Zambia as almost all infants who suffer from it die. A survey conducted by Ministry of Health (MOH) in Zambia in conjunction with UNICEF in Western and Eastern province, did reveal that 1 out of 32 neonatal deaths was due to tetanus and the immunisation coverage for the whole country of Zambia was 70% (UNICEF- MOH, 2004).

A recent field and data review showed that TT immunisation is offered to pregnant and non pregnant women of child bearing age as per national policy, but most doses are administered to pregnant women as part of immunisation services during antenatal contacts and rarely with the non pregnant women in their child bearing age even if they are due for a vaccine (UNICEF, 2003).

Health care provision in Zambia

Prior to independence, the country had poor health service provision which prompted the government to review its health care provision after Independence (CBOH/MOH, 2004). In 1964, following independence, the Zambian government declared free health services. Health care services focused on curative medicine as opposed to preventive medicine which is community - oriented. Within a few years, the country's population grew very fast and health care standards deteriorated.

There were shortages of drugs in hospitals and the infrastructures were run down. In 1981, the Zambian government through the MOH adopted the Primary Health Care (PHC) concept with the vision of providing health to all by the Year 2000 (CBOH/MOH, 2004). This concept emphasizes that health services should be provided as close to the family as possible through community participation and at a cost the family and community can afford. In 1991, when the Movement for Multiparty Democracy (MMD) came into power, the government introduced the concept of National Health Reforms (NHR), whose vision was to provide equitable access to high quality cost effective care as close to the family as possible (CBOH,2002). Health reforms stressed the need for families and communities to

be self-reliant and to participate in their own health. For the nation to reach a substantial reduction in the incidence of neonatal tetanus, all Women in the child bearing age should be immunized with TT using all contacts with the health services, that is; health centres of health posts. Five doses of TT give a lifelong immunity to the mother and thus, she will be able to pass adequate passive immunity to her offspring (Mukelabai, 1995: 57).

The table below shows World Health Organization (WHO) recommended schedule of TT immunisation for pregnant women and non pregnant women in the child bearing age.

Table 1: WHO recommended schedule of TT immunisation.

Dose	Minimal Interval	Duration of Protection
TT1	start dose	0
TT2	4 weeks after TT1	3 years
TT3	6months after TT2	5 years
TT4	1 year after TT3	10 years
TT5	1 year after TT4	Life long

Source: CBOH, 2002.

Improving of MCH and immunisation activities are some of the components of PHC that promote the wellbeing of mothers and children. In order to promote the health of women and their infants, the government had adopted programmes like immunization of all pregnant women and non pregnant women in the child bearing age (CBOH/MOH, 2004). Therefore the government has embarked on the following practical steps for integrating immunisation and MCH programmes:

- Prevention of maternal and neonatal tetanus
- Provision of TT vaccination to women
- Promotion of clean childbirth services to all pregnant Women
- Supplemental Immunization Activities (SIAs)

In order to protect mothers and their newborn babies against tetanus, Zambia follows WHO's recommendations that TT vaccine be given to all pregnant women (CBOH, 2003). Although, National immunization programs have had a significant impact on the reduction of morbidity and mortality caused by common vaccine-preventable childhood diseases and remains a key component of the country's primary health care strategies, this has been compromised with the scarce resources in the country which include staff, supplies and equipment. With this concern, TT immunisation among women of child bearing age has equally been affected negatively (CBOH, 2002).

1.2. STATEMENT OF THE PROBLEM

In most parts of Zambia NT has been well controlled through clean delivery practices and immunization activities (The Government of the Republic of Zambia (GRZ), 2005).

Even if it appears that the number of NT cases seem to be decreasing, TT immunization coverage among women in child bearing age remain a problem as most effort is concentrated on pregnant women during Antenatal Care (ANC), and not on non pregnant women. More so where the areas are far from the health centres.

In Lusaka Province, there have been improved Antenatal Care (ANC) services with initiation of SIA as well as campaigns of safe mothers and babies from tetanus (Mukelabai, 1995). In 2004 TT immunization coverage was 82% and in 2006 it increased to 87% (LDHMT, 2006).

Although TT immunization coverage among pregnant women has increased in the past years, there has been insufficient data on the coverage of non pregnant women in the child bearing age (LDHMT, 2006). If non pregnant women in the child bearing age are not reached by TT immunization programmes, there is potential for NT cases to increase.

Currently women who have been immunized with at least two (2) doses of TT, had the immunisations during pregnancy and they are not well spaced; for example if a mother was pregnant in 2004 and had her first TT vaccine given, and she does not become pregnant until 8 years later, then the second dose will be given after 8 years. The women who do not become pregnant remain with only one dose of TT vaccine given. If women in

child bearing age are given the first dose of TT vaccine during child health days, they do not come back to the health centre for the second dose. For the women who come to health centres to seek health care services, they seem to go back home without asking when they can come for immunisation. Further more women do not seem to know how many doses of TT they are supposed to receive before they are declared fully protected.

1.3. FACTORS ASSOCIATED WITH KNOWLEDGE AND PRACTICE OF WOMEN IN THE CHILD BEARING AGE ON TETANUS TOXOID IMMUNIZATION

The factors influencing the problem are categorized into service related and socio-cultural factors.

Service Related Factors

Distance to the Health Facility

Distance to health centres is one of the major barriers to women accessing immunisation services. Long distance to the Health Centre influences the accessibility of TT in that mothers who stay far from the Health Centres take several hours to reach the health centres and this discourages them.

Inadequate knowledge

Mothers who get adequate knowledge on TT are more likely to be immunized than those with inadequate knowledge because they understand the benefits of the immunisation. So if women are not well informed about TT immunisations, they would not see the need of having it more so that it is given when one is feeling fine.

Shortage of Staff

Shortage of staff at health facilities has resulted in poor delivery of quality services such as TT immunisation, especially in rural areas where you only find one member of staff, proving all the services at the Health Centre resulting in inadequate health care delivery.

Attitude of Health Care Providers

Health care providers' attitude towards their clients or work can greatly affect their ability to deliver a quality service to clients. Poor attitude of health provider may stem from pressure of work resulting from inadequate numbers of trained staff or non availability of supplies. The poor attitude of staff members at health centers could contribute to low TT immunisation of women in the child bearing age, because women after being treated rudely by the health care providers shun coming back.

Long Waiting Time

If women wait for a long time in order to get TT immunisation, they may give up and go back home without getting the immunisation or if they are immunized they would not come for the next doses.

Socio-Cultural and Economic Factors

Certain social and cultural practices may increase the risk of some conditions that are preventable by immunization, adversely affecting immunization coverage.

Educational Level

Women with higher education are more likely to acquire knowledge on TT immunisation than those with low education because they can utilize other sources to get more clarity. Unlike those with low education who would not seek for clarity.

Misconceptions and Myths

There are several misconceptions and myths about TT immunisation. Some of the women in the child bearing age have misconceptions that TT brings about malformations to unborn babies, and that it is some form of birth control because it targets women in the child bearing age.

Number of pregnancies

Women with high number of pregnancies are more likely to acquire all TT immunisations than those with one or none pregnancy because most women think TT vaccine is only for pregnant women, because it is mostly provided during ANC.

Religious Beliefs

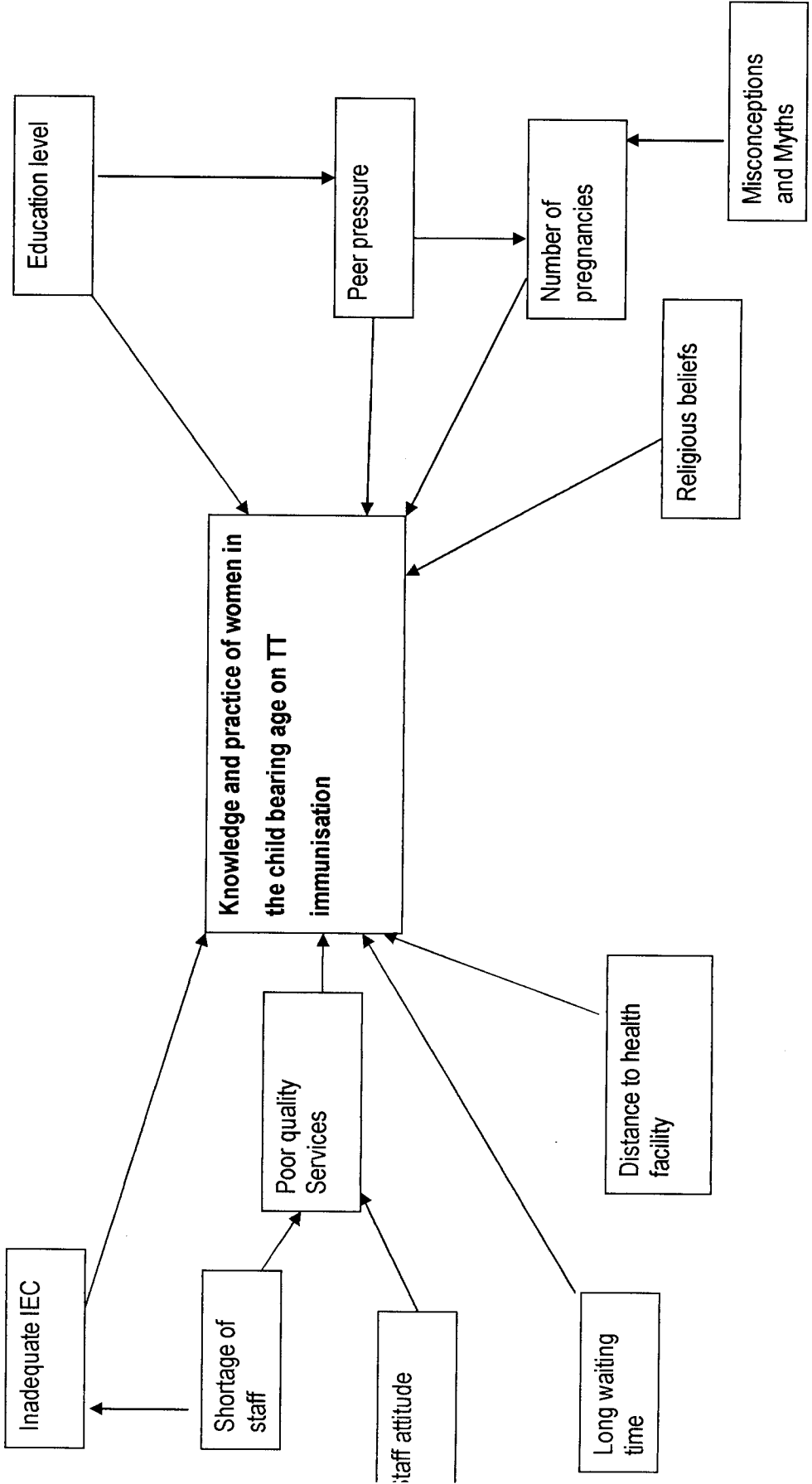
Religious beliefs usually take deep root in the minds of strong believers and followers because they often adhere to the norms and values their religion advocates for. Christianity is the dominant religion in Zambia comprising of different denominations which have different views on TT Immunisation. For instance, the Zionists do not go to health centre for health care as they believe in just taking holy water for healing. Therefore, such religious beliefs and practices have a strong influence on women's knowledge and practice on TT immunisation.

Peer Pressure

Some women in the child bearing age are easily influenced by fellow peers who have poor knowledge and practice towards TT immunisation. For example some women have misconceptions that TT vaccine brings about malformation to unborn child, thus influence others not to practice TT immunisation.

Figure: 1 DIAGRAM OF THE PROBLEM ANALYSIS

Service related factors



1.5. JUSTIFICATION

The purpose of the study was to determine knowledge and practices of women in the child bearing age on TT immunisation in Lusaka District. If women in the child bearing age are well informed on the importance of TT immunisation, they are likely to practice TT immunisation positively, thereby increase the TT immunisation coverage.

It is hoped that this study will contribute to the existing body of knowledge on the topic under study by identifying gaps in knowledge of women in the child bearing age on TT immunisation with a view of increasing access to immunisation services as well as providing adequate information in order to improve practice. This will then help health care providers as well as policy makers come up with workable strategies that will lead to coverage of non pregnant women. If both pregnant and non pregnant women receive fully TT immunisation, NT will remain under control.

1.6 OBJECTIVES OF THE STUDY

1.6.1 **General Objective**

To determine knowledge and practice of TT immunisation among women of child bearing age in Lusaka district.

1.6.1 **Specific Objectives**

The specific objectives for this study are:

1. To assess the knowledge of women in the child bearing age on TT Immunisation.
2. To establish the practice of women in the child bearing age on TT immunisation.
3. To identify factors influencing knowledge and practice of women in the child bearing age on TT immunisation.

1.7. HYPOTHESIS

Hypothesis for this study are:

1. Inadequate knowledge of women in the child bearing age on TT immunisation leads to bad TT immunisation practice.
2. Lower educational levels of women in the child bearing age lead to poor TT immunisation practice.
3. High number of pregnancies contributes to good practices on TT immunisation.

1.8. OPERATIONAL DEFINITIONS

- **Immunisation**

The production of immunity by artificial means

- **Tetanus**

This is an acute infectious disease, affecting the nervous system caused by the bacterium clostridium tetani.

- **Tetanus toxoid**

This is the preparation of poisonous toxins that is produced by tetanus and has been rendered harmless by chemical treatment while retaining its antigenic activity.

- **Women of child bearing age**

These are women between 15 to 49 years of age.

- **Neonate**

A baby from delivery to twenty eight days old

- **Neonatal**

This is a period immediately following birth and continuing through the first month of life.

- **Mother**

This is a female parent of a child.

- **Practices**

This is the doing of something repeatedly or regularly in order to improve one's skill.

- **Knowledge**

It refers to information needed and acquired by women in relation to TT immunisation.

1.9. VARIABLES AND CUT OFF POINTS

The two main variables in this study are the dependent and independent variables.

Dependent Variables

- Knowledge
- Practice

Independent Variables

- Educational level
- Religious beliefs
- Level of knowledge on TT immunisation
- Number of pregnancies

VARIABLES, INDICATORS AND CUT OFF POINTS

The table below shows the main variables and their cut-off points that are used in this study.

Table 2: Variables, Indicators and Cut off point.

Variables	Indicators	Cut off Points	Questions
Knowledge	High	Able to score 4 to 5 points in the knowledge category	5
	Moderate	Able to score 2 to 3 points in the knowledge category	
	Low	0 to 1 points in the knowledge category	
Variables	Indicators	Cut off points	Questions
Practice	Good	Able to score 3 to 5 points	5
	Bad	Able to score 0 to 2 points	

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1. INTRODUCTION

Literature review is a critical summary of research on a topic of interest, often prepared to put a research problem in context or to identify gaps and weaknesses in prior studies so as to justify a new investigation (Polit and Hungler, 1997).

Many studies worldwide have been carried out on tetanus. This review focuses on published and non published studies through out the world and therefore it will cover a general insight on prevention of tetanus, TT immunisation practices, coverage of TT immunisation, knowledge of TT immunisation among health provider and women, as well as coverage of TT on women in the child bearing age.

According to studies carried out in Bangladesh by Rahman and Nessa (2000), NT can be prevented through the use of TT vaccine among pregnant women and that 2 or 3 suitably timed injections are effective and thus preventing maternal and neonatal mortality due to tetanus. National Library for Health (NLH, 2005), reports also support that prevention of NT is possible by the vaccination of pregnant or non-pregnant women with tetanus toxoid and the provision of clean delivery services. In a survey conducted by WHO/UNICEF- Zambia, it was revealed that TT immunisation is offered to both pregnant and non pregnant child bearing women as per national policy to prevent NT (UNICEF- Zambia, 2006). But most concentration is on pregnant women as part of ANC and less concentration with non pregnant women. Although, Zambia considers eliminating NT, approximately 20% of pregnant women are still at risk due to accessibility issues

NLH (2005), reports, further support the implementation of immunisation practices on women of childbearing age or pregnant women in communities with higher levels of risk of neonatal tetanus. Vaccinating childbearing women against tetanus appears to decrease incidence of tetanus in newborn babies. The review of two studies assessing vaccinating

women of childbearing age showed fewer cases of neonatal tetanus when two or three doses were used.

A study done in African regions by WHO, (2008), revealed that routine tetanus immunisation among pregnant women, or TT2+ coverage in the African region, was 37 percent in 1990, 44 percent in 2000, and has been increasing recently to around 58 percent in 2005. In addition to increased coverage, more governments are now committed to reducing MNT, as exemplified by the development of national action plans. In order to accelerate progress towards MNTE, SIA have been implemented across the region, targeting all women of childbearing age in high risk areas with three doses of TT.

Rahman and Nessa (2000) quoted a paper by WHO which stated that the factors influencing NT incidences and mortality are low TT immunisation coverage of women in the child bearing age, poor quality of ANC as well as lack of safe and clean delivery. In relation to this, a study of cross-country multiple regression analysis with coverage of three vaccinations—measles, tetanus; and poliomyelitis was done, to test whether health worker density and female adults literacy was positively associated with vaccination coverage in developing countries (The Lancet, 2003). The study revealed that health worker density was significantly associated and female adult literacy was also positively associated with vaccination coverage. To interpret this, a higher density of health workers increases the availability of vaccination services over time and space, making it more likely that women will be vaccinated and thus, health workers can be a major constraining factor on vaccination coverage in developing countries.

In a study done by Esen et al (2007) in Turkey, it was revealed that immunity against tetanus among women of childbearing age was still insufficient and TT coverage in childbearing age women has not been adequate. Further more, there have been few studies done focusing on tetanus status among women of child bearing age compared to pregnant women.

In a study done in the five densely populated zones in the southern region of Kenya between May and June 1997 on missed opportunity for tetanus toxoid immunization, it was revealed that missed opportunity for tetanus toxoid immunization was three times higher in rural areas as compared to urban areas (Mekonnen, 2000). There could be a number of factors that could explain this difference. Antenatal clinics in the rural areas may not be fully operational or lack all the necessary facilities including tetanus vaccine. The other possible explanation could be that rural women have little knowledge about the different components of antenatal care and are less likely to enquire for tetanus vaccination when the health personnel negligently failed to immunize the clients.

In NT surveillance case investigation carried out in a large proportion of the Eastern Cape and KwaZulu-Natal Provinces in South Africa, it was revealed that 25% of rural women give birth outside the health facility and access to health facilities is difficult as a result of limited transport (UNICEF, 2002). This may account for the large immunisation drop-out rate making it difficult to curb MNT. With the above concern, WHO recommended that the national NT control policy needs to be changed to include 5 doses of TT for all women of child-bearing age.

A cross-sectional study that was done at a perfect health mela and all the government allopathic health agencies in Delhi to study knowledge among general public and health care providers about tetanus immunization schedules in children, pregnant females and female adults, revealed that the knowledge of tetanus immunization schedule for female adults was poor among all categories of respondents, though it was comparatively better for pregnant females (Dabas et al 2007). In another study from Karachi, Pakistan, which was done among general practitioners, it was observed that doctors had poor knowledge of tetanus immunization (Kumar et al, 2005). This implies that if health care providers have poor knowledge on TT immunisation then they will pass on incorrect messages to the women as well.

In another cross-sectional survey done to assess the levels of awareness and compliance of the women of childbearing age in a tertiary institution in southwest Nigeria with the TT1-

TT5 immunization schedule, the study concluded that there is a wide gap between policy formulation for the TT1-TT5 immunization schedule and the actual practice among a relatively educated population of women of childbearing age surveyed (Bamidele, 2003). Some of the reasons given by the respondents for non-compliance were lack of information on the need for the schedule, occupation/profession, and lack of organized campaign to make it mandatory and non-availability of the TT vaccine in the health centres during respondents' visits. Esen et al (2007), in Turkey further found that women with higher education levels had immunity against tetanus than those who had low educational levels.

A survey conducted by WHO/UNICEF- Zambia in 2006 on TT vaccination status of mother, showed that there were no entries for the TT status of 21% of the mothers. The TT vaccination status of an additional 20% of the women was unknown. Of the mothers with known TT status, 77% received less than 2 doses of TT. Probably the second dose, for some of the women who received 2 doses, were very near the time of delivery.

The survey conducted by WHO in some parts of Western Province of Zambia found that only one death from NT occurred in the districts of Sesheke and Kaoma between 15 July 2006 and 14 July 2007. The design of the survey allowed for ≤ 1 NT death to occur while still considering that elimination had been achieved; thus, NT can be considered to have been eliminated in these districts during the period covered by the survey. Since the districts were purposefully selected as areas where infants were at the highest risk of NT, it is likely that the disease has also been eliminated in other districts in the country where infants are considered to be at lower risk. Altogether, 77.2% of a sub sample of mothers reported having received ≥ 2 doses of TT, the incidence of NT in the districts surveyed has decreased to levels compatible with elimination (WHO, 2008).

2.2 CONCLUSION

The Literature reviewed shows that NT is a worldwide problem and that TT immunisation practices are the most important measures in its prevention. Literature has also revealed that NT remain a major cause of morbidity and mortality among children and women worldwide, in that some programmes are put in place to reduce the problem of NT. It has also revealed that the health care providers need to have adequate knowledge on TT immunisation, so as to pass correct messages to the women as well.

CHAPTER THREE

3.0. RESEARCH METHODOLOGY

3.1. INTRODUCTION

This chapter presents the research methodology that was used in this study. According to Polit and Hungler (1995) research methodology are the steps, procedures and strategies for gathering and analysing data in research investigations. This refers to the decisions the researcher must make concerning the methods to be used. Sometimes the nature of the research question, detects the methods to be used. The research methodology focuses on research design, study setting, study population, sample selection, sample size, data collection tools, data collection technique, pilot study, validity and reliability, ethical and cultural considerations, plan for data analysis and plan for dissemination of findings. It ensures validity and credibility of the research findings.

3.2. RESEARCH DESIGN

According to Polit and Hungler (2001) a research design is the overall plan for collecting and analyzing data, including specification for enhancing the internal and external validity of the study. The design provides answers to the research questions or for testing the research hypothesis. It spells out basic strategies that the researcher adapts to develop information that is accurate and interpretable.

In this study, the investigator used a descriptive non-interventional research design. A descriptive research design is a study in which a body of data is collected, recorded and analysed. It involves the systematic collection and presentation of data to describe or refine characteristics of a phenomena or person as they naturally occur (Polit and Hungler, 1997).

The study was descriptive because it involved identification and description of the knowledge and practice of women in the child bearing age on TT immunisation in Lusaka district without manipulating any variables.

3.3. RESEARCH SETTING

Research setting is the physical location and conditions in which data collection takes place in a study (Polit and Hungler, 1997). The study was conducted at Kalingalinga health centre found in Lusaka district.

Kalingalinga health centre was been chosen for its convenience and easy accessibility to the investigator considering inadequate time in which the study has to be completed and urban geographical location.

Kalingalinga Health Centre is situated along Alick Khata road in the eastern part of Lusaka. It caters for the catchment population of 55,687 people of which 12,251 (22%) are women of child bearing age (Kalingalinga clinic, 2008). It has a bed capacity of forty six (46) for both maternity and general wards. Its catchment area includes Hellen Kaunda, Sunnigdale, University of Zambia (UNZA) main Campus, Olympia, City Airport, Longacreas, Kalundu and Kabulonga residential areas. The health centre has an outpatient, MCH, Labour ward, Anti-Retro-Viral therapy department, laboratory, inpatient and voluntary counseling and testing departments. It also has a kitchen, laundry and mortuary unit. Its nearest referral hospital is the University Teaching Hospital.

The Health Centre is headed by a Registered Midwife and has a total number of one hundred and ten (110) health workers of which sixty one (61) are professionals and forty nine (49) are supportive staff.

The Department of MHC conducts growth monitoring and immunisation, Family planning, Post Natal services, ANC services and Prevention of Mother to Child Transmission of HIV, Children's clinic and School Health services.

3.4. STUDY POPULATION

Study population refers to the entire set of individuals or objects having some common characteristics, referred to as universe (Polit and Hungler, 2001). For this study there were women aged between 15 and 49 years living in Kalingalinga catchment area. According to Polit and Hungler (2001) a target population is the entire population in which the researcher is interested and to which he/she would like to generalize the results of the study. In this study, the target population was comprised of women aged between 15 and 49 years attending MCH clinic at Kalingalinga health centre.

3.5. SAMPLING PROCEDURE

Sample selection is a process of selecting a portion of the population to represent the entire population (Treece and Treece, 1986). In this study, simple random sampling was used to select the participants for the study. According to Basavanthappa, (2006), simple random sampling is one in which every member of the population has an equal chance of being selected into the sample. In this type of sample, sampling was done without replacement, so that no unit can appear more than once in the sample.

The investigator established a sampling frame of all women in child bearing age attending MCH clinic on specified days of Monday to Friday according to Kalingalinga MCH schedule. The women were given numbers, and then these numbers were written on slips of paper and put in a box. Then the slips were mixed thoroughly by shaking the box and five slips were picked from the box each day. The women with the numbers that were picked were study participants. The sampling was conducted every morning at Kalingalinga MCH department until the sample size was reached.

3.6. SAMPLE SIZE

A sample size is the total number of subjects to represent the population under study (Polit and Hungler, 1997). In this study a total of 50 respondents comprised the sample. The reasons for this sample size were attributed to the limited time in which the study was to be completed as well as financial constraint to carry out a large study.

3.7. DATA COLLECTION TOOL

A data collection tool is a measuring device used in gathering of information needed to address a research problem (Polit and Hungler, 2001). In this study, a structured interview schedule was used because it can be used for both illiterate and literate women in the child bearing age. The interview schedule had both open and closed ended questions in order to cover quantitative data. Data was collected over a period of 10 days and five interviews were done per day.

A structured interview schedule comprised of a series of questions designed to measure some variables and the questions were categorized into 3 sections, which were:-

- Category A consisted of questions on demographic data.
- Category B consisted of questions measuring the level of knowledge about TT immunisation.
- Category C consisted of questions related to practice towards TT immunisation.
- Category D consisted of questions related to factors influencing TT immunisation.

The following are some of the advantages and disadvantages of an interview (Treece and Treece, 1986).

Advantages of Interviews

1. Data for each interview are usable.
2. Depth of the response can be assured, since the researcher can pursue any question of interest.
3. If the respondent does not understand one of the questions during the interview he/she may request clarifications.
4. The interview procedure may serve time, because he/she does not have to go through the process of returning the instrument.

Disadvantages

1. It may be difficult to make comparisons of one interviewer's data with another interviewer data unless a rigid procedure is followed at all times.
2. In a large research project there is need to hire interviewers and suitable persons may not be readily available.

3.8. DATA COLLECTION TECHNIQUES

Data collection technique is the actual method on how the data is going to be collected (Polit and Hungler, 2001). It allows for systematic collection of information from respondents. In this study, data was collected using structured interview schedule in a room to provide privacy and confidentiality. An interview is a face-to-face interaction between the interviewer and the interviewee by using structured written questions.

At the beginning of each interview the interviewer introduced herself to the respondent, explained the purpose of the study and when interviewee agreed to be interviewed, the interviewer went ahead with the interview asking questions according to the interview schedule. She was reading out the questions to the respondents and then entered the responses as they were given by the respondents. At the end of the interview, the researcher went through the interview schedule to note for consistency in the answers that were given and for completeness of the interview schedule and finally the interviewer thanked the respondent for taking part in the study.

3.9. PILOT STUDY

According to Polit and Hungler, (2001), a pilot study is a small study or trial run, done in preparation for the major study. In other words, it is a small-scale study, which is conducted before the main study on a limited number of subjects selected from the same population as that of the actual study.

The pilot study was conducted at the University Teaching Hospital (UTH) in ward BO2, because it is an obstetric and gynaecological out patient department where most women in the child bearing age seek MCH services. It was conducted on 5 respondents which was 10% of the study sample.

3.10. Validity

Validity refers to the instrument's ability to actually test what it is supposed to test (Treece and Treece, 1986). Validity was maintained by ensuring that all variables under study were covered in the interview schedule. Questions were clearly constructed to avoid ambiguity and were pre-tested. The researcher constructed the questions in English, but if need arose, she was interpreting into Nyanja or Bemba for the illiterate group.

3.11. RELIABILITY

Reliability refers to the ability of the data-gathering device to obtain consistent results (Treece and Treece, 1986). The instrument should be able to bring out the accurate information whereby if the same instrument has to be used after some time, it will produce the same responses. To ensure this, the same instrument was used to collect data from all the respondents and similar questions were asked to all the respondents by the investigator herself to ensure consistency in collecting similar data.

3.12. ETHICAL CONSIDERATIONS

Ethical issues were addressed by requesting a written permission to conduct both the pilot and actual study from the UTH Managing Director and Lusaka District Health Director respectively. Both written and verbal permission was asked from each and every respondent through the use of an informed consent.

The respondents were briefed about the purpose of the study and that they had the right to participate or withdraw from the study. The respondents were assured of confidentiality of personal information shared with the researcher. The completed interview schedules were kept under strict security conditions to avoid unauthorized access to the information contained therein.

CHAPTER FOUR

4.0 DATA ANALYSIS AND PRESENTATION OF FINDINGS

4.1 INTRODUCTION

The purpose of this chapter is to present information on how the research data were analysed and what information was obtained.

4.2 DATA ANALYSIS

Data analysis is the systematic organisation and synthesis of research data, and the testing of research hypotheses using those data (Polit and Hungler, 1997).

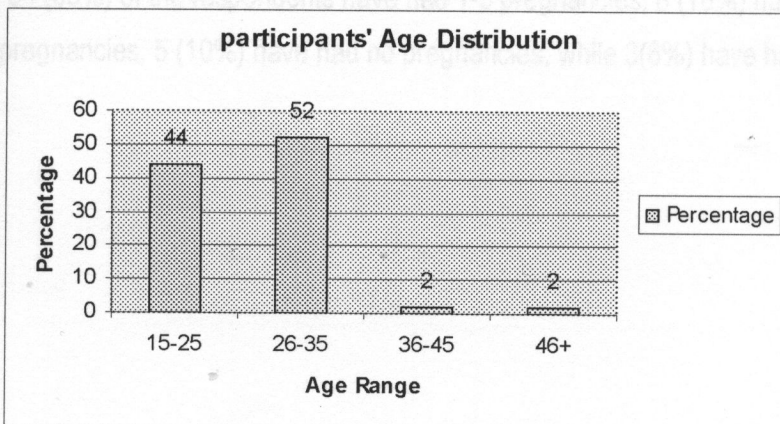
Data was collected from fifty (50) respondents using an interview schedule. After data was collected, it was checked for completeness and inconsistencies. It was then coded, categorised and entered on the data master sheet. The data master sheet was partitioned into 4 categories namely demographic data, knowledge on TT immunisation, practices towards TT immunisation and factors influencing knowledge and practice.

4.3 PRESENTATION OF FINDINGS

Data has been presented in the form of pie chart, graphs and frequency tables in order to summarize the findings in a meaningful way, which is easy to understand and cross tabulations tables have been used to highlight relationships between variables.

A. Demographic data

Figure 3: Respondents age distribution (n=50)



Twenty-six (52%) of the participants were in the age group of 26-35 years, 22 (44%) were between 15-25 years, 1 (2%) was between 36-45 years while 1 (2%) was above 46 years.

Table 4: Respondent's Number of Children (n= 50)

Number of Children	Frequency	Percentage
None	15	30
1-3	29	58
4-6	5	10
7-9	1	2
Totals	50	100%

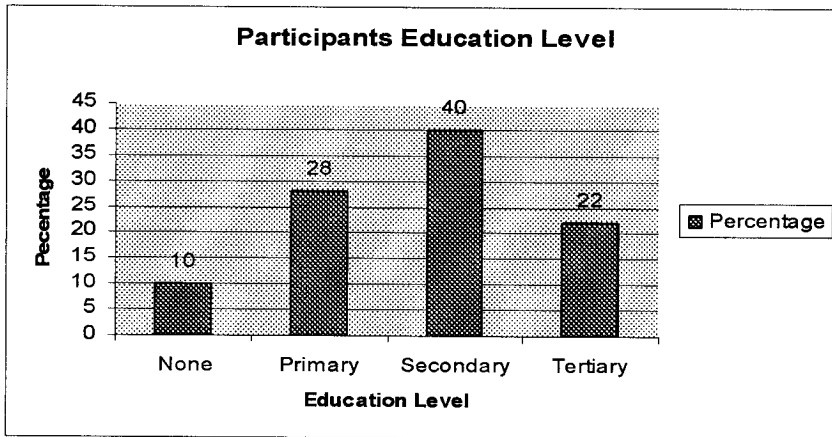
29 (58%) of the respondents had 1-3 children, 15 (30%) had no children, 5 (10%) had 4-6 children, while 1(2%) had between 7-9 children.

Table 5: Respondents number of pregnancies (n= 50)

Number of pregnancies	Frequency	Percentage
None	5	10
1-3	34	68
4-6	8	16
7-9	3	6
Total	50	100%

34 (68%) of the respondents have had 1-3 pregnancies, 8 (16%) have had 4-6 pregnancies, 5 (10%) have had no pregnancies, while 3(6%) have had 7-9 pregnancies.

Figure 6: Participants' education Level (n=50)



20 (40%) of the respondents had attained secondary school education, 14 (28%) had primary education level, 11 (22%) had tertiary education, while 5(10 %) had no education

Table 7: Participants' residential area

Residential Area	Frequency	Percentage
Within Kalingalinga	36	72
Outside Kalingalinga	14	28
Total	50	100

36 (72%) of the participants live within Kalingalinga area while 14 (28%) live outside Kalingalinga.

Table 8: Participants' denomination (n=50)

Denomination	Frequency	Percentage
Catholic	13	26
UCZ	6	12
RCZ	9	18
SDA	6	12
Other (specify)	16	32
Total	50	100

13 (26%) of the participants belonged to the Catholic Church, 9 (18%) belonged to RCZ, 6 (12%) each belonged to UCZ and SDA each, while 16 (32%) belonged to others churches.

B. Knowledge on TT immunisation

Table 9: Participants` response on what vaccine is given to women of child bearing age. (n=50)

Name of vaccine	Frequency	Percentage
Measles vaccine	1	2
TT vaccine	24	48
Not sure	25	50
Total	50	100

Half of the participants 25 (50%) indicated that they were not sure of the name of the vaccine given to women of child bearing age, 24 (48%) indicated that it was TT vaccine, 1 (2%) indicated that it was the measles vaccine.

Table 10: Participants` response on what TT vaccine is for (n=50)

Purpose for vaccine	Frequency	Percentage
Prevent Tetanus	9	18
Prevent any disease	28	56
Don't know	13	26
Total	50	100

28 (56%) of the participants mentioned prevention of any disease, 13 (26%) mentioned that they didn't know, while 9 (18%) mentioned prevention of tetanus.

Table 11: Participants` response to when the TT vaccine is supposed to be given for the first time (n=50)

Response	Frequency	Percentage
15 years	20	40
When pregnant	11	22
Not sure	19	38
Total	50	100

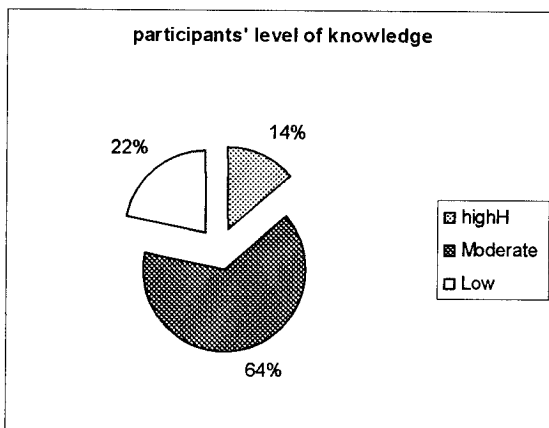
20 (40%) of the participants mentioned 15 years, 19 (38%) were not sure while 11(22%) mentioned when pregnant.

Table 12: Participants` response on the number of TT vaccine one is supposed to get in a life time (n=50)

Response	Frequency	Percentage
4	2	4
5	18	32
Not sure	30	60
Total	50	100

The majority of the participants 30 (60%) were not sure, 18 (32%) mentioned 5 while 2 (4%) mentioned 4.

Figure 13: participants` level of knowledge on TT immunisation (n=50)



Most of the participants 32 (64%) had moderate knowledge on TT immunisation, 11 (22%) had low knowledge while 7 (14%) had high knowledge.

C. Practice towards TT immunisation

Table 14: Participants` response on whether they had TT vaccine before (n=50)

Response	Frequency	Percentage
Yes	49	98
No	1	2
Total	50	100

49 (98%) of the participants have had TT vaccine before while 1 (2%) have never had.

Table 15: Participants` response on when they had the first TT vaccine (n=49)

Response	Frequency	Percentage
At 15 years	24	49
When pregnant	25	51
Total	49	100

Of the 49 participants who have had TT vaccine, 25 (51%) of the participants have had their first TT vaccine when they were pregnant, while 24 (49%) had it when they were 15 years.

Table 16: Participants` response on the number of TT vaccine they have had so far (n=49)

Response	Frequency	Percentage
1	11	23
2	6	12
3	18	37
4	10	20
5	4	8
Total	49	100

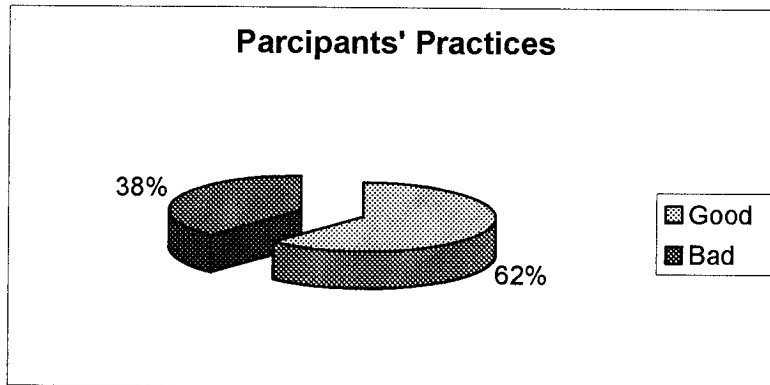
Of the 49 participants who have had TT vaccine, 18 (37%) of the participants have had 3 TT vaccines so far, 11 (23%) have had 1, 10 (20) have had 4, 6 (12%) have had 2, while 4 (8%) have had 5.

Table 17: Participants' response on when they had the second TT vaccine (n=38)

Response	Frequency	Percentage
4 weeks after the first vaccine	5	13
When pregnant again	33	87
Total	38	100

Of the 38 participants who have had more than 1 TT vaccine, 33 (87%) had their second TT vaccine when they were pregnant again, while 5 (13%) had it 4 weeks after the first one,

Figure 18: participants' practice towards TT immunisation (n=50)



31 (62%) had good practices towards TT immunisation, while 19 (38%) had bad practices.

D. Factors influencing knowledge and practice

Table 19: Respondents' response on how long it takes them to reach the health centre (n=50)

Response	Frequency	Percentage
30 minutes	41	82
1 hour	9	18
Total	50	100

41 (82%) of the participants take 30 minutes to walk to the health centre, while 9 (18%) walk for one hour.

Table 20: Participants response on whether the health workers provide information on Tetanus prevention (n=50)

Response	Frequency	Percentage
Yes	36	72
No	14	28
Total	50	100

36 (72%) of the participants indicated that they were provided with information on tetanus prevention by the health workers while 14 (28%) said they were not provided with information.

Table 21: Participants' response on whether they had been to the health centre for TT immunisation irrespective of pregnancy (n=50)

Response	Frequency	Percentage
Yes	9	18
No	41	82
Total	50	100

41 (82%) of the participants had not been to a health centre specifically for TT immunisation while 9 (18%) indicated that they had been.

Table 22: Participants` response on how long they had to wait before TT vaccine was given to them. (n=49)

Response	Frequency	Percentage
Less than 1 hour	1	2
1 – 2 hours	4	8
3 -4 hours	37	76
5 -6 hours	7	14
Total	49	100

Of the 49 participants who had received TT vaccine before, the majority 37 (76%) indicated that they waited for 3-4 hours before TT vaccine was given to them, 7 (14%) waited for 5-6 hours, 4 (8%) waited for 1-2 hours 1(2%) waited for less than an hour.

Table 23: Participants` reasons for having to wait before getting the TT vaccine (n=49)

Reasons	Frequency	Percentage
Too many people and few nurses	49	100
Total	49	100

All the participants 49 (100%) gave the same reasons of few nurses attending to many people.

Table 24: Participants` response to whether they have religious beliefs that restrict them from getting TT immunisation (n=50)

Response	Frequency	Percentage
Yes	0	0
No	50	100
Total	50	100

All the participants 50 (100%) had no religious beliefs that would restrict them from getting TT immunisation.

Table 25: Participants` response to whether they have traditional beliefs that restrict them from getting TT immunisation (n=50)

Response	Frequency	Percentage
Yes	0	0
No	50	100
Total	50	100

All the participants 50 (100%) had no traditional beliefs that would restrict them from getting TT immunisation.

4.4. CROSS TABULATION TABLES

SHOWING RELATIONSHIP BETWEEN VARIABLES

Table 26: Respondents` knowledge in relation to their education level

Knowledge	Education Level				TOTAL	Percentages (%)
	None	Primary	Secondary	Tertiary		
High	0	1(7.1%)	5 (25%)	1(9.1%)	7	14
Moderate	4 (80%)	8 (57.2%)	11 (55%)	9(81.8%)	32	64
Low	1(20%)	5 (35.7%)	4 (20%)	1(9.1%)	11	22
Total	5 (10%)	14 (28%)	20 (40%)	11(22%)	50	100

Of the respondents who had high knowledge on TT immunisation, 1 (9.1%) had attained tertiary level of education, 5 (25%) had attained secondary educational level, 1 (7.1%) had attained primary education. Those who had moderate knowledge, 9 (81.8%) had tertiary education, 11 (55%) had secondary education, 8 (57.2%) had primary education while 4 (80%) had no education. For the low knowledge, 1 (9.1%) had attained tertiary education, 4 (20%) had secondary education, 5 (35.7%) had primary education while 1 (20%) had no education.

Table 27: Respondents' knowledge in relation to the number of pregnancies

Knowledge	Number of pregnancies				Total	Percentages (%)
	None	1 - 3	4 - 6	7 - 9		
High	1(20%)	5(14.7%)	1(12.5%)	0 (0%)	7	14
Moderate	4(80%)	20(58.8%)	7(87.5%)	1 (33.3%)	32	64
Low	0(0%)	9 (26.5%)	0 (0%)	2 (66.7%)	11	22
Total	5 (10%)	34 (68%)	8 (16%)	3 (6%)	50	100

Of the respondents with high knowledge on TT immunisation, 5 (14.7%) have had 1-3 pregnancies, 1 (12.5%) has had between 4-6 pregnancies, while another 1 (20%) has had no pregnancy. Those who had moderate knowledge, 20 (58.8%) have had 1-3 pregnancies, 7 (87.5%) have had 4-6 pregnancies, 4 (80%) have had no pregnancy while 1 (33.3 %) has had between 7-9 pregnancies. For those who had low knowledge, 9 (26.5%) had 1-3 pregnancies, while 2 (66.7%) had 7-9 pregnancies.

Table 28: Respondents practice in relation to the level of knowledge on TT immunisation

Practices	Level of Knowledge			Total	Percentages (%)
	High	Moderates	Low		
Good	5 (71.4%)	24 (75%)	2 (18.2%)	31	62
Bad	2 (28.6%)	8 (25%)	9 (81.8%)	19	38
Total	7 (14%)	32 (64%)	11 (22%)	50	100

Of the respondents who had good practice towards TT immunisation, 5 (71.4%) had high knowledge, 24(75%) had moderate knowledge while 2 (18.2%) had low knowledge. For the respondents who had bad practice, 2 (28.6%) had high knowledge, 8 (25%) had moderate knowledge while 9 (81.8%) had low knowledge.

Table 29: Respondents' practice in relation to their education level

Practice	Education Level				TOTAL	Percentage (%)
	None	Primary	Secondary	Tertiary		
Good	0 (0%)	5 (35.7%)	16 (80%)	10 (90.9%)	31	62
Bad	5 (100%)	9 (64.2%)	4 (20%)	1(9.1%)	19	38
Total	5 (10%)	14 (28%)	20 (40%)	11 (22%)	50	100

Of the respondents who had good practices toward TT immunisation, 10 (90.9%) attained tertiary level of education, 16 (80%) had had attained secondary educational level, while 5 (35.7%) had attained primary education level. For those who had bad practice, 1 (9.1%) had tertiary education level, 4 (20%) had secondary education level, 9 (64.2%) had primary education level while 5 (100%) had not been to school.

Table 30: Respondents practice in relation to the number of pregnancies.

Practice	Number of pregnancies				Total	Percentages (%)
	None	1 - 3	4 - 6	7 - 9		
Good	3(60%)	21(61.8%)	7 (87.5%)	0 (0%)	31	62
Bad	2 (40%)	13 (38.2%)	1(12.5%)	3 (100%)	19	38
Total	5 (10%)	34 (68%)	8 (16%)	3 (6%)	50	100

Out of 34 respondents that have had 1-3 pregnancies, 21(61.8%) had good practice toward TT immunisation and 13 (38.2%) had bad practice. Of the 8 respondents who have had 4-6 pregnancies, 7 (87.5%) have had good practices and 1 (12.5%) has had bad practice and out of 5 respondents that have had no pregnancies at all, 3 (60%) had good practice and 2 (40 %) had bad practice. Of the respondents that had 7-9 pregnancies, all of them 3 (100%) had bad practice.

CHAPTER FIVE

5.0. DISCUSSION OF FINDINGS

5.1. INTRODUCTION

The discussion contained in this chapter is based on analysis of responses from fifty research participants.

5.2. CHARACTERISTICS OF THE SAMPLE

The respondents' in this study were aged between 15 and 49 years and the majority of them 48 (96%) were in the age group of 15-35 years. This means that most of the respondents were in their reproductive age. The majority 36 (72%) of them lived in Kalingalinga. This could be attributed to the fact that the study was conducted at Kalingalinga health centre which is situated in Kalingalinga compound.

The respondents were all Christians but with different denominations. The prominent ones being Roman catholics with 13 (26%) respondents, RCZ with 9 (18%), UCZ and SDA with 6 (12%) each, while 16 (32%) belonged to other categories of Christians churches (**Table 8**). Religion serves as an important role in the Zambian society and as a powerful agent of social control, encouraging conformity to the norms and values surrounding important societal issues. Moreover Zambia was declared a Christian nation by former President Dr. FTJ Chiluba in 1992.

The majority 34 (68%) of the respondents had 1-3 pregnancies, while 5 (10%) had never been pregnant before. This could be due to the fact that most of the respondents interviewed were young, below 35 years and thus just starting life as parents. Regarding the number of children, most of the respondents 29 (58%) had less than 3 children. Family planning is one of the programmes in MCH and knowledge on contraceptives is high among the young people.

The other characteristic worth noting is the education level. Most of the respondents 45 (90%) had some form of education. These included; tertiary education, secondary education and primary education. Only 5 (10%) had no formal education (**Figure 6**). It is worth noting that 44+ years after independence; there are still women who have no education at all. This could be attributed to the fact that some families still consider the kitchen as a woman's place. But this is slowly fading out with the coming of gender awareness programs.

5.3. DISCUSION OF VARIABLES

5.3.1 KNOWLEDGE ON TT IMMUNISATION

Having knowledge on TT immunisation is an important step towards the practicing of TT immunisation and acquiring the doses in a timely and effective manner. In assessing the respondents' knowledge on TT immunisation, the researcher asked for the name of the vaccine that is given to women of child bearing age, the purpose of TT vaccine, when the TT vaccine is supposed to be given for the first time and on the number of TT vaccines that a woman is supposed to get in a life time.

The results showed that, 24 (48%) of respondents knew the name of the vaccine that is given to women of child bearing age but on the purpose of the vaccine, only 9 (18%) mentioned tetanus prevention while the majority 41 (82%) were not sure. On the number of TT doses one is supposed to get in a life time, only 18 (32) respondents mentioned 5 doses and the rest were not sure. On when the TT vaccine is supposed to be given for the first time, 20 (40%) of the respondents mentioned 15 years, 19 (38%) were not sure while 11(22%) mentioned when one fails pregnant. Generally, the findings of the study revealed that knowledge among the respondents was moderate 32 (64%). These findings are contrary to the findings of Dabas (2007), which revealed that the knowledge of tetanus immunization schedule for female adults was poor among all categories of respondents.

Education level didn't seem to have a big impact on knowledge regarding TT immunisation. Table 26 shows that, of the respondents who had high knowledge on TT immunisation, 1 (9.1%) had attained tertiary level of education, 5 (25%) had attained secondary educational level and 1 (7.1%) had attained primary education. Those who had moderate knowledge, 9 (81.8%) had tertiary education, 11 (55%) had secondary education, 8 (57.2%) had primary education while 4 (80%) had no education. Interestingly, among the respondents who had low knowledge, 1 (9.1%) had attained tertiary education, 4 (20%) had secondary education, 5 (35.7%) had primary education while 1 (20%) had no education at all. This could be attributed to the fact that most women acquire information on TT immunisation from the health facility during MCH services. Therefore, there is need for intensified health education on TT immunisation in all health facilities, because that is where most people get their information from.

Table 27 shows the respondents' knowledge in relation to the number of pregnancies. Similarly, the findings of the study revealed that respondents' number of pregnancies had no influence on the level of knowledge. Out of 3 respondents that had between 7-9 pregnancies; no one had high knowledge, 1 (33.3%) had moderate knowledge and 2 (66.7%) had low knowledge. Of the 8 respondents who have had 4-6 pregnancies ; only 1 (12.5%) respondent had high knowledge, 7 (87.5%) had moderate knowledge and no one had low knowledge and out of 34 respondents who have had 1-3 pregnancies; 5 (14.7%) respondents had high knowledge, 20 (58.8%) had moderate knowledge while 9 (26.5%) had low knowledge and out of the 5 respondents who have had no pregnancies; 1 (20%) had high knowledge, 4 (80%) had moderate knowledge and no one had low knowledge. These findings are therefore rejecting the null hypothesis of the study which stated that; "The number of pregnancies one has had, has an influence on the level of knowledge". Although, knowledge on TT immunisation was generally inadequate in all respondents, most of the respondents 32 (64%) had moderate knowledge regardless of the number of pregnancies one has had.

5.3.2 PRACTICE TOWARDS TT IMMUNISATION

The practices of women in the child bearing age towards TT immunisation were investigated. The findings revealed that of all the respondents 49 (100%) who acknowledged having had TT vaccine, 25 (51%) of them had their first TT vaccine when they fell pregnant, while 24 (49%) had theirs when they were attending secondary school. The majority 33 (87%) of the 49 respondents had their second dose when they fell pregnant again, regardless of the years that past before the next pregnancy.

This could be due to the moderate knowledge on TT immunisation schedules that the respondents have. When the respondents were asked to mention how many doses of TT vaccine they have had so far; 18 (37%) of them mentioned 3 TT vaccines, 11 (23%) have had 1 TT vaccine, 10 (20) have had 4 TT vaccines, 6 (12%) have had 2 TT vaccines, while 4 (8%) have had 5 TT vaccines. This means that most 32 (65.3%) of the respondents had more than 3 TT doses, although inconsistently. This is as a result of the fact that most concentration on TT vaccine is put on pregnant women as part of ANC and less concentration with non pregnant women. These findings are in support of the findings of Rahman and Nessa (2000), that stated that 2 or 3 suitably timed injections are effective and thus preventing maternal and neonatal mortality due to tetanus (NLH, 2005).

The findings further revealed that 17 (34.7%) respondents (26 – 35 years) had less than 2 TT vaccines. This result is again supporting the findings of Rahman and Nessa (2000) which found that, of the mothers with known TT status, 77% received less than 2 doses of TT. Probably the second dose, for some of the women who received 2 doses, was very near the time of delivery. The study further revealed that the majority 41 (83.6%) of the respondents had not been to the health facility especially for TT immunisation. This again points to the fact that the respondents had inadequate knowledge to seek TT immunisation with out pregnancy (**Tables 14, 15, 16 and 17**).

Generally, the findings of this study revealed that most of the respondents 31 (62%) had good practices towards TT immunisation even if most of them had moderate knowledge on TT immunisation. The Zambian policy requires that TT immunisation be offered to both

pregnant and non pregnant women in the child bearing age in order to prevent NT (UNICEF-Zambia, 2006). This implies that there is still need for intensified health education on TT immunisation in all health facilities to capture all women in the child bearing age that are due for the vaccine at every contact with the health care provider and that school health services are intensified as well.

Table 28 shows that there is a correlation between the level of respondents' knowledge and the practices towards TT immunisation. Most of the respondents (39) that had high and moderate knowledge, 29 (74.4%) of them had good practices and the respondents (11) that had low knowledge, 9 (81.8%) had bad practices towards TT immunisation. This could be attributed to the fact that TT immunisation is conducted as routine care to all women who come for ANC as per national policy. Therefore, the researcher failed to reject the null hypothesis of the study which stated that; inadequate knowledge of women in the child bearing age on TT immunisation leads to bad TT immunisation practices.

The findings of the study also revealed that the respondents' level of education had influence on the practices towards TT immunisation. Of all the respondents 31 that had attained secondary and tertiary education, 26 (84%) had good practices (**Table 29**). This could be that education facilitates easy and faster assimilation of issues. These findings are in support of the findings of Esen et al (2007), who found that women with higher education levels had immunity against tetanus than those who had low educational levels. This again agrees with the findings of ZDHS 2001-2002 (CSO, 2003), where education was again mentioned to be a strong predictor of tetanus toxoid vaccination, as women with no education were twice as likely to receive no tetanus toxoid injections, compared with those with higher education. Of the 14 (28%) that had attained primary education level, 5 (35.7%) had good practices while 9 (64.2%) have had bad practices. For those that had bad practices, 1 (9.1%) had tertiary education level, 4 (20%) had secondary education level, while 5 (100%) had no educational at all.

The findings of the study further revealed that there is no correlation between number of pregnancies one has had and practices towards TT immunisation. Of all the respondents

(3) that have had 7-9 pregnancies, all of them had bad practices and for those that have had no pregnancies, 3 (60%) had good practices while 2 (40 %) had bad practices. On the other hand those that have had 1-3 pregnancies, 21 (61.8%) had good practice toward TT immunisation while 13 (38.2%) had bad practices and of the 8 respondents who have had 4-6 pregnancies, 7 (87.5%) had good practice while 1 (12.5%) had bad practices. This could possibly be to the fact that the TT immunisation programs are also conducted during school health services. Therefore, the researcher rejected the null hypotheses that stated that the number of pregnancies one has had, has an influence on TT immunisation practices.

5.4. IMPLICATIONS OF THE STUDY TO THE HEALTH CARE SYSTEM

All women in the child bearing age, when accessing health care in the health facility pass through the hands of the nurse, more especially those who seek MCH services. The nursing care that is given to all clients during MCH services provision need to be adequate and efficient in order to have better results.

The findings of this study raise many questions of utmost importance. Why is the knowledge and practice on TT immunisation inadequate despite of the expansion of health services? The results clearly show that there is lack of intensified health education to members of the public on the importance of TT immunisation, even though most of the respondents {36 (72%)} indicated that they were provided with information on tetanus prevention by the health workers. This could be due to the fact that few nurses attend to a large population in MCH department. Most of the participants had moderate knowledge on TT immunisation and 31 (62%) of the respondents had good practices towards TT immunisation. This implies that the MCH nurses need to intensify health education on tetanus prevention to all women who visit the health facility. This would improve the knowledge and practice of TT immunisation among women of child bearing age in Kalingalinga as shown in the findings of the study.

The shortage of nurses may have an effect on the provision of quality health education on TT immunisation. Few nurses can not manage to attend to a lot of clients and be able to

practice accordingly, thus make them to concentrate on pregnant women only, this has been shown in the findings of the study that out of the 38 respondents who have had more than one TT vaccine, 33 (87%) had their second TT vaccine when they fell pregnant again. This poses a challenge on MOH to employ more nurses especially midwives and ensure that these nurses are maintained and retained in most health facilities so as to improve on quality education and intensify school health services. The shortage of the nurses could also be attributed to lack of motivation that results into nurses leaving the country for greener pastures. This also calls for health care providers themselves to be more vigilant and attach much importance to the practices of immunizing to all women who visit the health facility.

The results of this study also show that explanations of TT immunisation schedules to clients is given very little attention by the health care providers, such that the clients do not understand the explanations given. This could be due to the fact that most MCH clinics are congested, so much that nurses find it difficult to explain to all clients for them to understand the schedules of TT immunisation. These clients go home with out knowing why they received the vaccine and how many doses they are supposed to have. This calls for MCH in-charges to motivate their nurses to work more cohesively towards improving TT immunisation practices, if Zambia has to achieve the elimination goal of NT.

5.5. RECOMMENDATIONS

An emphasis has been placed on primary health care; every health care provider has a role to play in achieving Millennium Development Goals (MDGs). In view of this and following the findings of the study, the researcher would like to make the following recommendations:

To the health care providers

- ◆ The health care providers should not only concentrate on teaching pregnant women on the importance of TT immunisation and on the number of doses one is supposed to have, but they should also educate every woman in the child bearing age who visits the

health facility for whatever reason. This is to ensure that all females that are not captured during school health services and MCH services are also captured.

- ◆ There is need for health care providers to constantly check the records of TT status of all women in the child bearing age, in order to identify which women are not immunised, partially immunised or fully immunised.

To the DHMT

- ◆ The DHMT should ensure that health care delivery centres have adequate staffing so that the staff will be able to deliver quality services to the clients, health education inclusive.
- ◆ The DHMT should also ensure that health care providers are conducting school health services regularly, to intensify health education on TT immunisation to every girl child who is 15 years and above.
- ◆ The DHMT should intensify sensitization programs on the importance of TT immunisation to women of child bearing age. The programs should be done throughout the year through the use of mass media (radio, television and prints such as bill boards).

To policy makers

- ◆ MoH should work with other sectors like Ministry of Information and Broadcasting and Ministry of Education in creating awareness on the importance of TT immunisation.
- ◆ MoH should plan to carry out national sensitization campaigns on TT immunisation so that all females aged 15 years and above are given information about it.
- ◆ *MoH should identify stakeholders who are concerned with health care delivery to supplement on the deficiencies in terms of training and retaining of more nurses who can ensure that health education is intensified on TT immunisation in Kalingalinga compound by conducting school health services and sensitizations campaigns on prevention of tetanus.*
- ◆ The MoH should plan to carry out a similar study on a larger scale in order to generalise the findings to the larger population.

CHAPTER SIX

6.0 CONCLUSION

The study sought to determine knowledge and practice of women in the child bearing age on TT immunisation in Lusaka district. The study findings demonstrated that most the respondents had moderate knowledge on TT immunisation and their practices was generally good towards TT immunisation because TT immunisation is mostly conducted during ANC as per national policy and that most women were immunised when they fell pregnant. Even if the respondents had moderate knowledge and good practice towards TT immunisation, only 14 respondents had more than 3 doses which were inconsistently.

Education level did not seem to have a big impact on knowledge regarding TT immunisation. Interestingly, among the respondents who had low knowledge, 1 (9.1%) had attained tertiary and another 1 (20%) had no education at all. This could be attributed to the fact that most women acquire information on TT immunisation from the health facility during MCH services. Similarly, the respondents' number of pregnancies had no influence on the level of knowledge as the researcher had assumed. The study further revealed that the majority 41 (83.6%) of the respondents had not been to the health facility especially for TT immunisation. This again points to the fact that the respondents did not know that they can see TT immunisation even when they are not pregnancy. Therefore, there is need for intensified health education on TT immunisation in all health facilities, because that is where most people get their information from. The DHMT and MoH should also ensure school health services and national sensitization campaigns are carried out on TT immunisation so that all females aged 15 years and above are given information about it. They should also plan to carry out a similar study on a larger scale in order to generalise the findings to the larger population.

6.1. LIMITATIONS OF THE STUDY

The study was conducted on a smaller sample of 50 respondents because of financial and time factor. The sample size makes it difficult for the researcher to make inferences on the whole population of Lusaka urban

6.2. DISSEMINATION OF STUDY FINDINGS

Dissemination of findings entails the measures that would be undertaken to communicate the findings from the study to others (Polit and Hungler, 2001). The researcher intends to disseminate the study findings by making five copies of the final report and giving a copy to each of the following; Department of Post Basic nursing, UNZA, the Medical Library, UNZA, the USAID- Zambia, Ministry of Health as sponsors and Lusaka DHMT a well as Kalingalinga health centre where the study was undertaken.

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APPENDICES

APPENDIX 1

A CONSENT FORM

Dear participant,

My name is Emmelia Chileshe, I am a student enrolled in the Bachelor of Science Degree in nursing (BSc NRS) program, in the Department of Post Basic Nursing School of Medicine – University of Zambia. In partial fulfillment for the award of a Degree, I am required to carry out a research project.

The main objective of the study is to determine knowledge and practice of women aged between 15 to 49 years old on TT immunisation.

You have been selected to participate in this study and I wish to inform you that participation in this study is voluntary and you are free to withdraw at any stage of the study if you so wish. You will be asked some questions on TT immunisation in which the interview will take about 25 minutes to complete.

All the information given to me will be kept confidential. You will receive no direct benefit from the study or any monetary gain. The information obtained from you will help develop a better understanding of the problem of TT immunisation and will be used by health planners and other agenda. If you have queries, please feel free to ask.

I hereby called participant understand the guidelines of the study and I am willing to participate in the study.

Dateday ofyear

Signature / Thumb print of participant.....

Interviewer's signature

APPENDIX 2

UNIVERSITY OF ZAMBIA
SCHOOL OF MEDICINE
DEPARTMENT OF POST BASIC NURSING

STRUCTURED INTERVIEW SCHEDULE

TOPIC: KNOWLEDGE AND PRACTICE OF WOMEN IN THE CHILD BEARING
AGE ON TT IMUUNISATION IN LUSAKA DISTRICT.

Serial No.

Date of Interview-----

Place of interview-----

INSTRUCTIONS TO INTERVIEWER

1. Greet the respondent and introduce your self
2. Explain purpose of interview
3. Do not write the respondent's name on the interview schedule
4. Get verbal and written consent from the respondent
5. Tick responses in the space provided - [] for answers with alternatives
6. Write the responses in the blank space provided for questions that require explanations.
7. Tell the respondent that her answers will not be communicated to other people as the information she will provide shall be treated with confidentiality.
8. Thank the respondent at the end of each interview.

FOR OFFICIAL
USE

SECTION A: DEMOGRAPHIC DATA

1. What is your age range?

- a) 15 - 25 years []
- b) 25 - 35 years []
- c) 36 - 45 years []
- d) 46 years and above []

2. How many children do you have?

- (a) None []
- (b) 1 - 3 []
- (c) 4 - 6 []
- (d) 7 - 9 []
- (e) Others specify -----

3. How many pregnancies have you had including abortions?

- (a) None []
- (b) 1 - 3 []
- (c) 4 - 6 []
- (d) 7 - 9 []
- (e) others, specify -----

4. What is your highest level of education?

- (e) None []
- (e) Primary []
- (e) Secondary []
- (e) College []
- (e) University []

5. Where do you live? -----

FOR OFFICIAL
USE

6. What is your denomination?

(a) Roman catholic []

(b) U.C.Z []

(c) R.C.Z []

(d) S.D.A []

(e) Others specify -----

SECTION B: KNOWLEDGE ON TT IMMUNISATION

7. Are you aware of the vaccine that is given to women
in the child bearing age?

(a) Yes []

(b) No []

(c) Not sure []

8. If your answer to question 7 is yes, what is it?

(a) Measles vaccine []

(b) TT vaccine []

(c) DPT vaccine []

(d) Not sure []

9. If your answer to question 7 is yes, what is the vaccine for?

(a) For prevention of tetanus disease []

(b) For prevention of diarrhoeal diseases []

(c) For prevention of DPT diseases []

(d) Not sure []

10. How did you know about the vaccination you have mentioned
in question 8?

(a) From the Clinic/ Hospital []

- (b) From the Media (TV, Radio, News paper) []
- (a) From the Community agents []
(NHC, CHW, TBA, CBD e.t.c)
- (b) From Friends []
- (c) Others specify []

**FOR OFFICIAL
USE**

11. When is the vaccine supposed to be given for the first time?

- (a) When one is 15 years and above []
- (b) when one is pregnant []
- (c) Not sure []

12. How many vaccines is one supposed to get in a lifetime?

- (a) 1 []
- (b) 2 []
- (c) 3 []
- (d) 4 []
- (e) 5 []
- (f) Not sure []

SECTION C: PRACTICE TOWARDS TT IMMUNISATION

13. Do you think TT immunisation is good?

- (a) Yes []
- (b) No []
- (c) Not sure []

14. Give reasons for your answer-----

15. Have you had any TT immunisation before?

- a) Yes []

b) No []

FOR OFFICIAL
USE

16. When did you have the first TT vaccination?

(a) When I was about 15 years old []

(b) when I became pregnant []

(c) Not yet []

(d) Not sure []

17. How many TT immunisation have you had so far?

(a) 1 []

(b) 2 []

(c) 3 []

(d) 4 []

(e) 5 []

(f) Not sure []

18. When did you have your second TT immunisation?

(a) 4 weeks after the first one []

(b) When I became pregnant again []

(c) Not yet []

(d) Not sure []

19. if your answer to question 15 is no, give reason for not having had TT immunisation before. -----

**SECTION D: FACTORS THAT INFLUENCE KNOWLEDGE
AND PRACTICE OF TT IMMUNISATION.**

20. How long do you walk before arriving at the health centre?

- a) Within 30 minutes walk []
- b) After 1 hour walk []
- c) After 2 hours walk []
- d) Over 3 hours walk []

21. Do health workers provide you with information on prevention of tetanus?

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

22. Have you ever gone for TT immunisation to the health center irrespective of pregnancy?

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

23. How long did you wait before being given the TT immunisation?

- (a) Less than one hour []
- (b) 1- 2 hours []
- (c) 3 - 4 hours []
- (d) 5 - 6 hours []
- (e) 7-8 hours []

24. if you waited for than one hour, what do you think was the reason for the delay? -----

25. Do you have any religious beliefs which restrict
you from getting TT immunisation?

(a) Yes []

(b) No []

26. Give any two of these religious beliefs you know.

27. Do you have any traditional beliefs which restrict
you from getting TT immunisation?

(c) Yes []

(d) No []

28. Give any two of these traditional beliefs you know.

THANK YOU VERY MUCH FOR YOUR COOPERATION

THE End

APPENDIX 4

UNIVERSITY OF ZAMBIA
School of Medicine
Department of Post Basic Nursing
P.O .Box 50110
Lusaka.

28th July, 2008.

The District Health Director
Lusaka District Health Management Board
P.O. Box
Lusaka

U.F.S: The Head of Department
University of Zambia
Department of Post Basic Nursing
P.O .Box 50110
Lusaka.

Dear Sir / Madam,

Re: PERMISSION TO CONDUCT A RESEARCH STUDY

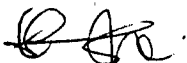
I am fourth year student pursuing a Degree in Nursing at the University of Zambia,
School of Medicine.

In partial fulfillment of this programme I have to carry out a research study in the area of my
interest, I therefore request for permission to conduct my study at Kalingalinga health centre.

My research topic is "**A study to determine knowledge and practice of women in the child
bearing age on TT immunisation**". The target population are the women in the child bearing age
seeking MCH services. They will be required to answer a structured interview schedule. The
sample size is 50 women.

Thanking you in advance.

Yours faithfully,



Emmelia Chileshe

P.O. Box 50827
Lusaka
Tel: +260 - 211- 235554
Fax: +260 - 211- 236429



Republic of Zambia

MINISTRY OF HEALTH

LUSAKA DISTRICT HEALTH MANAGEMENT TEAM



In reply please quote
No.....

21/08/2008

The In-Charge
KALINGALINGA Health Centre
BOX 50827
LUSAKA.

Dear Madam,

PRACTICAL/ RESEARCH: MR/MS. EMELIA CHULESHE

Be informed that permission has been granted to the above named student to be attached to your Health Centre for practicals/research.

However, this must be done with minimal disruption to the day to day activities at the health centre.

Your usual cooperation will be appreciated.

Yours faithfully,

DR. M.KABASO
CLINICAL CARE DEPARTMENT
FOR/DISTRICT DIRECTOR OF HEALTH