



UNIVERSITY OF MALAWI
KAMUZU COLLEGE OF NURSING

**FACTORS CONTRIBUTING TO UNDERUTILIZATION OF
TETANUS TOXOID VACCINE AMONG WOMEN AT SOUTH
LUNZU HEALTH CENTRE**

BY
EMMIE TIYAMIKE NDOVIE VIYUYI
(DIP.Nsg, UCM)

**A RESEARCH DISSERTATION SUBMITTED IN PARTIAL
FULFILMENT FOR THE AWARD OF BACHELOR OF SCIENCE
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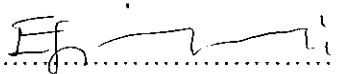
SUPERVISED BY:
MR. H. E. MALIWICHI
(B Ed, MSc. - Human Physiology)

NOVEMBER, 2010

DECLARATION

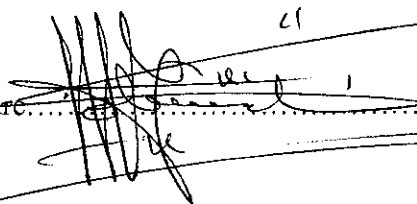
I, Emmie Tiyamike Ndovie Viyuyi declare that this dissertation entitled “**Factors contributing to underutilization of TTV among women at South Lunzu Health Centre in Blantyre**” is my own work and has not been presented for any other degree. All the sources used or quoted have been acknowledged by means of complete reference.

Researcher's Name: Emmie Tiyamike Ndovie Viyuyi

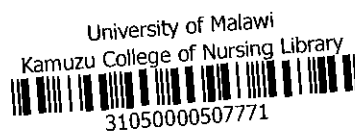
Researchers' Signature.....

Date:16th NOVEMBER, 2010.....

Supervisor's Name: H.E. Maliwichi (Mr.)

Supervisors Signature.....

Date:23.11.2010.....



DEDICATION

I would like to dedicate this work to:

- My beloved husband, Matthews, for his unfailing efforts in supporting and praying for me during the time of my studies.
- My children, Mayamiko and Favour, for enduring my absence for a long time when my presence would have made a difference in their lives, May the Lord Almighty richly bless our family and lead us into prosperity and excellence in HIS Glory.
- Mr. Chawinga and family, for all the support and care towards Favour during the study time. You stand behind my success. I will always cherish you and may GOD meet your needs.

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God bless you all.

LIST OF ABBREVIATIONS

1. ANC	Ante-natal care
2. ATS	Anti-tetanus serum
3. DHO	District Health office/r
4. DPT	Diphtheria, Pertusis and Tetanus
5. EPI	Expanded Program on Immunization
6. HPM	Health Promotion Model
7. HSA	Health Surveillance Assistant
8. KCN	Kamuzu College of Nursing
9. MCH	Maternal and Child Health
10. MDG	Millennium Development Goal
11. MICS	Multiple Indicator Cluster Survey
12. MNT	Maternal and Neonatal Tetanus
13. MT	Maternal Tetanus
14. MOH	Ministry of Health
15. NT	Neonatal Tetanus
16. RPC	Research Publications Committee
17. STI	Sexually Transmitted Infection
18. TTV	Tetanus Toxoid Vaccine
19. WCBA	Women of Childbearing Age
20. WHA	World Health Assembly
21. WHO	World Health Organization
22. UNFPA	United Nation Fund for Population Activities
23. UNICEF	United Nations Children's Fund

ABSTRACT

This was a descriptive qualitative study whose purpose was to explore “**factors contributing to underutilization of tetanus toxoid vaccine (TTV) among women at South Lunzu Health Centre in Blantyre**”. Most WCBA in this area do not get the World Health Organization (WHO) recommended five doses of TTV. WCBA who get five doses of TTV are protected from tetanus for the rest of their child bearing age. Failure to receive these doses predisposes them and their newly born babies to the deadly killer, tetanus. The study was conducted to answer the question: **what factors contribute to underutilization of TTV among women at South Lunzu Health Centre**. The study was conducted at Maternal Child Health (MCH) Department at South Lunzu Health Centre. The sample size was ten using in-depth interviews. A mixture of antenatal, postnatal and ladies in the age group of 15 years to 49 years were recruited in the study. An interview guide was used and the data was analyzed manually and presented using pie charts, bar graphs and categorized themes. The study revealed that women underutilized the vaccine because they had inadequate knowledge on the importance of TTV, the recipients of TTV and the schedule for TTV doses. Some also feared the consequences of immunization while others were sent back because the vaccine or the provider was not available. Yet other women demonstrated misconceptions that TTV was a contraceptive. Improving on these findings will help to improve the utilization of TTV in the area and hence sustain the maternal neonatal tetanus (MNT) elimination status the nation attained in 2002. This will also help the nation to progress towards achieving the millennium development goals (MDG) numbers 4 and 5 which are: reduce child mortality rate and maternal mortality rate respectively.

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CHAPTER ONE

INTRODUCTION AND BACKGROUND

1.1 INTRODUCTION

Tetanus toxoid vaccine (TTV) is a vaccine consisting of a toxoid (an anti-toxin or toxin neutralizer). The vaccine is effective in preventing maternal and neonatal tetanus (MNT). In order to achieve maximum protection from tetanus, World Health Organization (WHO) recommends 3 strategies, which include: provision of TTV to all women of childbearing age (WCBA); promotion of clean delivery services to all pregnant women and ensuring effective surveillance for MNT (Vandelaer, 2003).

The recommended schedule originally recommended by the Expanded Program on Immunization (EPI) was 2 doses of tetanus toxoid vaccine during pregnancy followed by a booster dose during each subsequent pregnancy. Since 1987, a revised schedule of a life time total of 5 doses of TTV to WCBA was recommended (Cumberland, et al, 2007). The new recommended schedule is given as follows: first dose at first contact with woman of childbearing age or at first Antenatal care visit, as early as possible. The second dose will be given at least four weeks after the first dose. This will then be followed by a third dose at least six months after second dose; a fourth dose at least one year after the third dose and finally the fifth dose will be given at least one year after the fourth dose (Appendix1).

Failure of WCBA to comply with these five doses put them and their neonates at a greater risk of contracting maternal tetanus (MT) and neonatal tetanus (NT) respectively. TTV coverage in Malawi is low compared to the other EPI antigens (Ministry of Health & UNICEF, 2005). It has been noted from the reports from the DHO's office that TTV coverage for 2009 for South Lunzu Health Center was 8.28%. This is very low as good coverage has to be above 80% for any reported antigen. It was also noted in Ethiopia that coverage for TTV was lower for pregnant women (Mekonen, 2000). Therefore this study aimed at exploring factors that contribute to underutilization of TTV at South Lunzu Health Centre. Identification of the contributing factors will help to put in place strategies to promote compliance to the five recommended doses of TTV hence prevent MNT occurrence.

1.2 BACKGROUND

Underutilization of TTV among WCBA is a problem in many parts of the world and leads to increased maternal and neonatal mortality rate. Maternal and neonatal mortality is a major public health problem, particularly in sub-Saharan Africa. Of particular concern are the deaths occurring due to MNT as they can be prevented through maternal immunization with TTV. World Health Organization (WHO), a non-governmental organization launched a body called EPI in 1974. EPI manages issues of immunization throughout the world. Different countries established their own EPI units. Malawi's EPI unit was launched in 1979 (EPI Manual, 2002). The unit is under the Preventive Health Care Services in the Ministry of Health (MOH). EPI targets all the vaccine preventable infections. MNT is among them and its prevention is possible throughout the world using TTV.

TTV is the most effective, safest, and least costly vaccine on the market. TTV coverage remains to be the lowest utilized vaccine as compared to the other EPI antigens (Ministry of Health & UNICEF, 2005). This is true also of Malawi. The low utilization of TTV makes it difficult to maintain the elimination status of MNT which Malawi attained in 2002 (WHO & UNICEF, 2002). Complete eradication of tetanus is not possible because tetanus spores are widespread, in dirt and in the stools of people and animals. Tetanus spores can survive and be transmitted without human contact. Therefore, countries that eliminate maternal and neonatal tetanus must routinely immunize all pregnant women and WCBA with tetanus toxoid and all children with DPT, implement school immunization program with TTV or tetanus diphtheria toxoid (Td) and expand the availability of clean delivery practices to all women in all districts (UNICEF, WHO & UNFPA, 2000).

In 2009 Malawi reported six cases of NT. Out of six one case was from Blantyre District. The district had TTV coverage of 39% which is very low (National EPI Office). This is a problem which needs to be rectified. In order for the District to report no case of MNT, WCBA must comply with the recommended schedule of TTV (Appendix 1). Therefore, the factors that contribute to underutilization of TTV among WCBA needed to be explored as these factors would help to put strategies that will promote compliance to TTV and hence prevent MNT.

1.3 PROBLEM STATEMENT

Tetanus is a fatal disease, which can be prevented through vaccinating WCBA with TTV; women at South Lunzu Health Centre do not get the required doses to get the required protection. This was noted as in 2009, out of the total population of the childbearing age 21,111, only 159 women got five doses of TTV representing a 0.75%, only 1,749 women got two doses representing 8.28%. For immunization to be considered good coverage it has to be above 80%. In the year 2009, Malawi reported 6 cases of NT. One case was from Blantyre district. This is risky as more cases can be occurring in the district. In order to improve on this, factors that contribute to underutilization of TTV among WCBA needed to be explored.

1.4 SIGNIFICANCE OF THE STUDY

The research findings exposed the factors that cause underutilization of TTV among the WCBA. The health care workers to improve the TTV immunization status by designing effective and relevant interventions will use these findings. Increasing TTV coverage in the area will help to prevent occurrence of MNT in the area. This will also reduce the maternal and neonatal deaths. This will help to achieve the MDG 4 and 5. The results will also be used to plan and implement strategies that will help to sustain the MNT elimination status for the country. In nursing research, the findings will assist to identify more areas where research can be conducted.

1.5 OBJECTIVES

1.5.1 BROAD OBJECTIVE

To explore the factors which contribute to underutilization of Tetanus Toxoid Vaccine among women at South Lunzu Health Centre in Blantyre District.

1.5.2 SPECIFIC OBJECTIVES

The specific objectives of the study included:

1. To assess the knowledge of women on TTV
2. To identify the source of information on TTV among these women
3. To find out the availability and accessibility of TTV at the health facility
4. To explore the myth and misconceptions related to TTV

1.6 DEFINITION OF OPERATIONAL TERMS

Tetanus:	an acute neurological disease caused by an exotoxin produced by <i>Clostridium tetani</i> which grows in dead tissues in the absence of oxygen such as deep, dirty wound or in a baby's umbilical stump
Elimination of disease:	reduction of case transmission to a predetermined very low level at which the disease is no longer a public health problem.
Neonatal tetanus:	Tetanus occurring in a newborn between the 3rd and 28th day after birth.
Maternal tetanus:	tetanus during pregnancy, or within 6 weeks of the end of pregnancy (whether pregnancy ended with birth, miscarriage/ abortion), and has the same risk factors and means of prevention as neonatal tetanus.
Maternal and Neonatal tetanus elimination:	The reduction of neonatal tetanus cases to less than 1 case per 1,000 live births in every district of every country.
Tetanus toxoid vaccine:	a vaccine consisting of a toxoid (an anti-toxin or toxin neutralizer).
Women	Women include all women of childbearing age (WCBA): within 15-45 years of age
Underutilization:	utilize less than fully or below the potential use

CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION

This literature review was conducted on the findings of recent existing studies on knowledge of WCBA on TTV, the source of information on TTV among the WCBA, availability of the TTV and the myths and misconceptions related to TTV among these WCBA.

2.1.1 KNOWLEDGE OF WCBA ON TTV

Knowledge is a driving force in health seeking behaviour. This is achieved by emphasizing on health education in health facilities.

Several studies had been conducted and supported that knowledge of WCBA is a contributing factor to the utilization of TTV. Hasnain & Sheikh (2007) conducted a study in Lahore district in Pakistan to identify the causes of low TTV coverage in pregnant women. Out of a random sample of 362 women who had delivered during the previous 3 months, 87% recalled receiving 2 doses of TTV. Hasnain & Sheikh discovered that the main reason for non vaccination was lack of knowledge about the importance of TTV, where to get the vaccine and when to get the vaccine. This then results into underutilization of the vaccine.

The findings by Hasnain & Sheikh are also supported by İnakçıl, Şimsek, Koruk & Koruk (2009), who conducted a cross sectional survey in Sanliurfa, in Turkey between November 2006 and January, 2007. The survey used Lot Quality Sampling method at 95% confidence interval level. The target population was a sample of 511 women aged 15-49 years of age selected from the rural areas. The results of this survey indicated that TTV coverage rate (within 2 or more doses) fluctuated from 15% to 70%. The major barriers were reported to have included those related to knowledge and health management. Education of women and antenatal care were found to be significant predictors.

The above study findings are also supported by Mekonen, 2000 in a study on missed opportunity of tetanus immunization among pregnant women in Southern Europe. The data showed that the

level of missed opportunity was three times higher in the rural areas as compared to the urban areas. The explanation to this was that women had little knowledge about different components of Antenatal care (ANC) and are less likely to inquire for TTV when the health worker negligently failed to immunize the client.

Educational level of an individual helps to promote knowledge and comprehension of health related issues. Rahman, (2004) conducted a study whose title was the determinants of the utilization of TTV coverage in Bangladesh. Rahman, (2004) found out that educational status of the WCBA and spouse also contributed to increased coverage of TTV. This is because literate people easily comprehend and utilize the services than do illiterate.

Another study by You, Kobayashi, Yang, Zhu, & Liang (2007) had similar findings to support that inadequate knowledge affects utilization of TTV. The study was done in China. This was a Qualitative study of knowledge and behaviours related to tetanus toxoid immunization among women of childbearing age in rural China. The results of this study demonstrated that knowledge levels are closely related to TT immunization behaviours in women of childbearing age in rural China.

An unpublished report on ante-natal care assessment in Awdal, Maroodijeex, Togdheer & Sanaag regions in Somaliland by the ANPPCAN Somaliland, Ministry of Health and Labour & UNICEF (2009) has an additional view. In this report it was discovered that knowledge of women on the importance of TT immunization was reasonably good among the respondents. However, nearly 40% of the interviewed women had no information on what TT prevents against. The prevalence of TTV in Somaliland is very low and this can be attributed to the considerable level of knowledge gap in the women on the importance of TT immunization.

A study which was done by the Ministry of Health in conjunction with UNICEF, in Malawi (2005) and reported in a follow up survey report aimed at finding out the key family and community care practices that ensure child survival, growth and development. The study was done in five districts including Blantyre, Mwanza, Lilongwe, Kasungu and Mzimba. The report

indicated that 50% of the female respondents were not vaccinated during pregnancy. The reason for not getting the vaccination in 12% of the women was because they did not know about TTV.

2.1.2 SOURCES OF INFORMATION OF WCBA ON TTV

Though it is said that knowledge is a determinant to increased TTV coverage, the source of knowledge also has a greater impact on ones decision to seek health services. A study by Rahman (2009) on determinants of the utilization of TTV coverage in Bangladesh revealed that WCBA who had mass media exposure shows the higher proportion rate for receiving two or more TTV doses. This is because a number of governmental and non governmental organizations (NGOs) have enriched their maternal and child health related programs on television, radio and news papers which are likely to have increased the mothers' knowledge on safe motherhood. This is attributed to unavailability of healthcare facilities in the rural areas.

A study by Kidanu & Banteyerga (2003) in Ethiopia on Tetanus Toxoid Immunization: Constraints and Opportunities to Raise Demand for TT Immunization revealed that the health facilities have been the source of information, education and communication on TT for women who visit the facilities during pregnancy. However, it was noted that the information that was received, the education given was inadequate. It was also noted that the level of health education is poor and most people particularly those that live in the rural sites lack correct information on tetanus and tetanus toxoid immunization.

In a study by Hasnain & Sheikh (2007) done at Lahore district in Pakistan on the causes of low TTV coverage, it is noted that some women said that mother-in-laws were a barrier to getting vaccinated due to jealousy or desire to control daughter-in-laws. Older women consider vaccination of no value because they had experience of giving birth to children without TT vaccination and did not face a problem. These women being a source of information would only end up discouraging utilization of the TTV.

Because of lack of education and inadequate information from the health facilities women either interact with friends and neighbors or depend on listening to the mass media particularly to both the national and local radio programs: Radio Ethiopia, Radio Fana, Radio Sidama, Radio Tosa and Educational Radio Programs of the Ministry of Education

2.1.3 AVAILABILITY AND ACCESSIBILITY OF TTV IN HEALTH FACILITIES

Another determinant to utilization of a service is its availability for the users to access it. TTV has to be readily available for the WCBA to use it.

In 2005, Omoigbele & Abiodun conducted a study in Benin City in Nigeria. The purpose was to study the upsurge in neonatal tetanus despite the various interventions examine the causes responsible for it and come up with suggestions for eliminating NT by targeting the date of 2005 which was set by WHO. The findings among other things revealed that many of the WCBA were disenchanted with the out of stock syndrome associated with the vaccine when ever they visited the health centers. This shows that though the strategies are in place to immunize all WCBA, TTV's unavailability in the facilities contributes to its underutilization.

In Ethiopia a tetanus toxoid immunization study on constraints and opportunities to raise demand for TTV Immunization, Kidanu & Banteyerga (2003) in this study highlighted that drugs were not available in the near by health facilities. An example of such drugs given was TTV. It was reported as being available only at some hospitals and health centre. This results into failure to access the vaccine by women who visit such facilities. Another reason for TTV not to be available is its need to be kept in a refrigerator. In the same study Kidanu & Banteyerga identified that one of the facilities had stopped immunizing WCBA because the clinic refrigerator was broken and the kerosene refrigerator was not working.

Yet another study which was done in Southern Ethiopia by Mekonen, (2000) on missed opportunity of tetanus toxoid immunization among pregnant women revealed that another reason for the missed opportunity was that clinics in the rural areas were not fully operational or lacked all the necessary facilities including TTV. Hence though women visited the clinic they did not get vaccinated. Hasnain and Sheikh in their study on causes of low tetanus toxoid vaccination coverage in pregnant women in Lahore district, Pakistan also discovered that some women mentioned that they made many visits at nearby health facilities but nobody was present there to vaccinate them. In this case availability of the vaccine goes with availability of the health care workers to provide the service.

2.1.4 MYTHS/MISCONCEPTIONS ASSOCIATED WITH TTV

Apart from knowledge on TTV, having good sources of information on TTV and its availability at the facility one may still decide not to get the vaccine. This is common where people have beliefs and misconceptions that seem not to promote the utilization of the vaccine.

In support of this, an unpublished report on ante-natal care assessment in Awdal, Maroodijeex, Togdheer & Sanaag regions in Somaliland by the ANPPCAN Somaliland, Ministry of Health and Labour & UNICEF (2009) revealed that TT is offered in all the health facilities, but women do not get the vaccine due to fear of the fever or misinformation that the immunization may lead to infertility or impose potential harm to the unborn child. In their study Kidanu & Banteyerga (2003) in Ethiopia also revealed that some women associate TTV with contraceptives while pregnant women fear to take TT immunization because they assume it causes abortion. In this report, some respondents admitted that they were forced to take the vaccine because they were not given convincing explanation to deal with their fears of sterility, infection, and pain.

In addition to this (Rahman, 2009) in his study on determinants of the utilization of TTV coverage in Bangladesh highlighted that the use of TTV was high in women who have used contraceptives than those who had never used the contraceptives. This explains the idea of relating the vaccine to a contraceptive. Another study by Hasnain & Sheikh in Lahore District which aimed at identifying the causes of low tetanus toxoid vaccination in pregnant women also reported that the other reason for low coverage were misconceptions about TTV with beliefs that it was a contraception.

Further more You et. al. (2007) in a qualitative study of knowledge and behaviours related to tetanus toxoid immunization among women of childbearing age in rural China also identified that false beliefs about possible contraceptive effects of the vaccine could hamper the effective implementation of supplementary immunization activities and result in low levels of acceptance.

2.2 CONCLUSION

The studies that were reviewed have highlighted some of the factors that may result into low utilization of TTV. The factors identified include lack of knowledge, inadequate information on

the vaccines, and shortage of vaccines in the facilities, and false beliefs as well as misconceptions about the vaccine. The reported study in Malawi only identified lack of knowledge as a cause for underutilization of TTV. Therefore this study aims at exploring more on the factors resulting into underutilization of TTV at South Lunzu Health Centre.

CHAPTER 3

THEORETICAL FRAMEWORK

3.1 INTRODUCTION

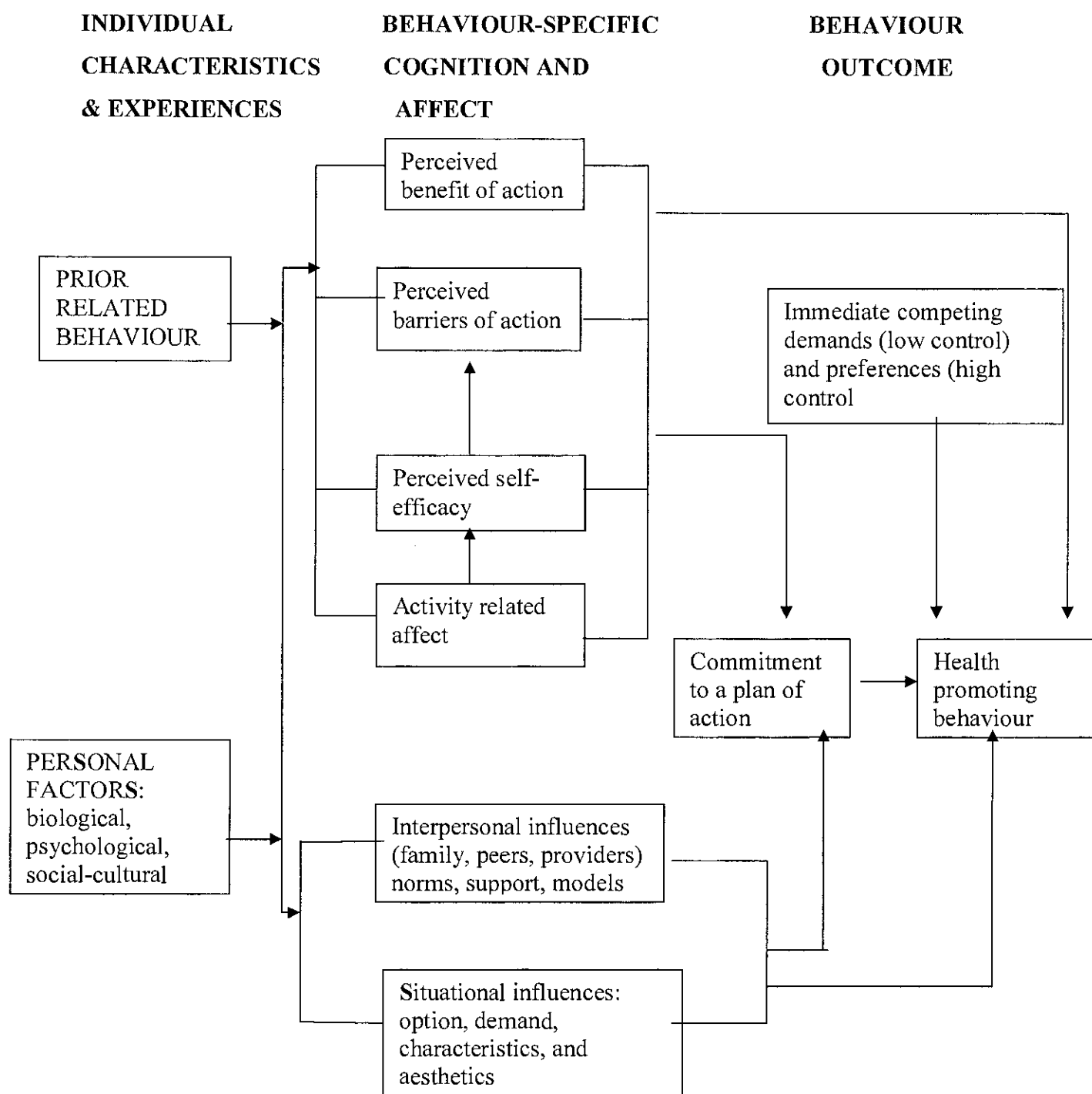
The researcher applied the health promotion model (HPM) in carrying out this study. The model was chosen because the concepts in the model applied to the subjects under subject. The model focused on the concepts which can promote or prevent women from getting TTV.

3.2 HEALTH PROMOTION MODEL

Nora J Pender proposed the health promotion model in 1982. It was revised in 1996 to be a complementary counterpart to models of health protection. The model describes the multi-dimensional nature of persons as they interact within their environment to pursue health. The model focuses on three areas; individual characteristics and experiences, behaviour-specific cognitions and affect and behavioural outcomes (Kearney-Nunnery, 2005).

The individual characteristics are all the unique personal characteristics and experiences that affect subsequent actions. They include prior related behaviours and personal factors. The behaviour specific cognitions and affect have important motivational significance and can be modified through nursing actions. They include perceived benefits of action, perceived barriers of action, perceived self-efficacy and activity related affect. They also include the interpersonal and situational influences. Behavioural outcome are the end point in the HPM outcomes (Kearney-Nunnery, 2005). They result in improved health, enhanced functional ability and better quality of life at all ages of development. It is also influenced by the immediate competing demands and preferences, which can derail, intended health-promoting action (Figure 1).

FIGURE 1: DIAGRAMATIC ILLUSTRATION OF HEALTH PROMOTION MODEL



SOURCE: Kearney-Nunnery, 2005

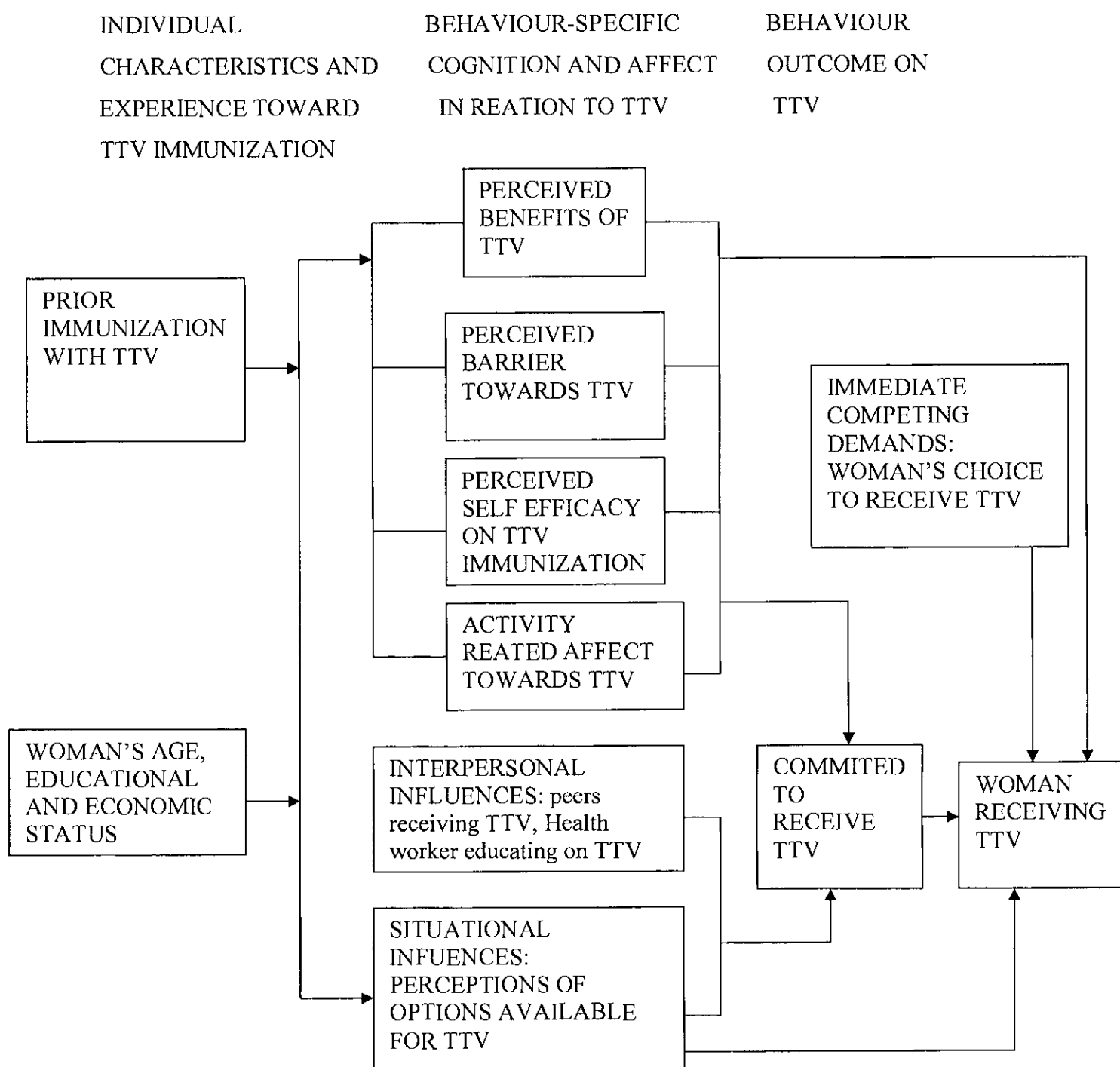
3.3 APPLICATION OF HPM TO THE STUDY

The individual characteristics and experiences involved looking at health through past experiences (prior related behaviour) and personal factors. Prior related behaviour in this study included the woman's previous exposure to vaccination. Women who had had a previous vaccine will either be motivated to get subsequent dosages of the vaccine or not. The personal factors such as age, sex, educational and socio-economic status, perceived health status are predictive of a given behaviour and shaped by the nature of target behaviour being considered. For instance, in this study the age and sex were the predictors of who should get the vaccine. That is all WCBA. One's educational background and socio-economic status were also variables to predict an individual's health seeking behaviours. This was because they help an individual to understand and interpret health in a different way.

The woman's decision to receive a vaccine or complete the scheduled dosage of TTV was determined by the behaviour specific cognition and affect. These included what the woman perceived as benefits, barriers, and her judgment of the behaviour as well as the positive or negative feelings that occur before, during and after getting the vaccine. Women who anticipated that TTV will protect them from MNT will comply with the scheduled dosages. Women who associated TTV with some barriers such as pain, or felt that the barriers outweighed the benefits will not get the vaccine. Thus health promotion activities such as vaccinations will be received if women perceive that they are associated with more benefits than harm. Motivation of the women to get the vaccine is an outcome and end point in the HPM (Figure 2).

Therefore the variables described in this model will assist the researcher in exploring factors that contribute to underutilization of TTV among WCBA at South Lunzu Health Centre.

FIGURE 2: A MODIFIED DIAGRAMMATIC ILLUSTRATION OF HPM IN RELATION TO THE STUDY



CHAPTER 4

METHODOLOGY

4.1 INTRODUCTION

This chapter provides information on steps, procedures and strategies that will be used to collect and analyze data. The discussion will focus on research design, sample and setting, data analysis, ethical consideration and limitations of the study.

4.2 RESEARCH DESIGN

This study used a descriptive qualitative design as it involved the organization and interpretation of non numerical data. The study unearthed full range of responses and opinions leading to the research problem. Qualitative methods concentrate on words and observations to express reality and attempts to describe people in natural situations (Amaratunga et al 2002, cited in Chikwenda 2005). The data was collected through in depth interviews. The interviews focused on identifying the reasons for non compliance to TTV among WCBA at South Lunzu Health Center in Blantyre.

4.3 RESEARCH SAMPLE AND SETTING

This study was conducted at South Lunzu Health Centre in Blantyre. Purposive sampling was used during data collection. The researcher selected participants based upon personal judgment about which ones would be most informative (Polit & Beck, 2008). WCBA who were available at the time of data collection and had met the inclusion criteria were used as subjects. The inclusion criterion was all WCBA who seek MCH or OPD services at South Lunzu Health Centre. Ten women were involved in in-depth interviews in order to collect the required data to answer the research question.

4.4 DATA COLLECTION

In this study, data was collected by means of in-depth interviews. An interview guide was designed in English (Appendix 2). For easy communication and understanding with the respondents, the interviews were conducted in Chichewa. Hence the interview guide was translated in Chichewa (Appendix 3). The guide comprised of open ended questions to allow participants to express their views. It also had probe questions where necessary to allow the

respondent to provide more information on specific areas of the guide. The guide had subsections on knowledge of the women on TTV, sources of knowledge, availability and accessibility of TTV and myths and misconceptions associated with TTV.

A pilot study was conducted at Kawale Health Centre on a sample of 2 in depth interviews at MCH Department. The pilot study was done at Kawale Health Centre because the health centre had some similarities with the setting for the main study, South Lunzu Health Centre. The purpose of the pilot study was to test the data collection tool. It helped the researcher to work out the faults or weaknesses on the data collection methods and modifications were made where necessary before the tool was used in the main study.

4.5 DATA ANALYSIS

In this study data was analyzed using content analysis to summarize narrative data of text into fewer content categories based on explicit rules of coding. Content analysis enables researchers to sift through large volumes of data with relative ease in a systematic fashion (Stemler, 2001 through the internet). This was done manually by identifying the categories and themes found in the collected data. Numerical data from demographic characteristics from the study was analyzed using descriptive statistics which is a method used to describe the characteristics of a group using variables (Chinkwende, 2005).

4.6 ETHICAL CONSIDERATIONS

To conduct this research, approval was sought from the KCN Research Publications Committee (Appendix 4). This was granted on 22nd September, 2010 (Appendix 5). Permission to conduct a pilot study at Kawale Health Centre was also sought from the District Health Officer, for Lilongwe District Health Office (Appendix 6). The permission was granted on 24th September, 2010 (Appendix 7). To conduct the study at South Lunzu Health Centre, permission was sought from Blantyre DHO (Appendix 8) and this was also granted on 28th September, 2010 (Appendix 9).

Furthermore to ensure that rights of subjects were protected, all participants were given information on what the research intended to do. Participants were informed that participation was voluntary and they were free to participate, refuse or withdraw from the study. They were

also informed that if they decided to withdraw or refuse to participate in the study, their care was not going to be affected in any way. The participants were also informed that there were no risks associated with the study and there were no direct benefit for participating in the study (Appendices 10 & 11). This is supported by Burns and Grove (2003) who states that some rights of participants include self determination, privacy, confidentiality and right to participate in the study. After all, the necessary information was given, participants were asked to sign a consent form to indicate that they had been well informed and had accepted to participate in the study (Appendices 10 & 11).

Participants were told that information was being collected using an interview guide (Appendices 4 & 5). The information collected was treated as confidential by not allowing accessibility of the information to anyone and numbers were used instead of names to ensure anonymity.

4.7 LIMITATIONS OF THE STUDY

This study was done for the purpose of identifying the factors that contribute to underutilization of TTV among WCBA at South Lunzu Health Centre in Blantyre. There are several health centers in Blantyre that provide similar services but this study only concentrated at the WCBA at South Lunzu Health Centre. Therefore the limitations of this study include:

- The study was done on a small sample of ten WCBA and at one health centre hence may not be applicable to the other health centers or generalized to the whole district.
- It was difficulty to capture WCBA in the age between 15 to 20 years as they were not present at the health facility during the period of data collection.
- The study only studied the WCBA hence may give wrong information than what they are taught by the health workers. No information was obtained from the health care providers to prove the type of information given to the women and type of services offered by the facility.

4.8 TIME TABLE OF EVENTS

The study involved several activities which were done at different times of the study period (Appendix 12). The topic was identified between February and March. This was followed by a literature review which was done in April. Literature review was done concurrently with proposal development, but the proposal development continues to June. By 30th June, the

proposal was submitted to the RPC for approval. In early July, the researcher will conduct a pilot study at Kawale Health Center. This will then be followed by data collection which will be done from mid July to end August. Data analysis will then follow in the month of September. After data analysis, a report will be written and bound. This will be done in October. Finally in November the report of findings will be submitted and results will be disseminated to all the required areas (Appendix 12).

4.9 THE RESEARCH BUDGET

This study had several activities and several items were used. To meet the cost of all the activities and items the total budget was MK58, 270.00 (Appendix 13).

CHAPTER FIVE

PRESENTATION OF RESULTS

5.0 INTRODUCTION

This chapter presents the findings of the study on “**factors contributing to underutilization of TTV among women at South Lunzu Health Centre in Blantyre**”. The findings are presented in demographic data and categories and themes that were identified during the study.

5.1 DEMOGRAPHIC DATA

Ten WCBA were interviewed in this study. Their characteristics included age, place of residence, marital status, parity, education and occupation (Figure 3).

There were 3 women in the age group of 15-25 years, 5 women in the age of 26-35 and 2 women of 36-45 years of age. Out of the interviewed women 30% (n=3) were from the rural area while 70% (n=7) were from the urban area. 90% of the women (n=9) were married and 10% (n=1) was a single parent (Figure 4).

The parity of women who were interviewed was: 10 % had no children, 30% had 1 child, 20% had 2 children, 20 % had 3 children, 10% had 5 children and 10% had 7 children (Figure 6).

On educational status it was noted that 10% of the respondents were illiterate, 40% had attended primary education, 40% had secondary education and 10% had tertiary education (Figure 5). 70% of the subjects were Christians while 30% were Muslims.

FIGURE 3: TABLE SHOWING SUMMARY OF DEMOGRAPHIC DATA

Code no	Age	Residence	Marital Status	Parity	Educational Level	Religion	Occupation
1	33	Urban	Married	3	Std 7	Christian	H/ wife
2	19	Urban	Married	0	Form 2	Moslem	H/wife
3	26	Rural	Married	1	Std 8	Moslem	Business
4	24	Rural	Married	1	Form 4	Christian	H/wife
5	27	Urban	Married	2	Form 4	Christian	Sells lady
6	28	Rural	Married	2	Std 3	Christian	H/ wife
7	38	Urban	Married	5	None	Moslem	H/wife
8	39	Urban	Married	7	Std 4	Christian	H/wife
9	35	Urban	Married	3	Tertiary	Christian	Teacher
10	21	Urban	Single	1	Form 4	Christian	Student

FIGURE 4: BAR GRAPH SHOWING THE PERCENTAGE OF WOMEN BY PARITY

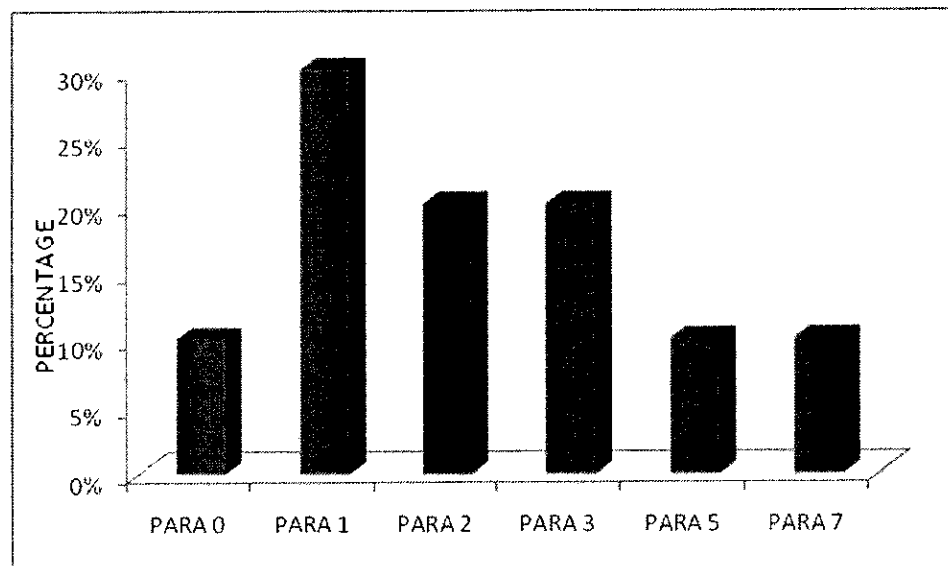
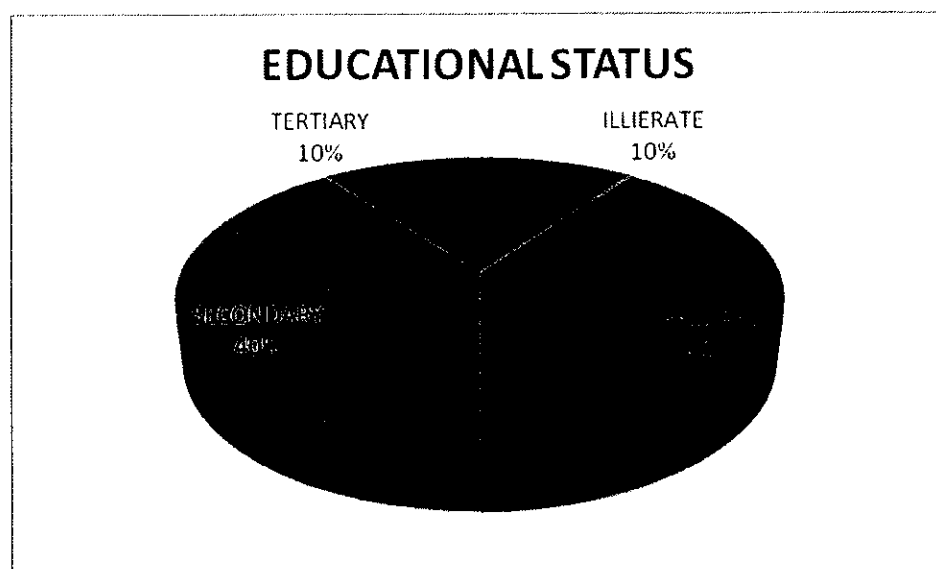


FIGURE5: PIECHART SHOWING EDUCATIONAL STATUS OF THE RESPONDENTS



5.2 CATEGORIZATION OF THEMES

The categories emerged from the study objectives and included: knowledge of WCBA on TTV, the source of information for the WCBA on TTV, availability of the vaccine and myths and misconceptions related to TTV.

5.2.1 KNOWLEDGE OF WCBA ON TTV

5.2.1.1 What information concerning TTV do you know?

All the participants in the study had knowledge of TTV. Some respondents knew what TTV is, the advantages and disadvantages of TTV and the schedule for TTV administration. However there were some misunderstandings. Some women when asked what they knew on TTV, their responses were contrary to TTV. For example two women said:

"I know that if one is vaccinated with TTV gets protection against several diseases like malaria".
 Another woman also said that *"I know that the vaccine protects us from sexually transmitted infections (STIs)"*.

Another one said that *"the vaccine protects us from cough"*.

5.2.1.2 Advantages of getting TTV as a WCBA

10% of the interviewed women responded that there was no advantage in getting the vaccine. The woman said *“it is important to get the vaccine to fulfill the government policy. The policy stipulates that every pregnant woman should get the vaccine”*.

However, 90% of the respondents knew the advantages of getting the vaccine and said *“the vaccine is important as it protects us from diseases”*.

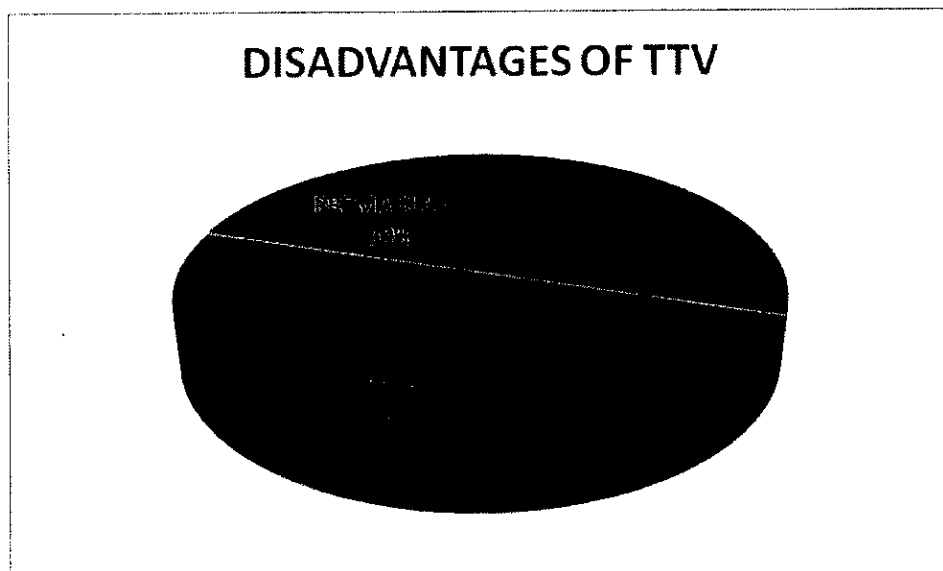
Though the respondents said the vaccine protects from diseases, some women had wrong information as they were reporting that the vaccine protects them from diseases like malaria, cough, and sexually transmitted infections.

5.2.1.3 Disadvantages of getting TTV among WCBA

30% of the interviewed respondents reported that they had no disadvantages related to getting vaccinated with TTV. 50% reported that they hate the pain and numbness of the limb that is experienced after getting the vaccine. These women were quoted saying *“I hate the pain that is felt after injection”*.

20% reported that some women experience premature labour and delivery after getting the vaccine (Figure 6). One of these women was quoted saying: *“this vaccine causes premature labour or abortions when given during pregnancy, especially when given more than 3 doses. I feel the women should get three doses and not more”*.

FIGURE 6: PIE CHART SHOWING THE DISADVANTAGES OF TTV AS REPORTED BY THE RESPONDENTS IN PERCENTAGE



5.2.1.4 Recipients of TTV

All the women demonstrated knowledge on the pregnant women as being the recipients of TTV. In addition to pregnant women being the recipients of TTV, 20 % of the women who were interviewed responded that the vaccine is given to the under five children. These women were quoted as saying *"Any child from 2 months to five years of age is supposed to get TTV"*.

30% of the subjects said that not every woman is supposed to get the vaccine and were saying *"women who have never conceived are not supposed to get the vaccine. If those who have no children get TTV, what purpose will it serve?"* Another 20% still said *"after delivery there is no need to get the vaccine"*.

70% of the respondents reported that the vaccine is meant for all women of child bearing age: *"all women including pregnant, those who have delivered and even those with no children are supposed to get the vaccine"*

5.2.1.5 Knowledge of the recommended schedule for the vaccine

40% of the women knew that every woman is supposed to get five doses of TTV. 20% knew that they are supposed to get four doses. The women were quoted saying *"I that every woman is supposed to get five doses."*

Another 20% knew that they were supposed to get three doses of TTV. The women were quoted heard saying *"Each pregnant woman should get three doses. After delivery she will just visit the under five clinic with the baby"*.

10% of the women knew that they are supposed to get one dose. 10% reported that they did not know how many doses they are supposed to get.

The woman said *"I don't know how many injection of TTV I am supposed to receive"*.

The women were also asked to explain how the doses are spaced. 70% of the respondents knew that they are supposed to get the first dose on first contact with the health personnel. 30% of them did not know. Timing for second dose was known by the 40% of the women while the remaining 60 % did not know. 10% of the women knew when they will get the third dose of the vaccine, but the 90% did not know how long it will take for them to get the third dose. All the women did not know when they were supposed to get the fourth and fifth dose of the vaccine.

5.2.2 SOURCES OF INFORMATION ON TTV

5.2.2.1 Sources of information

All the women respondents reported that they had heard of TTV. This represented a 100% of the respondents. However there sources of information varied among four sources. The sources of information included the nurses, HSAs, friends and the radio. 100% of the respondents heard the information on TTV from the nurses at the clinic. The women were quoted as saying *"I heard about TTV when I visited the clinic for my antenatal clinic"*.

In addition to the nurse being a source of information, 40% of the respondents reported having heard from the Health Surveillance Assistants (HSA) during under five clinic services or at home during home visiting. One of these women was quoted saying *"I also heard about this vaccine from the HSA who visits us at home and when I came for under five services at the clinic"*.

Further more 30% of the respondents heard the information from their friends. The respondents said *“I also heard the issue of TTV from my friends when we are chatting or during gatherings”*. The other source of information was the radio. 50% of the respondents were quoted saying *“I heard about TTV on the radio”*.

5.2.2.2 Types of information heard

The information that was being given to the WCBA during health education was explored. The respondents reported having a range of information from what TTV is, who should get TTV, advantages of TTV and how TTV is scheduled.

50% of the respondents heard that TTV is a vaccine for prevention of tetanus among them and their unborn babies. These women said *“I heard that TTV is a vaccine that is given to a woman for prevention of tetanus”*.

90% of the respondents said *“they explained that pregnant women should get the vaccine so that the unborn baby is protected from tetanus”*.

Some women also reported *“the nurses explained the schedule of TTV and its advantages during health education talk”*. This was heard from 30% of the respondents.

5.2.2.3 Satisfaction

All the women respondents indicated that they were satisfied with the information they heard from the health worker, friends and the radio. The women were quoted as saying *“I was satisfied with the information and I made the decision to receive the vaccine”*.

Apart from deciding to get the vaccine, 60% of the respondents said *“because I was satisfied I told my friends who were not getting the vaccine to get it so that they get protected”*.

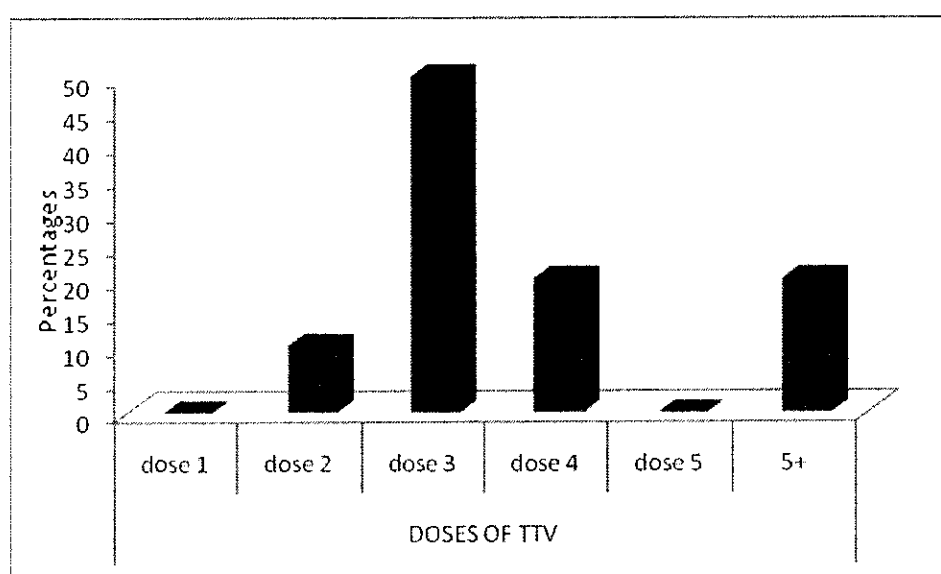
5.2.3 AVAILABILITY AND ACCESSIBILITY OF TTV AT THE HEALTH FACILITY

5.2.3.1 Number of TTV doses Received

All the respondents reported having received two or more doses of TTV. However the number of doses varied among them. 10% of the respondents got 2 doses. 50% got 3 doses while 20 % got 4 doses (Figure 7). The remaining 20% got more than 5 doses. One of the respondents who got

more than five doses said “I got four doses of TTV on every pregnant. I had conceived four times” (Figure 7).

FIGURE 7: BAR GRAGH SHOWING PERCENTAGE OF TTV RECIPIENTS BY DOSAGE



5.2.3.2 Place for receiving vaccine

All the respondents got the vaccine from the static clinic which is conducted at the health centre. But one respondent reported that there is an out reach clinic in one of the villages. “I know that sometimes the HSAs come to conduct the clinic at Malunga A, near where I stay. Sometimes I receive the vaccine there but I don’t like going there instead I prefer coming here,” she said.

5.2.3.3 Mode of transport and duration

80 % Of the respondents indicated that they walk to the clinic. Because some respondent combine walking and some times using minibus, the respondents who use minibus was 50%. Most of the respondents take less than an hour to reach the health facility to get the services. 70% reported taking less than an hour to reach the facility, while 10% reported taking more than 1 hour and 20% reported that they take 2 hours to reach the health facility.

5.2.3.4 Convenience of time

The respondents reported that the clinic starts providing the vaccines between 8:00am and 9:00am. All the respondents reported that the time was convenient for them. The reasons reported included: *"The time is convenient because after getting the vaccine I am able to go and do other household chores"*.

"The time is convenient because when the vaccine is given in the late hours when it is hot the injected area is very painful, itches and swells".

"The time is convenient because the health workers are able to conduct health education talks, weighing and then give the vaccine".

5.2.3.5 Availability of vaccines

50% of the respondents reported that the vaccine is always available. The remaining 50% reported that they were once sent back without getting the vaccine because it was either not available or the providers were not available. The respondents were quoted saying *"sometime back I was sent back because TTV was not available at the clinic. The nurses said I should come and check the vaccine on my next clinic day"*. Yet others said *"the vaccine was available but the health workers who are supposed to give the vaccine were busy with the child health days"*

5.2.4 MYTHS AND MISCONCEPTIONS ASSOCIATED WITH TTV

5.2.4.1 Myths and misconceptions

Among the 10 respondents 70% had no myths and misconceptions related to the vaccine. The remaining 30% had different beliefs and misconceptions. Their beliefs and misconceptions were as follows: 50% of these believed that TTV was a contraceptive. They narrated that *"I have heard people saying that TTV is a contraceptive. Women who get it do not conceive as a result they have prolonged menses"*.

25% of the women with beliefs believed that the vaccines cause numbness of the limbs.

50% Of the respondent reported that TTV causes either premature labour or abortions. They are quoted as saying *"I have heard that TTV causes preterm labour and delivery"*. *"After getting the*

vaccine, pregnant women start bleeding, have abdominal pains and eventually end up with an abortion of the pregnancy”.

5.2.4.2 Believing the myths and misconceptions

All the women reported that they do not believe in the beliefs and misconceptions outlined above because they have had the vaccine but have never had such experiences. *The respondents said “I have had the vaccine several times but I have been conceiving therefore I don’t believe that TTV is a contraceptive”.* But one woman said *“TTV is a good vaccine but the increase of the doses from 3 to 5 doses has brought in bad effects like preterm labour and delivery/ abortion. I don’t like these effects and I feel the doses should be reduced to 3”.*

5.3 CONCLUSION

This chapter has presented the study findings according to the demographic data of the respondents, their knowledge on TTV, the sources of information on TTV, availability of the vaccine at the health facility and the myths and misconception associated with TTV. All the respondents had some knowledge of TTV but some information was not a true reflection of the vaccine. The respondents had heard about TTV either from the nurse, HSA, friend or radio. The information that they heard concerning TTV ranged from what the vaccine is, advantages of receiving the vaccine, and the schedule for vaccination. However, all the women did not know when they are supposed to get the fourth and the fifth doses of the vaccine.

The respondents had also reported that sometimes they were sent back from the clinic without getting the vaccine because either the vaccine was not available or the vaccine was available but there was no one to give the vaccine. Some women also had some myths and misconceptions which may cause the underutilization of the vaccine.

CHAPTER SIX

DISCUSSION OF FINDINGS

6.1 INTRODUCTION

This chapter presents a discussion of the study findings on a study on **“factors contributing to underutilization of TTV among women at South Lunzu Health Centre in Blantyre”**. The findings are discussed in relation to the literature review and Pender’s Health Promotion Model which was used in the study. The implications of the study and recommendations made by the researcher are also presented.

6.1.1 DEMOGRAPHIC DATA

The age and parity of the respondents had significance on the number of TTV doses one receives. The respondents who got 4-5 doses are in the age range of 35-45 years of age. Their parity ranged from 3-7 children. Though one respondent in the age range of 25-35 years got 4 doses and had 2 children, the number is high for the high parity and high doses.

On Education of the respondents, the findings did not show any differences between literate and illiterate respondents. There was no difference in the number of doses received between the three groups of the women’s education. All of them had not completed the vaccine. This is contrary to what the findings from İnakçıl, Şimsek, Koruk & Koruk (2009) and Rahman, (2004) noted. In their study they noted that education of women contributed to increased coverage of TTV. This difference in Malawi might be due to the fact that all the respondents reported that they had visited the health facility several times. They also reported that the health care providers provided health education on TTV. Therefore health education in this study can be considered as an influential factor for TTV reception.

Pender’s HPM also indicates that individual characteristics and experiences, which include personal factors, should be considered for nursing interventions. Personal factors include age, parity, and educational status. In this case age and parity of the WCBA have been noted to influence ones behavior towards TTV immunization. While educational status is seen to influence health seeking behaviours in other countries, the researcher noted that educational status did not show any significance for the utilization of TTV. This was noted as all women

respondents regardless of their educational status did not complete the recommended schedule of TTV. Therefore health education which is provided to the clients at the clinic has an influence on TTV utilization than the formal education.

6.1.2 KNOWLEDGE OF WCBA ON TTV

The respondents demonstrated that they had partial knowledge of TTV. They had some information concerning TTV. Some of the information they had was distorted with the misunderstandings on the importance of the vaccine and when to get the doses of the vaccine. For instance, some women said that TTV protects against malaria, STIs and cough. Hence the knowledge these WCBA have, is not adequate for them to comply with the scheduled doses of TTV. This is also supported by findings in a study which was done by the Ministry of Health in conjunction with UNICEF (2005). This study revealed that the reason for not getting the vaccination in women was related to inadequate knowledge on TTV.

This is related to the findings by Hasnain & Sheikh (2007) and Şimsek, Koruk & Koruk (2009) who also discovered that the main reason for non vaccination was lack of knowledge about the importance of TTV and when to get the vaccine. This then results into underutilization of the vaccine. For instance, the respondents reported that TTV prevents against cough, malaria and STIs. In addition to this, You, Kobayashi, Yang, Zhu & Liang (2007) also noted that inadequate knowledge and misunderstanding regarding TT immunization prevented its acceptance by these women.

Knowledge of advantages of a vaccine is another driving force for WBCA to get the vaccine. Hence when these women are not aware of the advantages chances for them to strive to get the vaccine are decreased resulting into underutilization of the vaccine. This was noted in the study as 10% of the women could not explain the advantages or importance of getting the vaccine.

Furthermore, 50% of the women reported that pain and numbness of the limb experienced during vaccination is a disadvantage to them. This can result into non vaccination which can also result into low coverage of the vaccine. You, et al (2007) supported this in their findings in a study which discovered that the concern about the adverse events following immunization were the main factors preventing pregnant women and WCBA from receiving TT immunization. Among

the adverse events mentioned was fear of pain after the injection. In another study by Kidanu & Banteyerga (2003) from Ethiopia women who had phobia of needle injection refused to take TTV by associating it with pain. The women did not take the vaccine after they heard that the vaccine is painful.

In addition to the findings from You, et al (2007), the Health Promotion Model (HPM) according to Pender, stresses the impact of the woman assessing the perceived benefits for receiving TTV against perceived barriers for receiving TTV. Therefore a woman who feels that pain or adverse effects out weighs the benefits of TTV will not take an initiative to receive or complete the required five TTV doses.

In addition to pain, 20% of the women reported that some women experience abortions, premature labour or prolonged menses after receiving the vaccine. These women are likely to default the vaccination schedule before its completion as they would not want to experience premature delivery or abortions. In support of this, in unpublished report by the ANPPCAN Somaliland, Ministry of Health and Labour & UNICEF (2009) on ante-natal care assessment in Awdal, Maroodijeex, Togdheer & Sanaag regions in Somaliland also indicated that women might fear the immunization because of the fever or misinformation that the immunization may lead to infertility or impose potential harm to the unborn child.

It is also clear that the respondents had knowledge of the people who are supposed to get the vaccine. Though 70% of the women reported that all WCBA are supposed to get the vaccine, all the respondents knew that pregnant women are the recipients of the vaccine. TTV is mostly associated with pregnancy. This explains the reason for some women receiving more than five doses and on every pregnancy. This is supported by Perry, Weierbach, Hossain & Islam (1998) in their study which revealed that access to TT immunization was lower among women under age 20 and over age 30, especially among those who were not yet married or who had not yet become pregnant. This can be attributed to the high coverage of the vaccine among pregnant women. It can also result in low TTV coverage among non pregnant women. This can also be the reason for women seeking the vaccine during pregnancy only.

The study also revealed that 60% of the respondents did not know how many doses of the vaccine they were supposed to receive and how long it takes from one dose to the other. This was also noted with concern as some respondents had received more than five doses. It was surprising as one cannot get five vaccines during a single pregnancy. This was also shown in a study which was done by İnakçıl, et al (2009). The results revealed that the woman's knowledge about the repetition of the doses of the vaccine as well as their appropriate times is closely related to her efforts in learning what process of vaccination to involve. This is because the woman after knowing when to return for the other vaccine, she may plan to achieve the appointment.

In addition to this, the report by Kidanu & Banteyerga (2003) revealed that the respondents admitted that they had no idea as to how many doses should a woman receive to get the immunization. They did not know how long it takes from one dose to the next dose of TTV. To support the need for knowledge of how many doses of TTV and how long it takes from one dose to the next dose, HPM by Pender, shows that activity related affect has a great influence on ones commitment to health seeking behavior. If a woman knows the schedule of TTV and has no perceived barriers like pain, she will be committed to take the action to complete the TTV five scheduled doses.

10% of the respondents reported that they get the vaccine to fulfill the government policy. The researcher felt that these respondents had lack of knowledge hence the choice to get the vaccination depended on what the government said. This was also identified among some respondents in a study by Kidanu & Banteyerga (2003). The male respondents in this study said that they encouraged their women to take the vaccination because the health providers told them that it is useful. They also said it does not do any harm taking the vaccine as long as the government provides it and so long as every body takes it. Most rural women believed that anything that comes from the government has to be accepted and also admitted that they did not want to disappoint their leaders.

6.1.3 SOURCES OF INFORMATION

Among the respondents of the study, it is clear that the main source of information on TTV is the health facility. The people providing this information include the nurses and the HSAs. This is because when women attend ANC services the main provider of the service is the nurse. When they visit the under five clinic the provider of the service is the HSAs. This is similar to the findings in a study by Kidanu & Banteyerga, (2003) which revealed that the health facilities had been the source of information, education and communication on TTV for women who visit the facilities during pregnancy.

In addition to the health facilities being the source of information, 50% of the respondents also heard about TTV on the Radio. This is because the government puts efforts to promote awareness among WCBA on TTV and such messages were heard being broadcast on the radio stations in Malawi. This also collaborates with the report in a study from Bangladesh by Rahman (2004) which says that in recent years, a number of governmental and non-governmental organizations have enriched their MCH related programs on television, radio and newspapers which are likely to have increased the mother's knowledge on safe motherhood. Hence women having mass media exposure may show the higher proportion rate for receiving TTV.

It is also clear that 30% of the respondents learnt about TTV from their friends. Women like to interact with friends for different issues. During their interaction they may share issues concerning TTV. This is also in collaboration to Kidanu & Banteyerga (2003) whose findings revealed that neighbours and friends have been mentioned by participants to be one of the main sources of information on health matters particularly TTV. Most women, men and community leaders said that they inform their neighbors any information they learnt on health.

While it is important for women to share information on health issues a study by Hasnain & Sheikh (2007) done at Lahole district in Pakistan on the causes of low TTV coverage, revealed that some women said that mother-in-laws were a barrier to getting vaccinated due to jealousy or desire to control daughter-in-laws. Older women consider vaccination of no value because they had experience of giving birth to children without TTV and did not face a problem. These women being a source of information would only end up discouraging utilization of TTV. In this

study, the respondents did not report that they discuss TTV issues with their mother in laws but friends. This could be attributed to the culture of Malawi especially because most parents do not stay with their daughter in laws and have no influence on their children's family. Another difference is that the respondents reported that they encouraged friends to get the vaccine.

Pender's HPM on the behaviour-specific cognition and affect there is a component of interpersonal influences. This involves family members, peers, and providers as influential parties for one to make a decision to seek health promotion behaviours. Therefore these sources of information have a significant role in the woman's decision making to either complete the schedule of five TTV doses and get the protection against tetanus or discontinue utilization of the vaccine.

However, it was noted that the information that was received by the women, the education given to all the respondents was inadequate and misleading. This is noted from the responses that were being provided by the respondents giving wrong information on TTV. The type of information given included the recipients of the vaccine, advantages of the vaccine and the schedule for TTV. The wrong information did not matter which source provided the information. This is noted as even respondents who learnt about TTV from nurses or HSAs also did not give the right information. This can be related to health care workers giving inadequate information during health education talks.

Another important finding to support the inadequacy of information given to these women is the fact that 10% of the women got more than five doses of the vaccine. These vaccines were given on every pregnancy, regardless of how many doses one got during the previous pregnancy. This required that the health care provider properly documented and checked the vaccine status before giving another vaccine dose.

6.1.4 AVAILABILITY AND ACCESSIBILITY OF THE VACCINE

The study revealed that all the respondents had received at least two or more doses of TTV. This is a good indicator that the vaccine is available most of the times for the women at the facility. It was noted with concern to note that all the respondents got their vaccine at the static clinic.

Though some respondents knew that there was a near by out reach clinic, they had not utilized the nearby clinic.

However among the respondents, 60% of the women were supposed to have completed all the scheduled doses by the time this study was being done. It was disappointing to note that they had not yet completed the doses. According to the researcher, this could be related to the fact that 50% of the respondents had once been sent back without getting the vaccine as either the vaccine or the provider was not available to give the service. Kidanu & Banteyerga (2003) also mentioned of women returning from the clinic because the clinic did not have the vaccine. In the same line İnakçı, et al (2009) also reported that women delay to complete the vaccine schedule because of limited accessibility to services. This was related to the absence of health professionals at the clinic to provide the vaccine. This results in clients being put off to return for the service at another time.

In relation to this, Pender's HPM links an individuals' influence to seek health promotion behaviour to situations at the facility. In the model, situational influences are perceived as being available, demanding characteristics and environmental factors (George, 2010). When there is no vaccine or no health worker to provide the vaccine, the WCBA will be discouraged from getting the vaccine resulting in underutilization of TTV.

In relation to this Mekonen (2000), Hasnain & Sheikh (2007) and Omoigbele & Abiodun (2005) in their studies also discovered that WBCA were disenchanted with the out of stock syndrome associated with the TTV when women were visiting the facilities several times without getting the vaccine. The women were also sent back without receiving the vaccine because nobody was present to vaccinate them.

It was interesting to note that almost 70% of the respondents walk to the facility within an hour. Though 30% of these respondents take more than an hour to reach the clinic, they are satisfied with the time the vaccines are given at the clinic. The distance they walk is not of great concern for them as they are able to attend the clinic services and return home to attend to other household chores in time. In addition to this 50% of the women reported that they sometimes

board minibus to reach the clinic. Contrary to this, the findings by Kidanu & Banteyerga (2003) in Ethiopia whose study revealed that distance from health facility particularly for rural women has been discouraging them from taking TTV. Many women cannot afford to pay for transportation to get the service

6.1.5 MYTHS AND MISCONCEPTION ASSOCIATED WITH TTV

The study revealed that 70% of the respondents had no myths or misconceptions related to TTV. However 30% of the respondents who accepted having heard of some misconceptions revealed that: some people believe that TTV is a contraceptive. This was also observed in many respondents in separate studies which were done by Kidanu & Banteyerga (2003) and Hasnain & Sheikh, (2007). These studies revealed that the major misconception was that TTV was a contraceptive. This misconception became wide spread when the government announced that women in reproductive age were eligible to take the vaccine. People immediately associated it with contraceptive method as the message coincided with that of family planning education. This had also been reported that people were wondering why the vaccine was given for free and why it emphasized WCBA only.

In relation to the belief that TTV is a contraceptive, You, et al, (2006) also reported that false beliefs about possible contraceptive effects of the vaccine could hamper the effective implementation of supplementary immunization activities and result in low levels of acceptance. This is equally true for women whose fertile goals are not met. These women may hence discontinue acceptance of the vaccine.

20% of the respondents also reported that there were risks of prolonged menses, abortions or premature deliveries after getting the vaccination. In support of this, an unpublished report on ante-natal care assessment in Awdal, Maroodijeex, Togdheer & Sanaag the ANPPCAN Somaliland, Ministry of Health and Labour & UNICEF (2009) regions in Somaliland also indicated that women might fear the immunization because of misinformation that the immunization may lead to infertility or impose potential harm to the unborn child. On top of this the study by Kidanu & Banteryerga (2003) in Ethiopia also revealed that some respondents say TTV causes miscarriage if a pregnant woman takes the injection.

Relating to Pender's HPM, premature labour or abortion are some of the issues that WCBA would consider as perceived barriers for getting TTV. These barriers may influence the WCBA's action by blocking them from receiving the vaccine (George, 2010).

6.2 CONCLUSION

The findings reported for this study, though based on a small scale of women of child bearing age, have accomplished the purpose of this study which was to "explore factors contributing to underutilization of TTV among women at South Lunzu Health Centre in Blantyre". The study has found that women who participated in the study had underutilized TTV. None of them had completed the five doses of TTV as scheduled. Though some got more than five doses, they still did not follow the recommended schedule. The reasons for underutilizing the vaccine were found to be related to inadequate knowledge of TTV, the type of sources and type of information, availability of the vaccine or the provider of the vaccine at the health facility, and some myths and misconceptions among the respondents.

These findings relate to the findings from other studies that were reviewed as well as some concepts found in the Pender's HPM. The framework stresses that for one to opt for health promotion behaviour there has to be more perceived benefits of the behaviour than the perceived barriers. One to know the benefits of TTV against the barriers should have adequate knowledge. If one perceives more benefits, then she will decide to use the health promotion behaviour.

6.3 RECOMMENDATIONS

The study findings have provided insight on the factors that contribute to underutilization of TTV among women at South Lunzu Health Center. The factors have some implications towards the nursing practice, nursing education and nursing research. Recommendations will be given following the study findings in order to improve the utilization of TTV among the WCBA at South Lunzu Health Centre hence accelerate achievement of MDGs numbers 4 & 5.

6.3.1 IMPLICATIONS

❖ To nursing practice

The study findings have indicated some gaps in the provision of MCH services to WCBA at South Lunzu Health Center.

- Inadequate knowledge among WCBA due to inadequate health education on TTV provided by nurses and HSAs was noted to be one of the main reasons for utilization of the vaccine.
- Interrupted availability of TTV at the facility and unavailability of health care provider were also found to be the other reasons.
- Failure to use client's health profile records by nurses and HSAs leading to some women receiving more than the recommended doses.

❖ To nursing education

The findings indicate gaps in the provision of health education to women for them to clear their myths and misconceptions.

- Some women were not able to explain the importance of getting TTV.
- The women were also unable to mention the disease that the vaccine prevents as well as the recommended schedule for the vaccine.
- The information that women got from both the nurses and the HSAs was not realistic for TTV.

❖ To nursing management

The finding outlined some challenges related to policy of the institution. These include:

- Shortage of vaccine at the health facility
- Absence of health care providers to give the vaccine at the health facility especially during child health days.

❖ To nursing research

While Malawi is reported to be in the elimination phase of tetanus, there are still some reported cases of TTV in the country. This study was conducted on a small sample of ten hence:

- No studies were recently done on utilization of TTV in Malawi.
- Generalization of the results will not be possible.
- The study only involved the clients as respondents to the study interview guide.

6.3.2 RECOMMENDATIONS

Basing on the implications listed above, the following recommendations are given to improve the utilization of TTV among WCBA:

- Health education in all MCH services emphasizing on the importance of TTV, advantages of getting TTV and the recommended schedule for TTV should be intensified. This will help to clarify the misconceptions that women have in relation to TTV.
- Nurses and HSAs should take an active role in implementing health education both at the static and mobile clinics to increase knowledge of TTV among WCBA in the area.
- Ensure continuous availability of TTV at the facility as this will prevent sending women back from the clinic without getting the vaccine.
- Ensure that there is always a health worker to provide the vaccine. During mass campaigns for child health days proper arrangements should be made to ensure that WCBA also get the vaccine as scheduled.
- The health workers should ensure that after each vaccine dose the WCBA is informed of the next appointment for the next vaccine so that the women can remind the health workers to get the vaccine.
- The health workers should ensure proper documentation and follow up of client's records on every encounter with the WCBA to avoid missing the appointment days for their vaccine doses. This will also help to prevent women getting more than five doses of TTV which is not the recommended dosage for the vaccine.
- There is need to revisit the curriculum and emphasize on teaching the content on tetanus and tetanus prevention to nurses as well as HSAs.
- The district should conduct in service training workshops be in order to improve knowledge of TTV among the nurses and the HSAs hence strengthen health education on TTV at all the clinics.

6.4 ISSUES FOR FURTHER RESEARCH

The researcher feels that it will be necessary to:

- Conduct a similar study on a large scale in the district which should involve other health centers so that the results can be generalized to the entire district.
- Conduct another study which should target the health care providers on the factors that contribute to underutilization of TTV so that the findings can be compared with the factors identified from the TTV recipients.

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APPENDICES

APPENDIX 1: TTV SCHEDULE FOR WCBA

DOSE	WHEN TO GIVE	EXPECTED DURATION OF PROTECTION
TTV1	At first contact or as early as possible in pregnant	None
TTV 2	At least four weeks after TTV 1	1-3 years
TTV 3	At least 6 months after TTV 2	5 years
TTV 4	At least one year after TTV 3 or during subsequent pregnancy	10 years
TTV 5	At least one year after TTV 4 or during subsequent pregnancy	All childbearing years

SOURCE: EPI Manual, 2002

APPENDIX 2: IN-DEPTH INTERVIEW GUIDE: ENGLISH VERSION

INTRODUCTION

(Self introduction- name, Confidentiality, Duration of the interview, Conduct of the interview).

Name of interviewer

Participants CODE No

Date of interview

Time started

Time finished

SECTION A

PERSONAL DATA

- a) How old are you?
- b) Where do you live?
- c) What is your marital status?
- d) How many children do you have?
- e) What educational level did you attain?
- f) What is your denomination?
- g) What is your occupation?

SECTION B

1. KNOWLEDGE

- a) What information concerning TTV do you know?
- b) What are the advantages and disadvantages of getting TTV as a WCBA?
- c) In your understanding who is supposed to get TTV
- d) Do you know the recommended schedule for TTV? If yes, explain.

2. SOURCE OF INFORMATION

- a) Have you ever heard of TTV?
- b) Where did you hear about TTV?
- c) What information were you given on TTV?
- d) Were you satisfied with the information you heard? If no, why?

- e) Do you talk to friends on issues of WCBA immunization?

3. AVAILABILITY AND ACCESSIBILITY OF THE VACCINE

- a) Have you received any dose of TTV? If not, why?
- b) If yes, to (a) above, how many doses of TTV have you received?
- c) Where did you get the vaccine?
- d) How far do you travel to get the vaccine?
- f) What type of transport do you use when going to the clinic?
- g) What time of the day does the clinic open to offer the vaccines?
- h) Is the time convenient for you? Explain your answer.
- i) Are the vaccines always available at the clinic?
- j) What reasons are given when the services are not provided at the clinic?

4. MYTHS AND MISCONCEPTIONS

- a) Are there any myths and misconceptions associated with TTV that you have heard?
- b) What are they?
- c) Do you believe in such issues?

Do you have any thing to add to on the information provided?

THANK YOU FOR PARTICIPATING IN THIS STUDY

APPENDIX 3: IN DEPTH INTERVIEW GUIDE: CHICHEWA VERSION

KUDZIWA WOFUFIZA, KUFOTOKOZA ZA CHINSINSI NDI NTHAWI YOFUNSIRA MAFUNSO.

Dzina la wofufuza:

Nambala ya wofufuzidwa:

Tsiku lofufuza:

Nthawi yayambira:

Nthawi yomalizira:

GAWO LOYAMBA: MBIRI YANU

1. Muli ndi zaka zingati?
2. Mumakhala kuti?
3. Kodi muli ndi banja?
4. Ana muli nawo angati?
5. Zamaphunziro, mudalekera kalasi yanji?
6. Ndinu a mpingo wanji?
7. Mumagwira ntchito yanji?

GAWO LACHIWIRI: ZOKHUZA KATEMERA WA KAFUMBATA

1. ZOMWE MUKUDZIWA

- a) Mukudziwapo chiyani zokhuzana ndi katemera wa kafumbata/ kalongolongo?
- b) Mumapeza ubwino wanji polandira katemera ameneyu?
- c) Nanga ndi kuyipa kwanji komwe mumapeza polandira katemerayu?
- d) Kodi woyenera kulandira katemerayu ndi ndani?
- e) Ndondomeko ya kalandiridwe ka katemerayu mumayidziwa?
Fotokozani, ndiyotani?

2. MUNADZIWA BWANJI ZOKHUZA KATEMERAYU

- a) Kodi munamvera kuti zokhuza katemera wa kafimbata/ kalongolongoyu?
- b) Nanga munamva zotani zokhuzana ndi katemerayu?
- c) Kodi zomwe munamvazo munakhutira nazo?

d) Kodi mumafotokozera anzanu a msikhu wobereka za katemerayu?

3. KALANDIRIDWE KA KATEMERA

- a) Tafotokozani munalandirapo katemerayu.
- b) Munalandira mungati?
- c) Munakalandirira kuti
- d) Mumayenda nthawi yayitali bwanji kufika malo olandilira katemerayu?
- e) Mumayenda bwanji kukafika ku malo olandilira katemerawa?
- f) Amayamba nthawi yanji kupereka katemerayu?
- g) Nthawiyi mumagwirizana nayo?
Fotokozani yankho lanu.
- h) Kodi katemera amapezeka nthawi zones?
- i) Akasowa, amfotokoza zifukwa zotani ogwira ntchito.

4. ZIKHULUPILIRO NDI MPHEKESERA

- a) Pali zikhulupiliro zANJI zokhuzana ndi katemera wa amayi amsinkhu wobereka?
- b) Nanga ndi mphekesera zANJI zomwe mumamva zokhuzana ndi katemerayu?
- c) Inuyo mumazikhulupilira?

Pali zowonjezera zina pazokambiranazi?

ZIKOMO KWAMBIRI POTENGA NAWO MBALI MUKAFUKUFUKUYU.

APPENDIX 4: CLEARANCE WITH THE RESEARCH PUBLICATIONS COMMITTEE

University of Malawi,
Kamuzu College of Nursing,
Private Bag 1,
LILONGWE.

The Research Publications Committee,
Kamuzu College of Nursing,
Private Bag 1,
LILONGWE

Dear Sir or Madam,

**PERMISSION TO CONDUCT RESEARCH AT SOUTH LUNZU HEALTH CENTRE IN
BLANTYRE**

I am a mature year two student pursuing a Bachelor of Science Degree in Nursing Education at Kamuzu College of Nursing. In partial fulfillment of the program, I am expected to conduct a research study and write a dissertation thereafter.

This letter is therefore written to ask for permission to interview some WCBA at South Lunzu Health Centre in Blantyre. The study title is: **Factors contributing to underutilization of TTV among WCBA at South Lunzu Health Centre** and the proposal for the study is enclosed for your approval.

Looking forward to your favourable consideration.

Yours faithfully,

Emmie Viyuyi.

APPENDIX 5: APPROVAL FROM RPC



University of Malawi
KAMUZU COLLEGE OF NURSING
RESEARCH AND PUBLICATIONS COMMITTEE

APPROVAL CERTIFICATE

TITLE: Factors contributing to Underutilization of Tetanus Toxoid Vaccine among Women of childbearing age at South Lunzu Health Centre in Blantyre.

INVESTIGATOR: EMMIE T. VIYUYI

DEPARTMENT/YEAR OF STUDY:

REVIEW DATE: 08 SEPTEMBER 2010

DECISION OF THE COMMITTEE:

SIGNATURE:  **DATE:** 22/09/10
CHAIRPERSON, RESEARCH AND PUBLICATIONS COMMITTEE

cc Supervisor:

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: 22.09.2010 **SIGNATURE(S):** 

APPENDIX 6: CLEARANCE LETTER TO LILONGWE DISTRICT HEALTH OFFICE

Kamuzu College of Nursing,
Private Bag 1,
LILONGWE.

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

Dear Sir/ Madam,

PERMISSION TO CONDUCT A PILOT STUDY AT KAWALE HEALTH CENTER

I write to seek permission to conduct a pilot study at Kawale Health centre, MCH Department. The title of the study is: **Factors contributing to underutilization of TTV among WCBA at South Lunzu Health Center in Blantyre**. The proposal is enclosed for your authorization.

I am a second year Bachelor of Science in Nursing Education student. In partial fulfillment of the program, I am expected to conduct a research study and write a dissertation.

Looking forward to your favourable consideration.

Yours faithfully,

Emmie Viyuyi.

APPENDIX 7: APPROVAL FROM LILONGWE DHO

Ref. No.
Telephone No.: 265 727017
Telex No.: 265 727817
Telex No.
E-Mail: lilongwedho@malawi.net

Please address all communications to:
The District Health Officer



Lilongwe District Health Office
P.O. Box 1274
Lilongwe
Malawi

24th September, 2010

To whom it may concern,

RE: PERMISSION TO CONDUCT PILOT STUDY IN LILONGWE DISTRICT.

Permission has been granted to the bearer of this letter,

Emmie Viyuyi

to conduct a survey in Lilongwe District at
Kawale Health Centre, MCH Department on factors contributing to underutilization

of TTV among WCBA at South Lunzu Health Centre in Blantyre

Any assistance rendered would be appreciated.


Dr. M. Mwale
DISTRICT HEALTH OFFICER

APPENDIX 8: CLEARANCE LETTER TO BLANTYRE DISTRICT HEALTH OFFICE

Kamuzu College of Nursing,
Private Bag 1,
LILONGWE.

The District Health Officer,
Blantyre District Health Office,
Private Bag 66,
BLANTYRE.

Dear Sir/ Madam,

PERMISSION TO CONDUCT A STUDY AT SOUTH LUNZU HEALTH CENTRE

I write to seek permission to conduct a study at South Lunzu Health Centre. The title of the study is: **Factors contributing to underutilization of TTV among WCBA at South Lunzu Health Center in Blantyre.** The proposal is enclosed for your authorization.

I am a second year Bachelor of Science in Nursing Education student. In partial fulfillment of the program, I am expected to conduct a research study and write a dissertation.
Looking forward to your favourable consideration.

Yours faithfully,

Emmie Viyuyi.

APPENDIX 9: APPROVAL FROM BLANTYRE DHO

Telephone: Blantyre 01875332 / 01877401
Fax: 01875430

Communication should be addressed to :
The District Health Officer



In reply please quote No.
MINISTRY OF HEALTH AND POPULATION
DISTRICT HEALTH OFFICE
P/BAG 66
BLANTYRE
MALAWI

28th September 2010

The Officer in-Charge
South Lunzu Health Centre

Dear Sir,

**Re : AUTHORITY TO CONDUCT STUDY ON FACTORS CONTRIBUTING TO
UNDERUTILIZATION OF TVV AMONG WCBA**

The bearer of this letter is Mrs E. Viyuyi a Second Year Bachelor of Science in Nursing Education student and would like to use your Health Facility for the above named research study. Please assist as per requested.

Your cooperation will be greatly appreciated.

Yours faithfully,

G. Chatsika
Dr. G. Chatsika
DISTRICT MEDICAL OFFICER

APPENDIX 10: CONSENT FORM: ENGLISH VERSION

Respondent,

My name is Einmie Viyuyi. I am a second year Bachelors of Science in Nursing Education student at Kamuzu College of Nursing. In partial fulfillment of the program I am required to conduct a research study and write a dissertation thereafter. The title of my study is "Factors contributing to underutilization of TTV among WCBA at South Lunzu Health Center in Blantyre district.

You have been chosen to participate in this study because you are within the childbearing age. The discussion will last for an average of an hour. You will be asked questions related to your knowledge, utilization and beliefs related to TTV. Your responses will be written down. Your participation is not compulsory and you are free to withdraw from the study any time you want. The information obtained will be treated as confidential and will only be accessed by the researcher. It will only be used for educational purposes.

Your identification will be anonymous, as a code number will be used on the questionnaire instead of your name. You will be interviewed separately away from other women for privacy. You will not be penalized for giving any information, which is true. There is no benefit or risk in participating in this study.

Therefore, if you are convinced and wish to participate in this study please sign/print your finger below to show that you understand the information provided and you agree to participate in the study.

TO BE COMPLETED BY THE PARTICIPANT

The researcher has explained to me all the information above. I have understood and I freely give consent to participate in this study.

Participant's Signature/ Thumb print:

Researcher's Name:

Researchers Signature:

In case of any questions or need for clarification on the study, you can contact the following people using the address below.

RESEARCHER

Emmie Viyuyi

Cell: 0999647889

SUPERVISOR

Mr. H.E Maliwichi

0995286002/ 0888176776

University of Malawi

Kamuzu College of Nursing

Private Bag 1

LILONGWE

APPENDIX 11: CONSENT FORM: CHICHEWA VERSION

Otenga Mbali,

Dzina langa ndine Emmie Viyuyi ophunzira pa sukulu ya ukachenjede ya a namwino ya Kamuzu College of Nursing. Pofuna kukwaniritsa zofunika zina kuti nditenge satifiketi ya ukachenjedwe mu unamwino ndiyenera kuchita kafukufuku.

Mutu wa kafukufuku yemwe ndikupanga ndi: zomewe zikupangitsa kuti a mayi a msinkhu wobereka asalandire katemera wa kafumbata/ kalongolongo mosatira ndondomeko ku chipatala cha South Lunzu mu mnzinda wa Blantyre.

Inu monga mmodzi mwa amayiamsinkhu wobereka mwasankhidwa kuti muthandize poyankha mafunso okhudzana ndi kafukufukuyu. Zokambirana zathu zitenga ola limodzi. Mufunsidwa mafunso okhudzana ndi nkhaniyi ndipo ine ndidzilemba mayankho anu.

Pofuna kusunga chinsinsi chanu, sindikufunsani dzina lanu ndi gwiritsa ntchito nambala. Zokambiranan zonse zikhala pakati pa inu ndi ine, muli ndi ufulu kutenga nawo mbali kapena kutuluka mukafukufukuyu ngati muona kuti simungakwanitse kukhala mukafukufuku ndipo sipadzakhala chovuta chili chonse.

Ngati mwa lola kulowa kafukufukuyu sainilani kapena dindani pansipa.

KUVOMEREZA KUTENGA MBALI MUKAFUKUFUKU

Inde ndamvetsa zonse zimene andifotokozera za kafukufuku ndipo ndiku vomereza kutengapo mbali pa ka fukufukuyu.

Saini ya olowa kafukufuku

Dzina la ochititsa kafukufuku

Saini ya ochititsa kafukufuku

Ngati mu nga khale ndi funso apezeni anthu awa:

WOFUFUZA

Emmie Viyuyi

Cell: 0999647889

WOYANG'ANIRA

Mr. H.E Maliwichi

0995286002/ 0888176776

University of Malawi

Kamuzu College of Nursing

Private Bag 1

LILONGWE

APPENDIX 12: TIME TABLE OF EVENTS

MONTH	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV
ACTIVITY										
SELECTION OF TOPIC										
LITERATURE REVIEW										
PROPOSAL DEVELOPMENT										
SUBMISSION OF PROPOSAL										
PILOT STUDY										
DATA COLLECTION										
DATA ANALYSIS										
REPORT WRITING AND BINDING										
SUBMISSION OF REPORT										
DESSERMINATION OF RESULTS										

APPENDIX 13: BUDGET

ITEM	QUANTITY	COST IN MK	TOTAL COST IN MK
1. STATIONERY			
Plain papers	5 reams	1000.00	5000.00
Arch lever files	2	500.00	1000.00
Ball point pens	10	25.00	250.00
Pencils	2	10.00	20.00
Rubber	1	50.00	50.00
Tippex	1	130.00	130.00
Small envelopes	10	10.00	100.00
Big envelopes	10	25.00	250.00
Postage stamps	4	35.00	140.00
Pencil sharpener	1	60.00	60.00
1 GB Flush disk	1	3000.00	3000.00
Staple machine	1	500.00	500.00
Staple pins	1/ Box	200.00	200.00
Paper clips	1/Box	120.00	220.00
Punching machine	1	1200.00	1200.00
Stamp pad	1	550.00	550.00
SUB-TOTAL			12,620.00
2. SECRETARIAL SERVICES			
Typing proposal	55pages	80.00/page	4,400.00
Printing proposal	55 pages	50.00/page	2550.00
Binding proposal	2	150.00/ copy	300.00
Photocopying questionnaire	100	50.00/ page	5,000.00
Typing dissertations	60pages	80.00/page	4800.00
Printing dissertation	4	1000.00/ copy	4000.00

Binding dissertation	4	150.00/ copy	600.00
SUB-TOTAL			21,650.00
TRANSPORT AND COMMUNICATION			
Transport to and from data collection			7,500.00
Local running to other resource centers			5,000.00
Phone calls			2,500.00
Internet services			3,000.00
SUB-TOTAL			18,000
Incidentals			6000.00
GRAND TOTAL			58,270.00