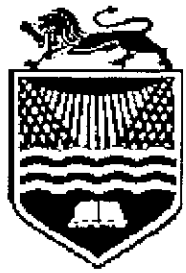

UNIVERSITY OF MALAWI

KAMUZU COLLEGE OF NURSING

A RESEARCH PROPOSAL ON FACTORS CONTRIBUTING TO PREVALENCE OF TYPHOID FEVER AT CHAKULEMBERA VILLAGE NENO DISTRICT

IN PARTIAL FULFILMENT OF THE AWARD OF BACHELORS

DEGREE IN NURSING

SUBMITTED BY

MISS WINNIE MWAWA

SUPERVISED BY

MRS WYNESS GONDWE

14TH JULY, 2010.

(i) DECLARATION

I declare that this proposal is completely the result of my own work, in originality and execution. This work has never been presented for any degree and has not been submitted elsewhere for any degree.

Candidate: Winnie Mwawa

Signature---------- Date 14/7/2010

Supervisor: Mrs. W. Gondwe

Signature: ---------- Date 14/07/2010

(ii) DEDICATION

This study is dedicated to my mother Mrs R Mwawa, Mrs G Mwakababu, Kenneth Chaona and all family members. Without their prayers, understanding and encouragement, my success at the college would have been very difficult

May the good Lord bless them all.

(iii) AKNOWLEDGEMENTS

First and foremost I would like to thank my almighty God for being with me all along and for keeping me well throughout the period of my studies. I would like to thank all my relatives for their support for the entire period of my studies while at the college. I would specifically also like to thank my mother for psychological support, encouragement and prayers. I acknowledge Mrs W Gondwe, my supervisor for her support that has enabled this proposal into a real study.

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(v) ABSTRACT

This research proposal 'is about a study to be conducted at Neno District on factors contributing to prevalence of typhoid fever at Chakulembera village. The study will adopt quantitative type of methodology inoder to explore and describe the factors contributing to prevalence of typhoid fever at Neno. The pilot study will be done to test the questionnaire at Neno district hospital and ammmendments of the questionnaire will be done later on with reference to the feedback of the pilot study. The real study will take place at Chakulembera village and it will involve 10 participants picked at a random. Health Belief Model will be used as conceptual model for the study as it involves people's behavior and attitude which is also the reason of the study.

TOPIC: FACTORS CONTRIBUTING TO PREVALENCE OF TYPHOID FEVER AT CHAKULEMBERA VILLAGE, NENO DISTRICT.

CHAPTER ONE

1.1 INTRODUCTION

Typhoid fever, also known as enteric fever is potentially fatal multisystemic illness caused primarily by salmonella typhi. It is spread through ingestion of food and water that is contaminated with the bacteria. The protean manifestations of Typhoid Fever make this disease a true diagnostic challenge. The classic presentation includes high fever, malaise, headache, abdominal pain, constipation, diarrhea and bowel perforation. Untreated, Typhoid Fever is a grueling illness that may progress to delirium, intestinal hemorrhage and death within one month of onset (Brush 1988).

Typhoid fever occurs worldwide, primarily in developing nations whose sanitary conditions are poor. Typhoid fever is endemic in Asia, Africa, Latin America, the Caribbean, and Oceania, but 80% of cases come from Bangladesh, China, India, Indonesia, Laos, Nepal, Pakistan, or Vietnam. Within those countries, typhoid fever is most common in underdeveloped areas. Typhoid fever infects roughly 21.6 million people (incidence of 3.6 per 1,000 populations) and kills an estimated 200,000 people every year.

In the United States, most cases of typhoid fever arise in international travelers. The average yearly incidence of typhoid fever per million travelers from 1999-2006 by county or region of departure was as follows: Canada – 0, Western Hemisphere outside Canada/United States - 1.3, Africa - 7.6, Asia - 10.5, India - 89 (122 in 2006). Total (for all countries except Canada/United States) - 2.2 (Brush and Garvey, 1900) improved sanitation and successful antibiotic treatment have steadily decreased the incidence of typhoid fever in the United States. In 1920, 35,994 cases of typhoid fever were reported. In 2006, there were 314.

Between 1999 and 2006, 79% of typhoid fever cases occurred in patients who had been outside of the country within the preceding 30 days. Two thirds of these individuals had just migrated from the Indian subcontinent. The three known outbreaks of typhoid fever within the United States were traced to imported food or to a food handler from an endemic region. Remarkably, only 17% of cases acquired domestically were traced to a carrier (John and Garvey, 2000)

1.2 BACKGROUND

Although typhoid fever has been recognized as a major cause of morbidity for over a century, concerted efforts for its control have been largely restricted to the developed world. These measures have included provision of clean water, sanitation, and general improvements in public awareness and education. However, this evolutionary trajectory has taken time and enormous resources. While WHO recommended the use of vaccination for preventing typhoid fever in countries suffering from this infection in 1994 , the target populations and strategies for administration of these vaccines were unclear. As a result only a few countries were able to use these vaccines on a wide scale (Siddiqui and Rabban, 2006).

Typhoid may be regarded as a neglected disease. There is considerable evidence to support this view. Despite its relative importance as a cause of serious morbidity and potential economic losses, typhoid does not appear as a major disorder in the global burden of disease estimates (Brooks and Hossain, 2005). In Africa, democratic Republic of Congo had an outbreak of typhoid fever in Kinshasa from 27th September 2004 to 11 January 2005.World Health Organization received reports of a total of 42,564 cases, 696 severe cases of intestinal perforation and 214 deaths happening during the period of the outbreak. With provision of clean water and other control measures including health educational activities the number of cases declined (WHO Bulletin, 2005).

Similarly South Africa reported to have an outbreak of typhoid fever in the province of Mpumalanga in July, 2005. The English daily star 10 September 20005 reported that the Bernice Samuel hospital in Deimas, Mpumalanga, was filled to capacity as the small town battled to the outbreak of typhoid fever. There were 526 cases, of which 4 deaths were reported. Treatment Action Campaign considered this report and the World Health Organization intervened water treatment campaigns and also health education on typhoid fever which resulted into a decline in a number of cases (South Africa health news, September, 10 2005).

Malawi as one of developing country is experiencing Typhoid fever outbreak at

Chakulembera village Tradition Authority Nsambe, Neno district since May 2009.Neno is in the southern region of Malawi and its one of the hot areas in the country. In May 2009 patients with persistent fever, headache and abdominal pains started appearing at Neno district hospital. (World health bulletin, 2009). Two thirds of the patients presenting at Mwanza District Hospital had other non-typhoid fever symptoms. These included stiffness of the joints, jaw neck usually tilted to the left hip and knees. Patients were having difficulties with walking. They walked with their legs apart, their hands in flexion position and their mouth gapping. There were also increased reflexes in such patients. This was strange because typical typhoid fever symptoms are fever, headache, abdominal pains and malaise. Due to these confusing symptoms the disease was associated with witchcraft by the villagers (Nyasa times, Malawi news reporter, 25th August 2009).

Blood samples were taken from nine of the first cases for laboratory investigations and four of the samples were positive for salmonella typhii. The college of Medicine, District Health Officer and Centre's for Disease Control collected other samples from July to October 2009, on blood, stools, urine, water sources and food stuffs to find out the exact disease. Ninety nine blood cultures were done and out of these forty one were positive for salmonella typhii and by December 2009, 289 cumulative cases reported with 26 deaths from 16 affected villages. (National reporter Theresa Chapulapula, Friday 12th February 2010).

Early November 2009 Ministry of Health published a press release informing the general public that Neno strange disease was typhoid fever outbreak. Anaedontal evidence is indicating that cases that stayed long without treatment are those that developed the abnormal symptoms (Malawi News of November 2009).

1.3 STATEMENT OF THE PROBLEM

During initial stages of the Typhoid Fever Outbreak, World Health Organization provided technical and financial support to the Ministry of Health of Malawi to manage and implement health promotion, epidemic and response activities at Neno. In addition, the Ministry of Health formed technical subcommittees responsible for activities on preventive measures of the outbreak at Neno such as health education, plays, songs, demonstration of water treatment. (WHO Bulletin December 2009). Despite these interventions, more new Typhoid Fever cases are being reported; Malawi News of February 12, 2010 published a story where they reported that Neno has registered 25 more cases and 2 deaths of typhoid fever by the month of February, 2010. Current statistics of 17th may to 23rd may 2010 shows eight new cases of typhoid fever from Chakulembera village Traditional Authority Nsambe (Sunday times 23rd may 2010). It is not known what causes the continued prevalence of Typhoid Fever after interventions to control it were put in place. This gap necessitates the need to conduct a study to determine the factors contributing to prevalence of typhoid fever at Chakulembera village, Neno district for successful control of the disease. .

1.4 SIGNIFICANCE OF THE STUDY

The study findings may help to unveil factors contributing to prevalence of Typhoid Fever at Chakulembera village Neno district. In addition the results may help to promote knowledge on Typhoid Fever among villages in Chakulembera village hence easier to control the disease.

The information may further help Ministry of Health through the District Health Officer in developing new strategies of controlling the disease in reference to the causes specific for Neno.

Lastly, the results of the study may act as basis for further studies on typhoid fever.

1.5 OBJECTIVES

BROAD OBJECTIVE

To explore the factors contributing to prevalence of Typhoid fever at Chakulembera village Neno district.

SPECIFIC OBJECTIVES

1. To assess the knowledge of Typhoid Fever among villagers at Chakulembera village Tradition Authority Nsambe Neno district.
2. To explore availability and types of water sources at Chakulembera village Tradition Authority Nsambe Neno district.
3. To assess food handling practices of people at Chakulembera village Neno district.
4. To find out the type of refuse disposal system used by the people at Chakulembera village Neno district.
5. To assess peoples sewage disposal systems at Chakulembera, Neno.

LITERATURE REVIEW

2.1 INTRODUCTION

A literature review is a body of text that aims to review the critical points of current knowledge and or methodological approaches on a particular topic. (Dellinger, 2005).

Its ultimate goal is to bring the reader up to date with current literature on a topic and forms the basis for another goal, such as future research that may be needed in the area (Hart, 2001). This chapter will discuss the literature related to the topic under study which will include water management, food storage and preparation, refuse disposal systems and sewage disposal systems.

2.2 STUDIES ON TYPHOID FEVER

WATER MANAGEMENT

Typhoid still is a major public health issue in many tropical countries in particular in Southeast Asia (Pang et al., 1998; Parry et al., 2002). In areas that are relatively free of typhoid fever, outbreaks usually occur from a single source of food or carrier (Birkhead et al., 1993; Gruner et al., 1997). Safe drinking water supplies are of prime importance in controlling typhoid fever as is exemplified by a massive outbreak in Tajikistan due to sewage contaminated drinking water after breakdown of the city water supply system (Mermin et al., 1999). In endemic areas with poor sanitation and hygiene and a weak infrastructure the situation may be entirely different with continuous exposure of the whole population from multiple sources.

A study was conducted by Amber Farooqui (2000) on an investigation of community outbreak of typhoid fever at Nek Mohamed village, Metropolitan city of Karachi Pakistan. The aim of the study was to find out the causes of the outbreak in this area. The author found that inhabitants of this village lived in poor and unhygienic conditions with no proper water supply or sewage disposal facilities. They consumed water from a nearby well which was the only available source of drinking water. Epidemiological evidences

revealed the gross contamination of well with dead and decaying animal bodies, their faecal material and garbage. Microbiology analysis of household and well water samples revealed the presence of heavy bacterial load with average total of aerobic count 10-10. In conclusion the study indicated the possible involvement of well water in typhoid fever outbreak in Nek Mohamed village Pakistan (Amber, 2009).

Similarly one study conducted in an urban area on Java, Indonesia showed that low socio-economic status, poor housing with inadequate water supply and open sewers and inappropriate personal hygiene were associated with an increased risk of getting typhoid fever (Gasem et al., 2001). In conclusion improper management of water contribute alot to typhoid fever outbreak in different parts of the world. This should call for many studies in search for related causes of typhoid fever outbreaks for better management of outbreak.

FOOD STORAGE AND PREPARATION

Food storage is both a traditional domestic skill and is important industrially. Food is stored by almost every human society and by many animals. On the other hand Food preparation is the act of preparing foodstuffs for consumption. Many types of food preparation involve heating the food ingredients; however other types of preparation involve chemical, biological, or mechanical means. When food is not stored well it can cause diseases like diarrhoea in the same way with food preparation when not properly prepared it can be harmful to human health.

One study carried out among all household heads in five neighbouring villages in rural South-Sulawesi, Indonesia, to collect information on the prevalence of typhoid fever and of demographic and behavioural risk factors for having typhoid. The study was done by Mohammed Hatta, Mirjam Bakker in the year 2001. The following independent risk factors were identified: consumption of uncooked vegetables, consumption of water with a poor quality, use of water that is contaminated with coliform bacteria, not washing hands before eating. The results indicate that in the absence of clean drinking water and adequate sanitation education focussing on simple measures such as hand washing with

soap before eating and cooking of vegetables before consumption may contribute to the prevention of typhoid fever in rural areas.

Another study conducted in cities in Indonesia, Chile and Pakistan reported that eating and drinking contaminated food outside home were risk factors (Velema et al., 1997; Black et al., 1985; Luby et al., 1998) and a study performed in the Philippines indicated that street vendors play an important role in transmission (Castillo et al., 1995). This seemingly contrast with the study performed by Vollaard et al. (2005), which demonstrated that risk factors for typhoid fever are generally related to factors within the household which include food preparation.

REFUSE DISPOSAL SYSTEM

This is the discarding or destroying of garbage, sewage, or other waste matter or its transformation into something useful or innocuous. In Tokyo there was large increase in typhoid fever infection during 1976 and 1985 due to rubbish disposed during an earthquake which occurred on the 1st of September, 1972. It devastated the metropolis and approximately 140,000 people were killed. The damage was particularly severe within the Central and Eastern districts. Nearly 90 per cent of the houses in these areas either collapsed or were burned down. Many people were forced to live in shelters and barracks (Tokyo-to, 1972, 1102). Public utilities, including running water, and waste removal services were slow to recover. As a result sanitary conditions deteriorated rapidly, particularly affecting those living in shelters and barracks. Water-borne infectious diseases spread rapidly. According to an investigation conducted by the Metropolitan Police, typhoid and dysentery morbidity during the 4 years following the earthquake was especially high among those living in shelters, where many families were obligated to share small living Spaces (Nagashima, 2000).

SEWAGE DISPOSAL SYSTEM

The disposal of sewage, in a convenient and sanitary manner is a problem of serious importance in the equipment of isolated dwellings with modern household conveniences. The manner of heating, lighting and of water supply are questions of selection among a

number of established systems, but the problem of sewage disposal must in a great measure be determined by local conditions. Unless the natural surroundings are such as will permit sewage to be emptied directly into a stream of considerable volume, the problem of its safe disposal becomes one of serious importance. A matched case-control study was conducted in Italy by ospedale cotugno from January to June 1990, to identify risk factors of typhoid fever in Neapolitan area. The study was done at this area because it is reported that typhoid fever is endemic in the Neapolitan area, where its yearly incidence rate largely exceeds the corresponding national figure. The risk factor identified in this study showed inadequate sewage treatment facilities combined with lack of sanitation in Neapolitan area (Stroffolini and Manzilo, 2004). Similarly, a study performed in Indonesia in an urban community endemic for enteric fever in Jakarta, the capital of Indonesia, showed that risk factors for typhoid fever were a recent typhoid fever case in the household due to absence of a toilet in the household and not using soap for hand wash (Vollaard et al., 2005).

2.3 CONCLUSION

Literature review showed that typhoid fever remains a very important public health problem in developing countries. Poor sanitation and hygiene together with the absence of clean drinking water contribute to the high prevalence of this food and water born disease. No literature was found on knowledge on Typhoid Fever in general and there is no documentation of studies done on typhoid fever in Malawian context.

CHAPTER THREE: COCNCEPTUAL FRAMEWORK

3.1 INTRODUCTION

This chapter focuses on the theoretical framework that will be used in the topic under study. A conceptual model refers to global ideas about individuals, groups, situations and events of interest to a discipline so as to guide them. The theoretical framework for this study will be based upon the Health Belief Model.

3.2 HEALTH BELIEF MODEL

The Health Belief Model (HBM) was one of the first models that adapted theory from the behavioural sciences to health problems, and it remains one of the most widely recognized conceptual frameworks of health behaviour. It was originally introduced in the 1950s by psychologists working in the U.S. Public Health Service (Hochbaum1958, Rosenstock1974, Leventhal, and Kegeles1965). Their focus was on increasing the use of then-available preventive services, such as chest x-rays for tuberculosis screening and immunizations such as flu vaccines. They assumed that people feared diseases, and that health actions were motivated in relation to the degree of fear (perceived threat) and expected fear-reduction potential of actions, as long as that potential outweighed practical and psychological obstacles to taking action (net benefits) The model postulates that health seeking behavior is influenced by a person's perception of a threat posed by a health problem and the value of association with actions aimed at reducing the threat (Hungler and Polit, 2007). The major components of the model include individual perception, modifying factors and the likelihood of initiating actions.

3.3 INDIVIDUAL PERCEPTION

A person's perceptions or susceptibility refers to a person's perception that a health problem is personally relevant or that the diagnosis of the illness is accurate. A person's individual perception or view of susceptibility to disease and seriousness of the disease combine to form his or her perceived threat of an illness. Hence action will not occur unless the individual believes that becoming ill would have serious organic or social implications. One of contributory factor is knowledge about the disease or prior contact

with the disease. When an individual have knowledge about the diseases he or she is able to know how serious the disease is hence would seek medical health early. On the other hand if the individual has ever suffered from the disease he or she would recall how the disease was treated hence following the previous way of treatment. Other factors include knowledge about the disease and prior contact with the disease (Polit, 1998).

3.4 THE LIKELIHOOD OF INITIATING ACTIONS

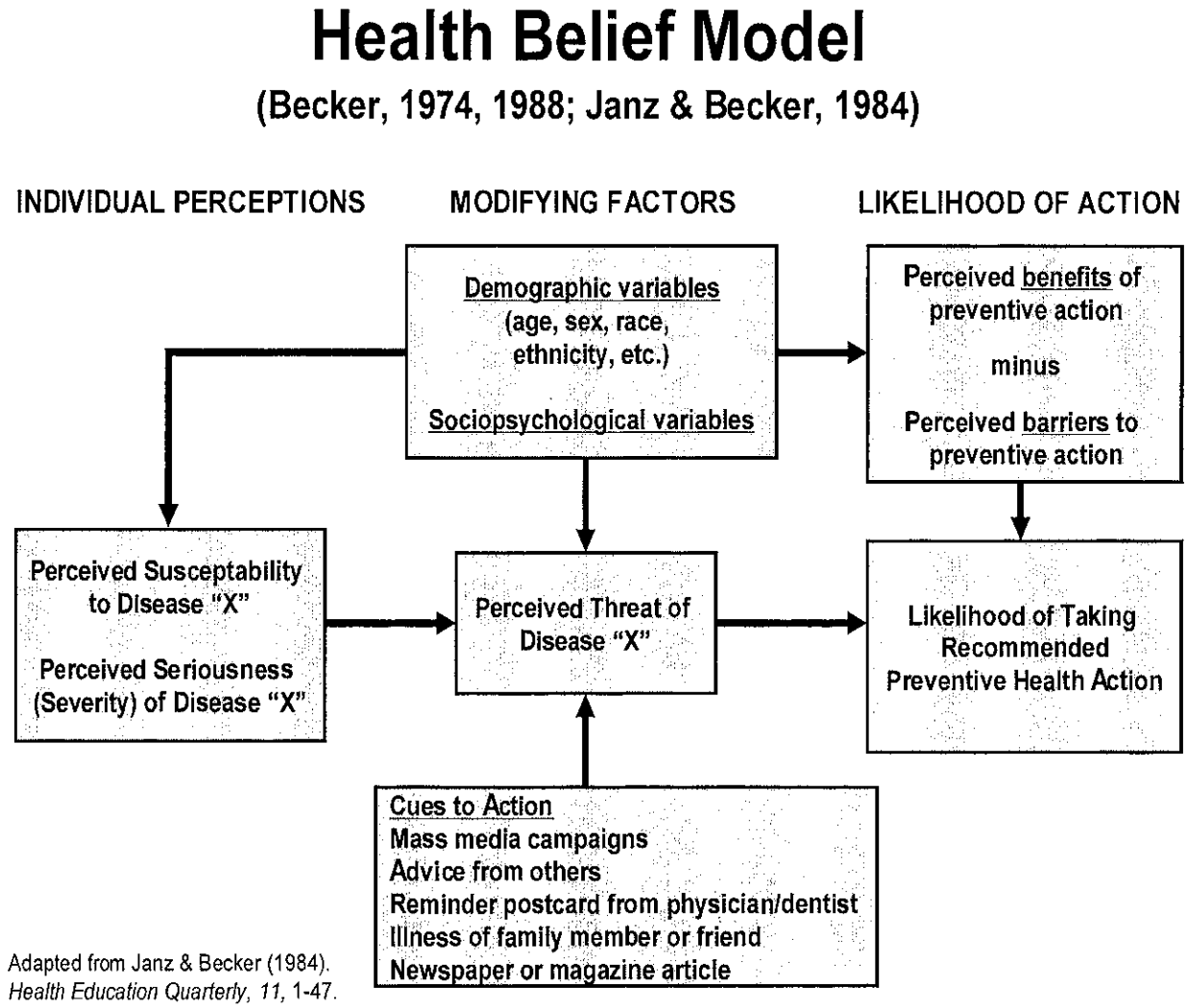
The likelihood that the person will take any action is influenced by the perceived benefits of the action weighed against barriers to acting. Perceived benefits refer to the patient's belief that a given treatment will cure the illness or help to prevent it. Examples of barriers are costs, motivation, inconveniences. Costs refer to complexity, duration and accessibility of treatment that is if people are able to afford the cost for treatment then they will be able to go and seek medical help unlike when the cost is high. Motivation includes desire to comply with the treatment, belief that people should do what is prescribed by health care personnel. People need to be motivated by health care personnel since some don't comply because they know nothing about the treatment given. Motivation can be done through health education about the treatment (Lancaster, 2002). Inconveniences refers to the way people are being handled for them to seek medical attention. If people believe that going to seek medical attention is a waste of time unlike they try some other ways of treating the problem at hand then they can do the one with more benefits.

3.4 MODIFYING FACTORS

Among the modifying factors that have been identified are the practitioner relationship and patient satisfaction. When the relationship with the practitioner is not good people would rather chose to die at home with a disease at hand rather than going to the hospital. On the other hand when the relationship is good they will always opt for treatment even with a minor condition. On patients satisfaction people would always go to a health facility when they know that the treatment given previously was successful. They get

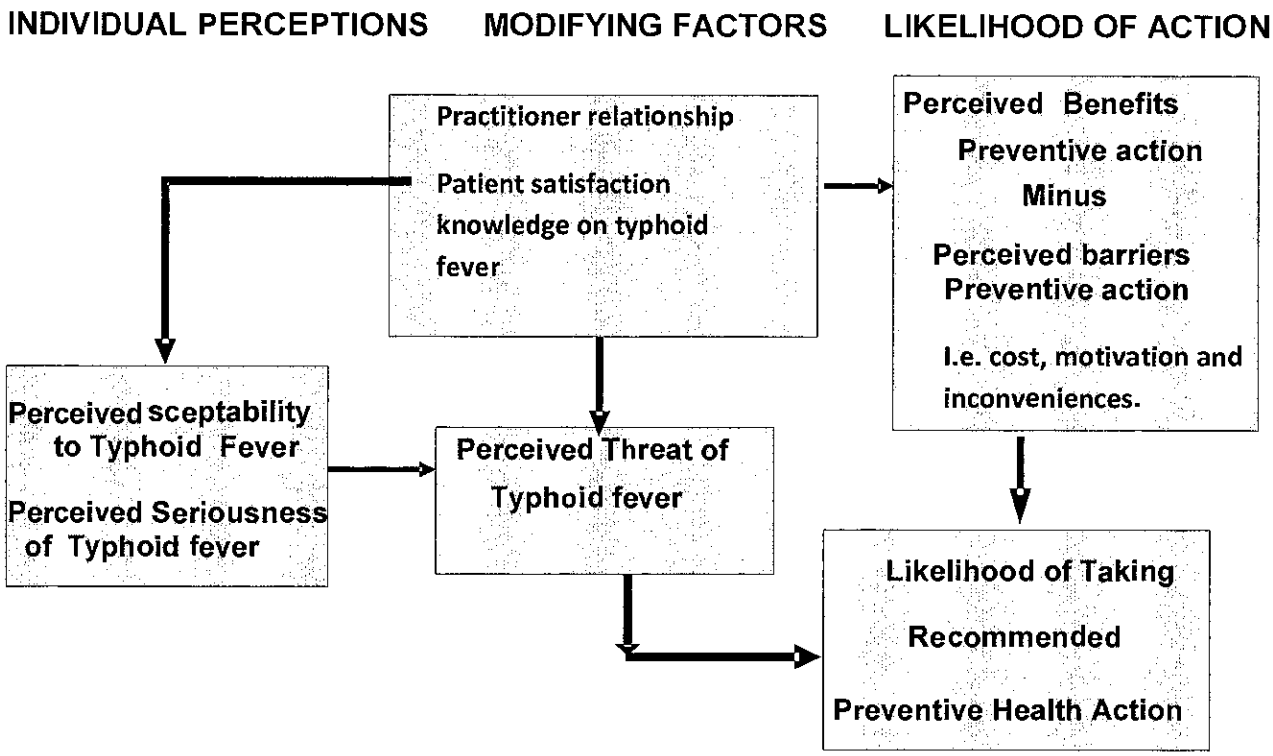
discouraged when no better medical help is being provided at a facility (Lancaster, 2000). The relationship of these components is illustrated in the diagram below.

FIGURE 3: RELATIONSHIPOF THE COMPONENTS



Adapted from Janz & Becker (1984). *Health Education Quarterly, 11,* 1-47.

THE HEALTH BELIEF MODEL AS USED IN THE TOPIC UNDER STUDY



3.5 APPLICATION OF HEALTH BELIEF MODEL TO THE TOPIC UNDER STUDY

The model suggests that people from Chakulembera village Neno district had perceptions that affected their health seeking behaviors. At Neno the outbreak of typhoid fever was at first confused as a strange disease. The villagers associated the disease with witchcraft and this contributed to them ignoring the hospital for treatment. One of the contributory factors was lack of knowledge about typhoid fever. If they had known the disease they couldn't have associated it with witchcraft. Another contributory factor was that typhoid fever disease was new to then hence did not know much about the diseases. As stated earlier this contributed to them seeking medical attention late, they would visit the hospital after somebody had died of Typhoid fever (World Health Bulletin, 2009). The villagers lacked motivation so that they can take an action to the problem at hand (the likelihood of initiating actions). They needed knowledge on typhoid fever so that they stop associating the disease with witchcraft. Letting them know that typhoid fever disease is something caused by pathogen would contribute to them seeking medical attention at a health facility. The health personnel can only give them appropriate information about the disease only when they are aware of the causes of typhoid fever specifically for the problem area.

The other thing can be that the villagers at Chakulembera were afraid of being left waiting for long hours in order to get helped (inconveniences). This is one of the barriers that can contribute to them not going to a health facility for medical help. Also cost can be another barrier it can happen that the nearest hospital is a private hospital making those with no money not to visit the hospital. On the other hand a government hospital can be situated at place where it is far away hence need for transport. This would have made some of the villagers to visit the hospital late in waiting of finding money hence going to the hospital when the problem is serious leading into death.

Lastly the people of Chakulembera village would visit the hospital for medical help only when they know the health personnel will welcome them (practitioner relationship). Most of the people regard health practitioners as being rude to them. They can chose to go to a

traditional healer where they think they will be respected unlike at the hospital. This would have been one way why people would wait until they develop complications of typhoid fever at Chakulembera village which resulted into death.

CHAPTER FOUR: METHODOLOGY

4.1 INTRODUCTION

A methodology is a systematic way of conducting systems analysis and design (Fowler, 2000) This chapter involves the description of a study design, setting, sampling, pre testing, data collection tool, data analysis, ethical consideration and limitation of the study. Plan for dissemination of findings has also been outlined.

4.2 RESEARCH DESIGN

The quantitative descriptive research design will be used because it is easy to work with and provides high percentage of precision. Descriptive research design will be used because of its ability to explore, describe and document aspects of life. It does not manipulate the environment as well as the subjects as the subjects are studied in their own natural setting (Polit, 2007). In this study a questionnaire will be used to find the causes of typhoid fever outbreak at the problem area, Neno.

4.3 SETTING

The study will be conducted at Chakulembera village Tradition Authority Nsambe Neno District. This area has been selected because it is one of the affected villages and also the village which the problem still remains upon intervention done by Ministry of health. Lastly the site will be convenient to the researcher as it is close to where the researcher lives.

4.4 SAMPLING

The study will use convenience sampling, which involves the selection of the readily available persons as participants. This is because most of the villages may be aware and victims of the outbreak of typhoid fever at Chakulembera village. The researcher will collect data from any eldest family member of any home at chakulembera village.

4.5 SAMPLE

In this study data will be collected from 10 participants selected at a random one person from each household at Chakulembera village. The participants will be those above the age of 18 years to get more detailed information and also to be able to answer questions which need adult reasoning .A pilot study will be done at Neno hospital where participant will be picked at a random and they are either going to be patients or guardians of patients suffering from typhoid fever. The sample size may increase if the information given needs to be added.

4.6 DATA COLLECTION TOOL

In this study data will be collected using questionnaire which will be submitted to 10 participants to answer individually. The questionnaire will be developed by the researcher in advance and it will contain both closed and open ended questions. Open ended are questions with no options while closed ones contains options. The participants will be given a day to answer and fill the questionnaire (refer appendix 1). Lastly, the questionnaire will be administered to the villagers by the researcher.

4.7 PILOT STUDY

The interview guide will be piloted at Neno district hospital and a total of 5 participants from any affected villages will be interviewed to test the effectiveness of the interview guide. After pre-test study the interview guide will be revised to modify some questions in order to get data that is relevant to the topic. The data collected during pilot study will be kept in case of reference during the main study.

4.8 DATA ANALYSIS

Data analysis involves the synthesis of the pieces of information obtained in the course of a study. In this study the answers to a questionnaire will be transcribed in Chichewa and later on will be translated in English. Then the data will be analyzed through statistical package for social scientist (SPSS). Data shall be entered into software and the data will be analyzed automatically resulting in tables, charts e.t.c. The descriptive statistics will be

employed during data analysis which includes mean, median, mode, standard deviation and standard error. The data will be presented in form of graphs, charts and frequency table to be done by the researcher.

4.9 ETHICAL CONSIDERATION

Permission to conduct a study will be obtained from KCN Research and Ethics Committee, the director of Neno district hospital, the tradition authority Nsambe and the chief of Chakulembera village. The participant's rights will be protected and observed throughout the study period. The participants will be informed about the study and its benefits. In addition the participant will be asked to participate willingly hence they will be required to sign a consent form if they agree to participate. Participants will also be assured of confidentiality and privacy on the information they will give by keeping the questionnaires that has been answered under lock and key. The data collected will be accessible to the researcher and research supervisor only. Participants will be informed that there are neither risks nor personal benefits by participating in the study however the information provided will help to explore the factors contributing to prevalence of Typhoid fever at Chakulembera village Neno district which may help with control of the disease.

4.10 LIMITATIONS OF THE STUDY

The study findings will not be generalized because of the small sample amongst the many villages that were affected by typhoid fever. Financial constraints might make data collection difficult but for the interest of the study the researcher will try her best to cover up this problem.

4.11 DISSERMINATION OF THE FINDINGS

The findings will be disseminated through a written report which will be submitted to Neno district hospital and KCN library. Additionally feedback will be given to the chief and the people of Chakulembera village.

TIME LINE FOR THE RESEARCH PROPOSAL AND DESSERTATION (2010)

	February March	April	May-June	July September	October Novembe r	December
Identify Research Title						
Literature Review						
Proposal writing, submis-ion of proposal						
Waiting for approval of the proposal						
Piloting, Data Collection						
Data analysis						
Report writing						
Dissemination of results						

THE BUDGET FOR THE PRPOSAL AND DESSERTATION (2010)

ITEM	COST OF EACH ITEM	TOTAL
STATIONERY		
2 reams of plain papers	K900each	K1800.00
3 ball pens	K25 each	K75.00
2 pencils	K15each	K30.00
1 flash diskette(1GB)	K1500	K1500.00
1 hard cover	K300	K300.00
PRINTING AND BINDING SERVICES		
Printing 3 copies of research proposal	K500 each	K1500.00
Printing 15 copies of research interview guide	K100 each	K3000.00
Printing 4 copies of dissertations	K500 each	K2000.00
Binding 4 copies of dissertation	K200 each	K800.00
Internet services	K1000	K1000.00
Transportation	K4000	K4000.00
Phone calls	K1500	K1000.00
Subtotal		**K17005.00**

Contingency 10 % of subtotal		**K1700.05**
GRAND TOTAL		**K18705.05**

BUDGET JUSTIFICATION

The stationery outlined in the budget will be used during the whole research process. Money will be needed for printing and binding services, buying writing materials, transportation to and from traditional authority Nsambe Neno district and for buying flash diskette for storing information. There will also be need for communication with the supervisor and this will require funds for buying airtime. The research will also require funds for internet services to access information from electronic journals and also communication with the supervisor. Contingency money amounting to k1700.05 will be used to top up the budget in case there will be some inconveniences during the research process which are not budgeted for.

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APPENDIX 1: QUENSTIONAIRE (English version)

SECTION A: DEMOGRAPHIC DATA

CODE NUMBER: DATE:

INSTRUCTION: You are going to provide answers by ticking in the boxes given and you will only write others if your answer is not provided on options given.

1. What is your age?
   i. 17-27 years [ ]
   ii. 28-37 years [ ]
   iii. 38-47 years [ ]
   iv. More than 37years [ ]
2. What is your educational level?
   i. No schooling [ ]
   ii. Primary school [ ]
   iii. Secondary school [ ]
   iv. University and above [ ]
3. What your current marital status?
   i. Single [ ]
   ii. Married [ ]
   iii. Widowed [ ]
   iv. Divorced [ ]
4. What is your occupation?

i. Unemployed [ ]

ii. Trader (business) [ ]

iii. Employed [ ]

iv. Other (specify) [ ]

SECTION B: Knowledge on typhoid fever

5. What causes typhoid fever?

i. Ingestion of food contaminated with the bacteria [ ]

ii. Drinking water contaminated with the bacteria [ ]

iii. Others (specify).....

6. What is the mode of transmission of typhoid fever?

i. Oral-fecal route [ ]

ii. Others (specify).....

7. What are the signs and symptoms of Typhoid Fever?

i. diarrhea [ ]

ii. fever [ ]

iii. rash [ ]

Others (specify).....

8. How can Typhoid Fever be prevented?

i. Water treatment [ ]

ii. Proper waste disposal [ ]

iii. Protection of food from contamination [ ]

iv. Others (specify) .....

SECTION C: WATER MANAGEMENT

9. What is your source of drinking water?

i. Tap [ ]
ii. Well [ ]
iii. Borehole [ ]
iv. Others (specify) .....

10. How do you treat water at home?

v. Boiling [ ]
vi. Filtration [ ]
vii. Using water guard [ ]
viii. Others (specify).....

11. Is water available at the source throughout the year?

Yes [ ] no [ ]

12. If not where else do you get water?

—

13. How is the place of water source taken care of?

i. Sweeping [ ]
ii. Slashing glass around [ ]
iii. Covering with a rid [ ]
iv. Others (specify) .....

14. is the water from the source free of charge or you have to pay in order for you to access it?

Payable [ ] free of charge [ ]

SECTION D: FOOD STORAGE, PREPARATION AND REFUSE DISPOSAL

15. How do you prepare raw food?

i. Cooking [ ]

ii. Drying [ ]

iii. Others (specify) .....

16. How do you store food at home?

i. Basket [ ]

ii. Plastic bag [ ]

iii. Others (specify).....

17. What practices do you do before handling food?

i. Hand washing with soap

ii. Cleaning the food

iii. Hand washing with no soap

iv. Others (specify).....

18. How do you dispose domestic waste at home?

i. Throwing them in a rubbish pit [ ]

ii. Burying them [ ]

iii. Disposing in a nearby river [ ]

iv. Others (specify).....

19. How do you handle domestic waste when the place of disposal is full?

i. Burry them and dig another pit [ ]

ii. Set the on fire [ ]

iii. Throw them in a river [ ]

20. How far is the place of domestic disposal from the

-main house

i. One meter [ ]

ii. Two meters [ ]

iii. More than two meters [ ]

-kitchen

i. One meter [ ]

ii. Two meters [ ]

iii. More than two meters [ ]

-water source

i. One meter [ ]

ii. Two meters [ ]

iii. More than two meters [ ]

SECTION E: SEWAGE DISPOSAL

21. What do you use to dispose feces at home?

i. Toilet [ ]

ii. Nearby bush [ ]

iii. Nearby river [ ]

iv. Others specify.....

22. How many families use the facility to dispose the feces?

i. One [ ]

ii. Two [ ]

iii. Many [ ]

23. How do you clean the facility used to dispose the faces?

i. Mopping [ ]

ii. Sweeping [ ]

iii. Others specify.....

24. How often do you clean facility?

i. Everyday [ ]

ii. Once a week [ ]

iii. Thrice a week [ ]

iv. Others specify [ ]

25. What is the distance of the facility from the

-main house

i. One meter [ ]

ii. Two meters [ ]

iii. Three meters [ ]

iv. More than three meters [ ]

-water source

i. One meter [ ]

ii. Two meters [ ]

iii. Three meters [ ]

iv. More than three meters [ ]

-main house

i. One meter [ ]

ii. Two meters [ ]

iii. Three meters [ ]

iv. More than three meters [ ]

26. What do you do when the facility is full?

i. Shift to another facility [ ]

ii. Find ways of reusing [ ]

iii. Others specify.....

THANK YOU FOR TAKING PART IN THE STUDY

APPENDIX 2: KALONDOLONDO WA MAFUNSO MU NCHICHEWA

NAMBALA.....TSIKU LOPEREKA MAFUNSO.....

Muyankha mafunsowa pochonga mu timabokosi tili kudzogolo kwa mayankho a funso lililonse ndipo lembani pa zina ngati yankho lanu siyinalembedwe.

<u>Gawo A; mbili yanu</u>

1. Muli ndi zaka zingati? [ ]

   Zaka 17 mpaka 27 [ ]

   Zaka 28 mpaka 37 [ ]

   Zaka 37 mpaka 47 [ ]

   Zoposera 47 [ ]

2. Sukulu munalekezera pati?

   Sindinapiteko [ ]

   Pulayimare [ ]
   Sekondale [ ]

   Koleji ndi kuposera apo [ ]

3. Muli pa banja? Eya[ ] Ayi [ ]

4. Ngati ayi tchulani zina .....

5. .Mumagwira ntchito yanji? [ ]

   i. Sindiri patchito [ ]

   ii. Bizinesi

   iii. Ndiri pa tchito [ ]

iv. Zina (tchulani).....

GAWO B: Maganizo pa nkhani ya typhoid fever

6. Chimayambitsa typhoid fever ndi chani?
    i. Mukadya chakudya chomwe muli kachilombo koyambitsa matendawa [ ]
    ii. Mukamwa madzi omwe muli kachilombo koyambitsa matendawa [ ]
    iii. Zina (tchulani).....
7. Kodi matendawa amafara bwanji?
    i. Kudzera mu bibi kupita kukamwa [ ]
    ii. Zina (tchulani).....
8. Tchulani zizindikiro zake.
    i. Kutsekula mmimba [ ]
    ii. Kutentha thupi [ ]
    iii. Kutuluka tizilonda myhupi [ ]
    iv. Zina (tchulani).....
9. Nanga tingawapewe bwanji matendawa?
    i. Kuteteza madzi [ ]
    ii. Kasamalilidwe ka zithu zonyasa pakhomo [ ]
    iii. Kuteteza za kudya kuti chisaonongeke [ ]
    iv. Zina (tchulani).....

GAWO C: Za kasamalidwe ka madzi

10. Madzi akumwa mumatunga kuti?
    i. Pampopi [ ]
    ii. Pachitsime [ ]
    iii. Pamjigo [ ]

iv. Zina (tchulani).....

11. Mumawateteza bwanji madziwa pakhomo pano?

i. Pophitsa [ ]

ii. Powasefa [ ]

iii. Pogwiritsa makhwala a water guard [ ]

iv. Zina (tchulani).....

12. Madzi amapezeka chaka chonse komwe mumatungako?

Eya [ ] Ayi [ ]

13. Ngati sapezeka chaka chonse mumakatunga kuti akansowa?

_____

_____

_____

14. Malo otungilako madzi mumasamalako bwanji?

i. Posesa [ ]

ii. Potchetcha [ ]

iii. Povindikira [ ]

iv. Zina (tchulani).....

15. Kodi madzi mumatunga aulere kapena mumapereka ndalama kuti mutunge?

i. Ogula [ ] Aulere [ ]

GAWO D: Za zakudya ndi kasamalidwe ka pa khomo

16. Mumakonza bwanji chakudya mukagula kumsika?

i. Kuphika [ ]

ii. Kuwumitsa pa dzuwa [ ]

iii. Zina (tchulani).....

17. Mumasunga bwanji chakudya kunyumba?

i. Mdengu [ ]

ii. Mjumbo [ ]

iii. Zina (tchulani).....

18. Mumataya bwanji zinyalala kunyumba kwanu kuno?

i. Kutaya mu dzala [ ]

ii. Kukwilira [ ]

iii. Kutaya mu tsinje [ ]

iv. Zina (tchulani).....

19. Kodi malo otaya zinyalala akadzadza mumatani?

i. Mumazikwilira [ ]

ii. Kudziyatsa moto [ ]

iii. Kukazitaya kumtsinje [ ]

iv. Zina (tchulani).....

20. Nanga malo otaya zinyalala amenewa atalikirana bwanji ndi

-nyumba

i. Mtunda umodzi [ ]

ii. Mitunda iwiri [ ]

iii. Kuposera mitunda iwiri [ ]

-khitchini

i. Mtunda umodzi [ ]

ii. Mitunda iwiri [ ]

iii. Kuposera mitunda iwiri [ ]

21.-malo otungilako madzi.

Mtunda umodzi [ ]

Mitunda iwiri [ ]

Kuposera mitunda iwiri [ ]

GAWO E: Za kasamalidwe ka chimbudzi

22. Mumagwiritsa tchito chani kuti mudzithandize?

i. Chimbudzi [ ]

ii. Tchire loyandikira [ ]

iii. Mtsinje woyandikira [ ]

iv. Zina (tchulani).....

23. Ndi mabanja angati amene amagwiritsa tchito malo odzithandiziawa?

i. Limodzi [ ]

ii. Awiri [ ]

iii. Opesera awiri [ ]

24. Mumasalira bwanji malo odzithandizilawa?

i. Kukolopa [ ]

ii. Kusesa [ ]

iii. Zina (tchulani).....

25. Mumakonza kangati malowo?

i. Tsiku lirilonse [ ]

ii. Kamodzi pa sabata [ ]

iii. Katatu pa sabata [ ]

iv. Zina (tchulani).....

26. Chimbudzi cha pakhomo panu chatalikilana bwanji ndi

-khitchini

i. Mtunda umodzi [ ]
ii. Mitunda iwiri [ ]
iii. Kuposera mitunda iwiri [ ]

-malo otungilako madzi

i. Mtunda umodzi [ ]
ii. Mitunda iwiri [ ]
iii. Kuposera mitunda iwiri [ ]

-nyumba yogonamo

i. Mtunda umodzi [ ]
ii. Mitunda iwiri [ ]
iii. Kuposera mitunda iwiri [ ]

27. Kodi pakati pa chimbudzi chanu ndi malo otungilako madzi chilikumtunda ndi chiti?

.....
....

28.Kodi mumachita chani chimbudzi chikadzadza?

i. Mumayamba kugwiritsa ntchito china [ ]
ii. Kupeza njira zogwiritsanso [ ]
iii. Zina (tchulani).....

29. Maganizo anu pankhani ya typhoid fever mwachidule?

ZIKOMO POTENGA NAWO MBALI MU KAFUKUFUKUYU.

APPENDIX 3: CONSENT FORM (English version)

I am Winnie Mwawa, a 4th year student at Kamuzu College of Nursing and currently pursuing a Bachelors of Science Degree in Nursing. As a requirement to obtain the degree I am required to conduct a research study. The title of my study is **FACTORS CONTRIBUTING TO PREVALENCE OF TYPHOID FEVER AT CHAKULEMBERA VILLAGE NENO DISTRICT.**

You are being asked to participate in the study because you were affected by typhoid fever. The findings of this study will indirectly benefit you but they may help to determine strategies of controlling the disease at Chakulembera village and other affected villages. If you participate, you be required to respond to questions of a questionnaire. Your participation is voluntary and there will be no penalties involved if you choose not to participate in the study.

To ensure confidentiality your name will not be used and the information given on a questionnaire will be kept under lock and key. There are no risks attached to the study and you are free to ask questions. If you agree to participate, you will append your signature as evidence of your acceptance.

I hereby give full consent to participate in the study and I have fully understood the above information.

Participant sign.....

Date.....

Investigator sign.....

date.....

Cell: 0995179703

APPENDIX 4: CHIVOMELEZO PA KUTENGA MBALI PA KAFUKUFUKU

Dzina langa ndine Winnie Mwawa ophunzira wa za unamwino pa sukulu ya ukachenjede ya Kamuzu ndipo ndili mu chaka chomaliza.Ngati mbal imodzii ya mapphunziro athu timayenera kuchita kafukufuku.Kafukufuku amene ndikupanga ndi wofufuza zinthu zimene zinayambitsa matenda a typhoid fever m'mudzi mwa Chakulembera ku Neno.

Cholinga cha kalatayi ndi ku pempha chilolezo chanu kuti mutengepo mbali mukafukufukuyu.Zotsatirazakafukufukuyu zidzathandiza a ku unduna wa zaumoyo kudzela mwa a District Health Officer pa chipatala acha Neno kupanga njira zina zothetsera vutoli mderali.Mukalola kutenga mbali mukuyenera kudzayakha mafunso amene ndidzakufunseni pa chipepala. Muli ndi ufulu wotenga mbali, kukana kapena kusiya mthawi iliyonse kafukufuku ali mkati ndipo izi zidzakhala ndi vuto lilonse ku gawo lomwe munakatenga mukafukufukuyu. izi zidzakhla za chinsinsi ndipo maina anu zadzacthulidwa kapena kulembedwa kulikonse, komanso zithu zoyikidwa mtepi zizasungidwa malo mokiya ndi loko.Poonjezera apo ndikadzamaliza kusonkhanitsa mayakho anu pamodzi ndidzaoctha kapena kukwirira matepi amenewa.Palibe chovuta chilichonse mukatenga mbalipa kafukufukuyu ndipo palibe cholowa manja chilichonse potenga mbali mukafukufukuyu.Muliomasuka kufunsa mafunso.

Ine ndawerenga za kafukufukuyu ndipo ndalola kutenga mbali.

Otenga mbali.....

Tsiku.....

Ochititsa kafukufuku.....

Phoni nambala ya wochititsa kafukufuku; 0995179703

APPENDIX 5: LETTER TO KAMUZU COLLEGE OF NURSING RESEARCH AND PUBLICATION COMMITTEE REQUESTING FOR APPROVAL

University of Malawi

Kamuzu College of Nursing

Private Bag 1,

LILONGWE.

Date

The Chairperson,

KCN Research and Publications Committee

Private Bag 1,

LILONGWE.

Dear Sir /Madam,

APPLICATION FOR APPROVAL TO CONDUCT A RESEARCH STUDY

I am Winnie Mwawa, a fourth year student pursuing a Bachelors of Science Degree in Nursing at Kamuzu College of Nursing. As a requirement to obtain the degree, I am required to conduct a research study. My topic of study is "**FACTORS CONTRIBUTING TO PREVALENCE OF TYPHOID FEVER AT CHAKULEMBERA VILLAGE NENO DISTRICT".**

The purpose of this letter is to seek approval to conduct a study at Mtemankhawa village Neno. The study will be conducted within the months of August and September 2010. I will be grateful if my application meets your favorable consideration.

Yours faithfully, ...

WINNIE MWAWA (0995179703)

APPENDIX 6: LETTER REQUESTING FOR PERMISSION TO CONDUCT A PILOT STUDY AT NENO DISTRICT HOSPITAL

University of Malawi

Kamuzu CollegNursing

Private Bag 1,

LILONGWE.

Date

The District health Officer

Neno District Hospital

P.O Box 50

Neno.

Through: The Chairperson,

KCN Research and Publications Committee

Private Bag 1,

LILONGWE.

Dear Sir /Madam,

APPLICATION FOR PERMSSION TO CONDUCT A PILOT STUDY AT NENO DISTRICT HOSPITAL

I am Winnie Mwawa, a fourth year student pursuing a Bachelors of Science Degree in Nursing at Kamuzu College of Nursing. As a requirement to obtain the degree, I am required to conduct a research study. My topic of study is on **FACTORS CONTRIBUTING TO PREVALENCE OF TYPHOID FEVER AT CHAKULEMBERA VILLAGE NENO DISTRICT.**

The purpose of this study is to seek permission to conduct a pilot study at the hospital. The pilot study will be conducted within the months of August and September 2010.I will be grateful if my application meets your favorable consideration.

Yours faithfully,

MWAWA (0995179703)

APPENDIX 7: REQUEST FOR PERMISSION TO CONDUCT STUDY AT CHAKULEMBERA VILLAGE NENO DISTRICT

University of Malawi

Kamuzu College of Nursing

Private Bag 1,

LILONGWE.

Date

The District officer,

Neno district

Neno.

Through: The Chairperson,

KCN Research and Publications Committee

Private Bag 1,

LILONGWE.

Dear Sir /Madam,

PERMSSION TO CONDUCT A STUDY AT CHAKULEMBERA VILLAGE NENO DISTRICT

Iam Winnie Mwawa, a fourth year student pursuing a Bachelors of Science Degree in Nursing at Kamuzu College of Nursing. As a requirement to obtain a degree am required to conduct a research study. My topic of study is on **FACTORS CONTRIBUTING TO PREVALENCE OF TYPHOID FEVER AT CHAKULEMBERA VILLAGE NENO DISTRICT.**

The purpose of this letter is to seek permission to conduct a study at Chakulembera village the study will be conducted within the months of August and September 2010.

I will be grateful if my application meets your favorable consideration.

Yours faithfully,

.....

.....

WINNIE MWAWA (0995179703)

APPENDIX 8: REQUEST FOR PERMISSION TO CONDUCT STUDY AT CHAKULEMBERA VILLAGE NENO DISTRICT

University of Malawi

Kamuzu College of Nursing

Private Bag 1,

LILONGWE.

Date

The Traditional Authority Nsambe,

Chakulembera Village

Neno.

Through: The Chairperson,

KCN Research and Publications Committee

Private Bag 1,

LILONGWE.

Dear Sir /Madam,

PERMSSION TO CONDUCT STUDY AT CHAKULEMBERA VILLAGE NENO DISTRICT

My name is Winnie Mwawa, a fourth year student pursuing a Bachelors of Science Degree in Nursing at Kamuzu College of Nursing. As a requirement to obtain Degree in Nursing, am required to conduct a research study. My topic of study is on **FACTORS CONTRIBUTING TO PREVALENCE OF TYPHOID FEVER AT CHAKULEMBERA VILLAGE NENO DISTRICT.**

The purpose of this study is to seek permission to conduct a study at Chakulembera village. Another copy of this letter has been sent to the chief of Chakulembera village and the district officer. The study will be conducted within the months of August and September 2010.

I will be grateful if my application meets your favorable consideration.

Yours faithfully,

.....

.....

WINNIE MWAWA (0995170703)

APPENDIX 9: REQUEST FOR PERMISSION TO CONDUCT STUDY AT CHAKULEMBERA VILLAGE NENO DISTRICT

University of Malawi

Kamuzu College of Nursing

Private Bag 1,

LILONGWE.

Date

The Chief,

Chakulembera Village

Neno.

Through: The Chairperson,

KCN Research and Publications Committee

Private Bag 1,

LILONGWE.

Dear Sir /Madam,

PERMSSION TO CONDUCT STUDY AT CHAKULEMBERA VILLAGE NENO DISTRICT

My name is Winnie Mwawa, a fourth year student pursuing a Bachelors of Science Degree in Nursing at Kamuzu College of Nursing. As a requirement to obtain Degree in Nursing, am required to conduct a research study. My topic of study is on **FACTORS CONTRIBUTING TO PREVALENCE OF TYPHOID FEVER AT CHAKULEMBERA VILLAGE NENO DISTRICT.**

The purpose of this study is to seek permission to conduct a study at Chakulembera village and another copy of this letter has been sent to Traditional Authority Nsambe. The study will be conducted within the months of August and September 2010.

I will be grateful if my application meets your favorable consideration.

Yours faithfully,

.....

.....

WINNIE MWAWA (0995179703)