



UNIVERSITY OF MALAWI  
KAMUZU COLLEGE OF NURSING

TOPIC: FACTORS CONTRIBUTING TO HIGH INCIDENCE OF  
PNEUMONIA IN UNDERFIVE CHILDREN IN KASUNGU DISTRICT

THIS IS A RESEARCH DESSERTATION SUBMITTED TO THE  
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## DECLARATION

I declare that this work is as a result of my own effort and exertion and that it has never been presented for any degree.

Candidate: **Grey Timothy Nkhanga**

Signature  Date 30/11/10

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## ABSTRACT

This research is an exploratory study on the factors contributing to high incidence of pneumonia in underfive children in Kasungu district. The topic was reach based on the outcome of the 2004 Malawi Demographic and Health Survey (MDHS). The survey revealed that pneumonia is a leading cause of death in Malawi at about 30% (MDHS, 2004). This numeral corresponds to the one revealed by World Health Organisation (WHO), on the international scene. This means that Millennium Development Goal (MDG) 4, which aims at reducing child mortality rate by 2/3 by the year 2015, cannot be achieved. This is also inline with Millennium Development Goal (MDG) 6, which aims at combating HIV and AIDS and other diseases like Malaria, tuberculosis, and pneumonia by the same year, 2015.

The researcher was therefore interested to find out why pneumonia incidence is still high in some parts of the country like Kasungu and Zomba districts, which is at 25% amidst the nation's effort to achieve MDG4 and MDG6 as stated above. A qualitative study method was used in this cram. A pilot study was done at Dowa District Hospital. The main study was done at Kasungu District Hospital. A sample of 10 women with underfive children was interviewed during the data collection period. The data was analysed manually. The findings will be disseminated to Kamuzu College of Nursing library, to the Research and Publications Committee, and to Kasungu District Health Office.

The findings of the study reveal that the high incidence of pneumonia is attributed to lack of knowledge on predisposing factors to pneumonia, immunosupression, poor feeding habits, cultural believes, and poor management and poor referral system of cases from primary level to secondary level of referral system.

## LIST OF ABBREVIATIONS

AIDS—Acquired Immunodeficiency Syndrome

DHO—District Health Office

HBM—Health Belief Model

HIV—Human Immunodeficiency Virus

KCN--Kamuzu College of Nursing

MDHS—Malawi Demographic and Health Survey

MDG—Millennium Development Goal

RPC—Research and Publications Committee

UN---- United Nations

WHO—World Health Organisation



## **CHAPTER 1**

### **1.0 INTRODUCTION**

Pneumonia causes 4 million child deaths each year (Bulletin of the World Health Organization 2008). Research conducted by Garenne et al in 1990 revealed that between one-fifth and one-third of deaths in preschool children was due to or associated with acute respiratory infection. In addition to that, 1993 World Development Report showed that acute respiratory infection caused 30% of all childhood deaths.

The increasing focus on the reduction of child mortality arising from the Millennium Declaration and from the Millennium Development Goal (MDG) 4 of "reducing by two-thirds, between 1990 and 2015, the under-five mortality rate", has generated renewed interest in the establishment of the cause the number of deaths in children aged less than 5 years. The results have attributed to pneumonia as a leading cause deaths in children less than 5 years (World Development Report, 1993).

### **1.1 BACKGROUND**

Pneumonia is the single leading cause of death in young children in Malawi. The 2004 Malawi Demographic and Health Survey (MDHS) showed that 19 percent of children under five years of age were ill with pneumonia at some time in the two weeks preceding the survey. The prevalence of respiratory infection varies by age of the child, with highest prevalence occurring at 6-12 months (MDHS, 2004).

Pneumonia is also slightly higher in the Central Region of Malawi with 20% and then the Southern Region with 19% than the Northern Region at 15%. By district, Blantyre has a low prevalence at 14% with highest in Kasungu and Zomba at 25 % of all childhood illnesses (MDHS, 2004).

Among children with symptoms of pneumonia, 20% were taken to a health facility. Young children age less than 6 months are more likely to be taken to a health facility, as are urban children as compared to their counterparts in rural areas (MDHS, 2004).

The researcher has therefore been prompted to explore the reasons why Kasungu has a high incidence of pneumonia as compared to other districts in the country.

- **To Nursing practice**

The findings will also establish psychological, sociological, cultural and spiritual perception of parents when their children present with signs and symptoms of pneumonia. This will help nurses to be sensitive in assessment, planning and implementation of nursing care.

## **1.4. OBJECTIVES OF THE STUDY**

### **1.4.1. BROAD OBJECTIVE**

By the end of the study, the researcher wants to establish factors that are contributing to high incidence of pneumonia in Kasungu district.

### **1.4.2. SPECIFIC OBJECTIVES**

1. Assess the level of knowledge in women to underfive children on possible predisposing factors of pneumonia:
  - Indoor air pollution
  - Poor feeding
  - Smoking
  - Lack of exclusive breastfeeding in children less than 6 months
  - Overcrowdings
2. Find out the level of knowledge in mothers to underfive children on the signs and symptoms pneumonia.
3. Find out the mothers health seeking behaviour when a child develops signs and symptoms of pneumonia.
4. Find out the possible barriers in seeking medical interventions when a child presents with signs and symptoms of pneumonia.
  - Social-cultural barriers.
  - Psychological barriers.
  - Spiritual barriers.

year respectively (Bulletin of the World Health Organization, 2008). A single-cause model derived from 40 studies published between 1961 and 2000 and based on the relationship between the proportional mortality due to respiratory infections and the overall mortality in children aged less than 5 years, estimated the number of deaths attributable to childhood pneumonia to be 1.9 million in 2000.

A multiple cause model that analysed 38 more recent studies predicted a similar number of deaths attributable to pneumonia (i.e. approximately 1.8 million under-5 pneumonia deaths in these two regions in the year 2000). The studies were done in sub-Saharan Africa and South Asia, especially those countries with mortality rates of at least 26 per 1000 live births in underfive children. However, at least another 300 000 deaths caused by pneumonia are likely to occur worldwide during the neonatal period (Lawn J, 2000). Therefore, two lines of evidence both indicate that there are more than 2 million deaths due to pneumonia each year in children aged less than 5 years.

The African Region has in general, the highest burden of global child mortality. Although it comprises about 20% of the world's population of children aged less than 5 years, it has about 45% of global underfive deaths and 50% of worldwide deaths from pneumonia in this age group. By contrast, less than 2% of these deaths take place in the European Region and less than 3% in the Region of the Americas. More than 90% of all deaths due to pneumonia in children aged less than 5 years take place in 40 countries. Even more striking is the fact that, according to the official estimates from WHO for the year 2000, two-thirds of all these deaths are concentrated in just 10 countries. These 10 countries are: India (408 000 deaths), Nigeria (204 000), the Democratic Republic of the Congo (126 000), Ethiopia (112 000), Pakistan (91000), Afghanistan (87 000), China (74 000), Bangladesh (50 000), Angola (47 000) and Niger at 46, 000 (Bulletin of the World Health Organization, 2008).

Pneumonia is the leading cause of death in young children in Malawi. The 2004 Malawi Demographic and Health Survey (MDHS), showed that 19 percent of children underfive years of age were ill with pneumonia. Pneumonia is also slightly higher in the central region with 20% and then the southern region with 19 % than the northern region at 15%. By district, Blantyre has a low prevalence at 14% with highest in Kasungu and Zomba at 25% (MDHS, 2004).

Among children with symptoms of pneumonia, 20% were taken to a health facility. Young children age less than 6 months are more likely to be taken to a health, as are urban children as compared to their counterparts in rural areas (MDHS, 2004).

## CHAPTER 3

### 3.0 THEORETICAL FRAMEWORK

The conceptual framework used in this study is the Health Belief Model (Fain, 2008). The Health Belief Model (HBM) was developed by Rosen stock in 1955 and was modified in 1974 with the intention to include the following concepts; individual perception, modifying factors and variables likely to affect initiating action (Clemen-stone S, 1995). The advantage of utilizing HBM is that the researcher establishes the findings based on the clients health belief.

The HBM is based on motivation theory and it suggests that people are more likely to take preventive action if they feel concerned about their health and are motivated to protect it. It also says that an individual will comply with treatment if he perceives that the consequences are serious and dangerous if left untreated (Figure 1).

## **Modifying Factors**

Modifying factors include the following; age, sex, race, ethnicity, personality, social class, peers, reference group pressure, knowledge about the disease and prior contact before with the disease (Figure 1). The modifying factors have an impact on individual's perception, for example age; an infant does not perceive the importance of a health life. If an infant gets sick, the mother has to take it to the hospital.

While a parent with a sick child may perceive peer approval as more important than family approval to take the recommended actions, influence from other reference groups may affect their perception to take a health action or not.

## **Individual's perceptions**

Individual's perceptions include perceived susceptibility to the disease or perceived seriousness of disease. An individual will perceive that they are susceptible to a certain disease if their family has a history of that disease or if his friends had the same condition.

They will perceive the seriousness of the disease if they have the knowledge about that disease or if they have ever seen someone close to him or a friend who died of that condition. This drives them to take the recommended preventive action.

## **The Likelihood of Taking an Initiating Action**

An individual will outweigh the benefits minus the barriers to take the recommended actions. If the benefits outweigh the barriers to take the recommended actions the likelihood of taking the recommended actions is high.

## **Cues to action**

Cues to action include the feelings of fatigue, uncomfortable symptoms or thoughts about someone who is also suffering from the same condition (Figure 1). The internal cues are likely to influence someone to perceive a threat and the perceived threat will motivate her to take recommended health action.

## **CHAPTER FOUR**

### **4.0. RESEARCH METHODOLOGY**

#### **4.1. INTRODUCTION**

This chapter discusses the research design, sample size, sample setting, data collection and the instrument that was used, data analysis, ethical considerations and limitations of the study.

#### **4.2 RESEARCH DESIGN**

The study was conducted using qualitative research method (Burns, 2001). The purpose was to establish the enormity of the problem among the subjects.

#### **4.3 SAMPLING AND SETTING**

The study sample comprised of 10 women with underfive children at Kasungu District Hospital. A sample of 10 participants was enough for a qualitative study. The place was chosen because Kasungu is one of the reported districts with high incidence of pneumonia. It was therefore not difficult to obtain a required study group at Kasungu District Hospital. In this study, a convenience sampling approach was used as there would be no better alternative to it.

#### **4.4 DATA COLLECTION AND INSTRUMENT**

Data was collected using an interview guide (Appendix A). The researcher interviewed the subjects. The interview guide was translated in Chichewa (Appendix B) for better communication with the subjects. The interview guide comprised of a section on demographic data, and other sections with both open ended and closed ended questions which answered the objectives of the study (Appendices A and B).

#### **4.5. PRE TESTING**

In order to find out the validity and feasibility of the data collection tool, pretesting of the tool was conducted at Dowa District Hospital. Two women with underfive children suffering from pneumonia were interviewed during the pilot study as this helped the researcher to correct tentative errors in the interview guide. This also acted as a practising session for the researcher before the main study.

#### **4.6. PLAN FOR DATA ANALYSIS**

The researcher used manual method to analyse the data and the findings are presented in tables, figures, percentages, and bar graphs.

#### **4.7. DISSEMINATION OF THE STUDY RESULTS**

Findings from the study have been communicated to Kamuzu College of Nursing (KCN) library and, Kasungu District Health Office (KDHO) for their appreciation and action respectively.

#### **4.8. ETHICAL CONSIDERATIONS**

The rights of the participants at Kasungu DHO as well as those of Dowa DHO, where the pilot study was conducted were considered for the sake of their protection and legal purposes. A letter accompanied by a research proposal was sent to the research and publication committee (Appendix C) in order to obtain an approval (Appendix D). Other letters asking for permission to conduct a pilot study at Dowa DHO (appendix E) and later a main study at Kasungu DHO (Appendix F) were written to seek an approval. It was only after approval was given by the ethical committee and permission granted by the hospital authorities (Appendices D and F), that data collection exercise ensued.

An informed consent was sought from the voluntary participants (Appendix G) who were asked for their participation after a detailed explanation, told what is required of them, and the benefits of the study. They were also told about the freedom to choose to participate or withdraw at will without penalty. The letter was translated in Chichewa for better communication with participants (Appendix H). They were also assured of confidentiality and anonymity by not publishing their names on the consent forms nor on interview guides (Appendices A, B, G and H). In order to ensure that the subjects remain anonymous, the report on findings was written without mentioning names of subjects.

#### **4.9. LIMITATIONS OF THE STUDY**

Despite having other areas with increased incidence of pneumonia like Zomba District (MDHS 2004), this study was conducted in Kasungu District only. This was due to time limitation for the researcher since the research has been embarked for academic achievement. It is therefore important to embark similar research in Zomba District and other places in Malawi where Pneumonia incidence is relatively high in order to have a true reflection of the underlying factors to high incidences of pneumonia for appropriate interventions by concerned stakeholders.

#### **4.10 TIME SCHEDULE**

Selection and the formulation of the research topic were done within two months, thus January and February, 2010. The month of March, 2010 was for formulation of research objectives and planning for method of data collection. The next three months explicitly April, May and June, 2010 were for literature review, proposal development and proposal submission.

The researcher planned to do a pilot study, to collect, analyse and interpret the data in the next three months of July, August and September, 2010. At last, a dissertation was to be written and findings be disseminated in the months of October, November, and December, 2010 (Appendix I).

#### **4.11 BUDGET**

This research used money approximately amounting to **MK54, 100**(Appendix J). This was so because there were a lot of activities needed during the study.

#### **4.12 JUSTIFICATION OF THE BUDGET**

##### **4.12.1 STATIONARY**

Preparation for the research proposal and dissertation needed enough stationery. Enough paper rims were necessary for gathering of information from different literature, for developing a proposal, questionnaires and for writing a dissertation. This had cost the researcher about MK 9,100(Appendix J).

##### **4.12.2 SECRETARIAL SERVICES**

Some of the money was used for secretarial expenses as money was required for printing, binding and photocopying of the proposal and final dissertation for them to look neat. This estimate amounted to MK11, 500 (Appendix J).

##### **4.12.3 TRANSPORT**

The researcher needed money to travel to Kasungu District Hospital and Dowa DHO for pretesting(pilot study) and data collection respectively, hence an allocation of MK4,500 (Appendix J).

##### **4.12.4 CELLPHONE EXPENSES**

Part of the money was spent on cell/telephone calls for communicating with the research supervisor and all those involved in the study. This is projected at K2, 000 (Appendix J).



#### **4.12.5 LUNCH AND ACCOMODATION**

Another great portion of the money was spent on lunch and accommodation for the researcher during the data collection period. This portion went up approximately to MK17, 500 (Appendix J).

#### **4.12.6 CONTINGENCY**

Some money was also used for incidentals which cannot be planned, for example frequent hikes in prices of materials and costs of services. This was set at MK5, 000 (Appendix J).

## **CHAPTER FIVE**

### **5.0 PRESENTATION OF FINDINGS**

This chapter presents the findings of the study. These findings will be presented under the following headings: demographic characteristics, knowledge of mothers about pneumonia, health seeking patterns of mothers and finally, barriers to seeking medical care.

An expedient sample of 10 mothers with underfive children was enrolled in the study that was conducted at Kasungu District Hospital.

#### **SECTION A**

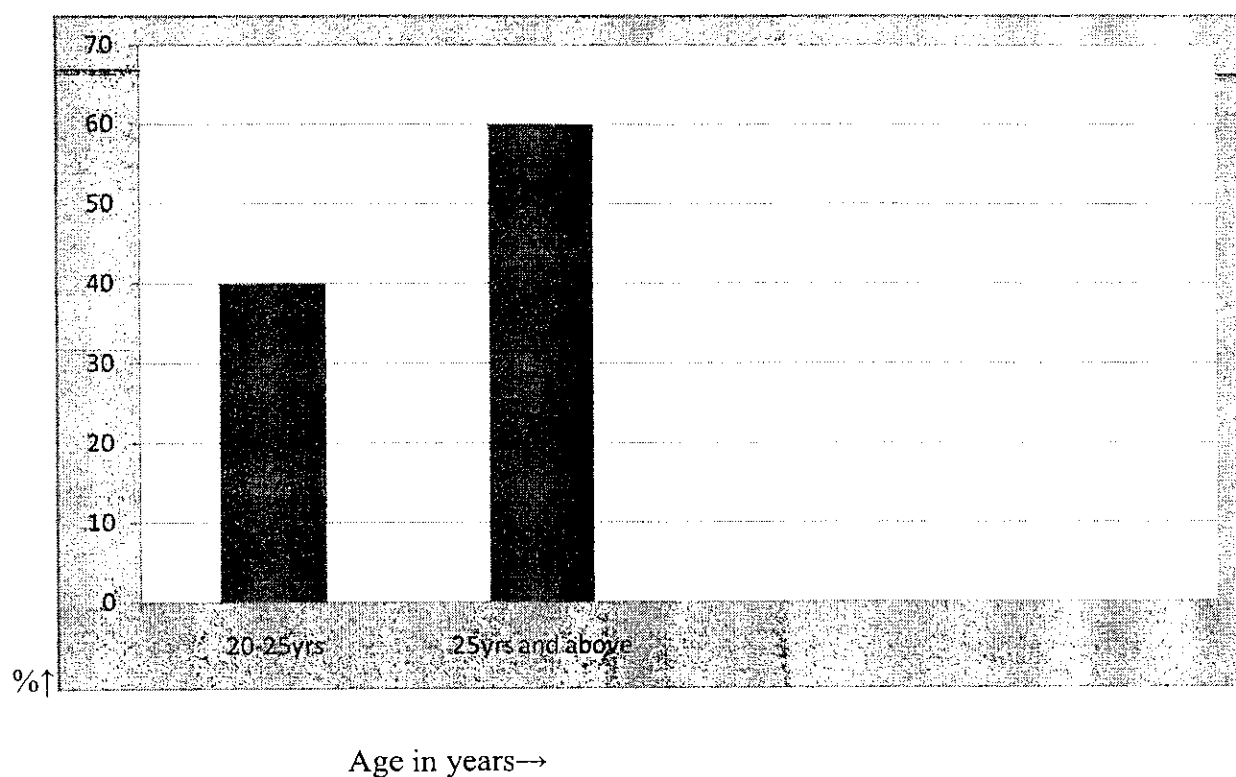
##### **5.1.0 DEMOGRAPHIC CHARACTERISTICS OF THE PARTICIPANTS**

This section covers the demographic characteristics of the participants. The demographic characteristics that will be presented in this section include gender, age, marital status, occupation, place of residence and educational level of the participants.

##### **5.1.2. AGE OF MOTHERS**

It's been revealed that 40% (n= 4) of the mothers were within the age range of 20-25 years of age. The remaining 60 % ( n=6) were within the age range of 25 years and above (Figure 2).

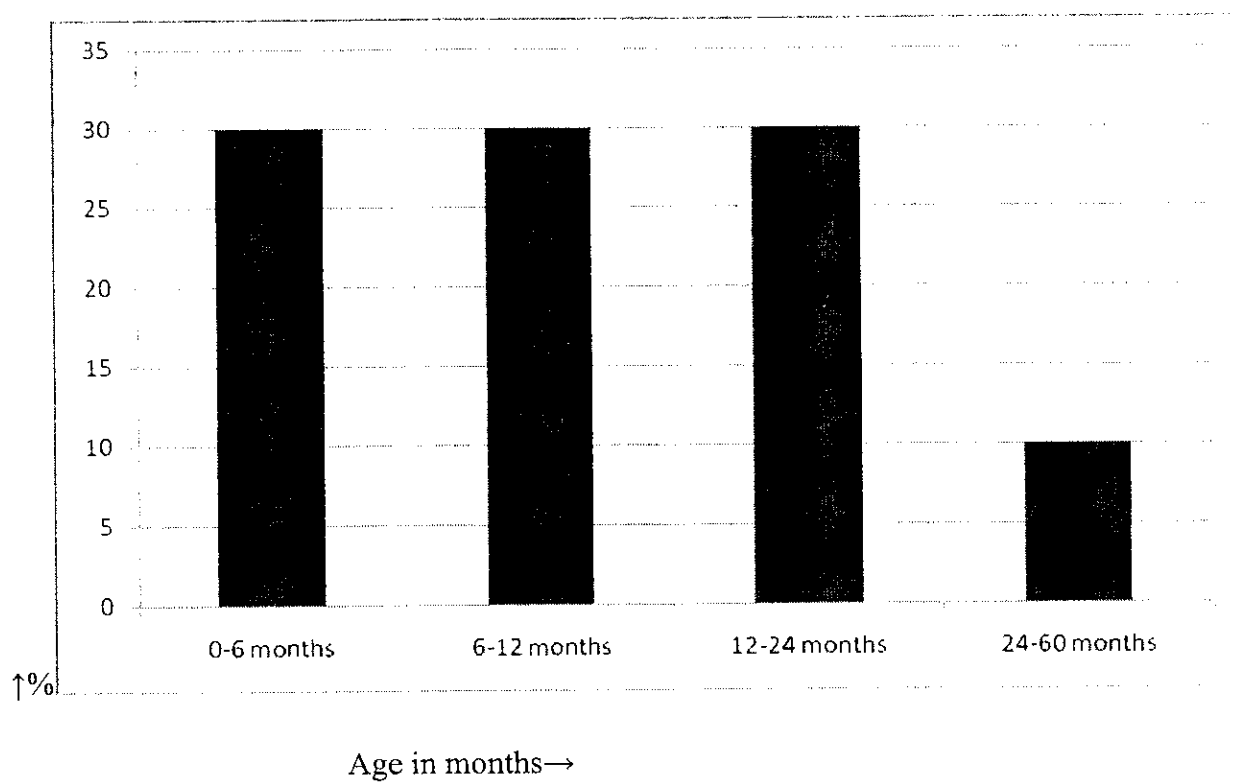
**Figure 2: Age of mothers**



### **5.1.3. AGE OF CHILDREN**

The findings indicated that 30% (n= 3) of the children were within the age range of 0-6 months of age, 30 % ( n=3) were within the age range of 6-12 months and another 30 % ( n=3) were within the age range of 12-24 months. Only 10% were within the age range of 24- 60 months (Figure 3).

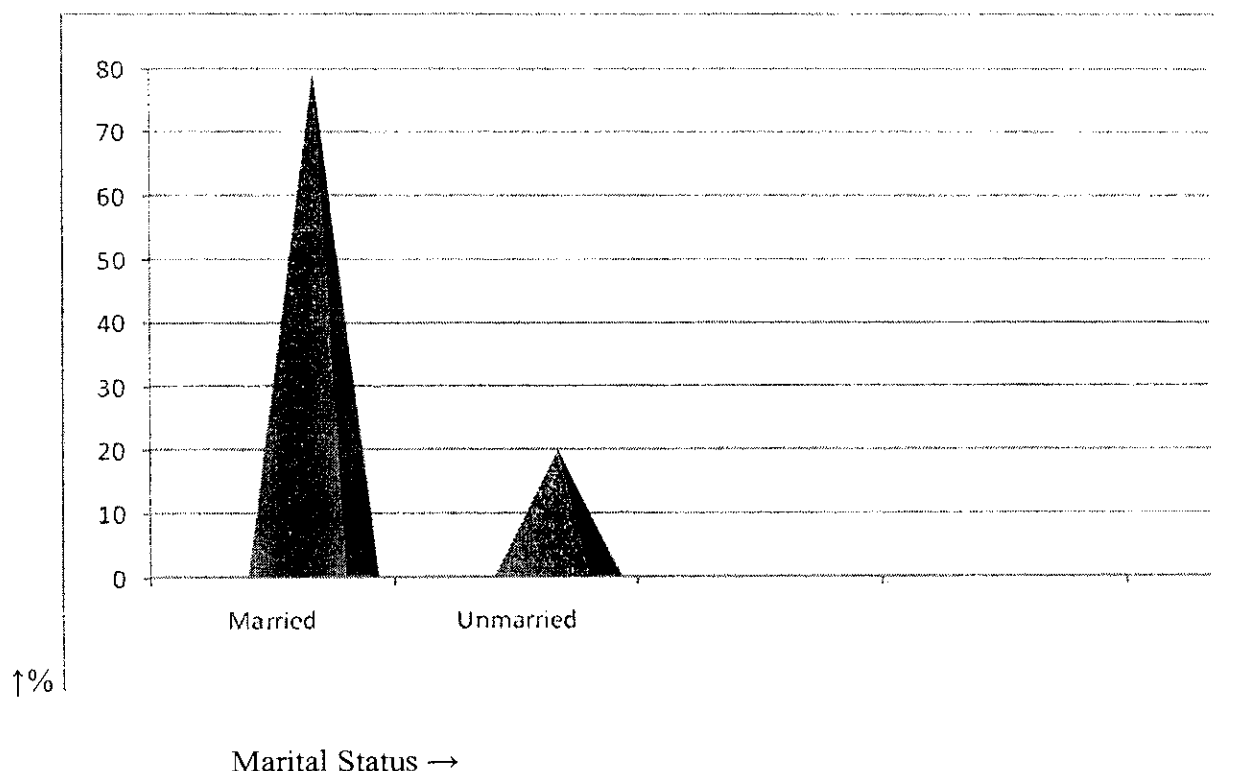
Figure 3: Age of children



### 5.1.3 MARITAL STATUS OF PARTICIPANTS

The results of the study showed that 80% (n=8) were married, 20% (n=2) were divorced (Figure 4).

**Figure 4: Marital status of participants**



### 5.1.4 PARTICIPANTS RESIDENCE

The findings showed that 10% (n=1) were from the following Traditional Authorities; chiolamatambe, Lukwa, Njombwa each. 20% (n=2) were from the following Traditional Authorities; Mwase, Kaomba each; 30% (n=3) were from Traditional Authority Kauma (Table 1).

**Table 1 participant's residence**

TRADITIONAL AUTHORITY	NUMBER OF PARTICIPANTS	PERCENTAGE (%)
Chiolamatambe	1	10
Lukwa	1	10
Njombwa	1	10

Mwase	2	20
Kaomba	2	20
Kauma	3	30
<b>TOTAL</b>	<b>10</b>	<b>100</b>

### 5.1.6 OCCUPATION OF PARTICIPANTS

Upon asking the participants on what they depend on for their daily living, it was revealed that 40%(n=4) of the participants families depend on farming only; 10%(n=1) depend on both farming and business; 10%(n=1) of families depend on business only, 10% (n=1) of the families depend on employment only; 10% (n=1) of the families depend on farming and self employment; 10%(n=1) of the families depend on both employment and business while the last 10% revealed that they depend on both employment and farming. The responses of the participants were as follows:

- *'We depend on farming'* participants number 2, 4, 9, and 10.
- *'We do farming. The father on the house does kabaza (bicycle hires)'* Participant number 08.
- *'We do farming. The father on the house is a watchman'* Participant number 01.
- *'We do farming and I also brew beer'* Participant number 03.
- *'I am a tailor and my husband is a Health Surveillance Assistant (HSA)'* Participant number 07.
- *'I am a house wife. My husband is a minibus assistant'* Participant number 05.
- *'I am a business woman. I am divorced'* Participant number 06.

## SECTION B 5.2.

### 5.2.0 THE LEVEL OF KNOWLEDGE ON PNEUMONIA

This section presents the findings from the participants' knowledge on the cause of pneumonia, its signs and symptoms and its predisposing factors.

#### 5.2.1 KNOWLEDGE ON THE CAUSE OF PNEUMONIA

Participants were asked to tell the cause of pneumonia. 60 %( n=6) said that pneumonia is caused by cold air; 10% (n=) said that they know pneumonia as cough; 10% said that they know pneumonia as a disease that causes fevers; 20 %( n=2) said that they don't know what causes pneumonia. The participants' responses were as follows:

The researcher also wanted to establish the nature of diets that were taken by the child within the last 24 hours. The participants were asked on the nature of foods that they prepared for the child within the last 48 hours. Some of the participants' responses were as follows:

- *'I prepared porridge in the morning, Nsima with green vegetables in the afternoon today. As of yesterday, I prepared Nsima with Nsomba in the evening; I prepared Nsima vegetables in the afternoon and Phala in morning.'* Participant 09.
- *'I did not prepare anything in the morning, Nsima with fish in the afternoon today and Nsima with fish in the evening on Friday, 1st October 2010.'* Participant 02.
- *'As of yesterday, I prepared tea with bread in the morning, Nsima with fish in the afternoon and Nsima with meat in the evening.'* Participant 06.
- *'I prepared porridge in the morning, Nsima with green vegetables in the afternoon today. As of yesterday, I prepared Nsima with Nsomba in the evening; I prepared Nsima with vegetables in the afternoon and Phala in morning.'* Participant 09.

The researcher also wanted to find out the mothers knowledge on the relationship between poor diet and the suffering of diseases like pneumonia. 50% of the participants' indicated that they knew the relationship between the two. Some of the participants' responses were as below;

- *'They can suffer from diseases due to lack of some foods in the body'* Participant 06.

However, another 50% of the participants showed that they don't know the relationship between the two. Some of the participants' responses were as below;

- *'There is no relationship between poor diet and pneumonia. However, the child can have a stunted growth.'* Participant 08.

When asked on the type of the house they dwell in, it was revealed that 80 % (n=8) of the families live in small and grass thatched houses as quoted by this participant.

- *'I am married with eight children. I live in a house of 2 rooms. I sleep with my two other children. The rest go to sleep with their granny.'* Participant 09.

The remaining 20% said they live in a house roofed with iron sheets and cemented. The researcher also wanted to find out the number of episodes the child has suffered from pneumonia this year. 60% (n=6) indicated that it was the first time for the child to suffer from pneumonia. The remaining 40%(n=4) indicated that it was second to fourth episode this year alone as quoted from one participant below;

- *'I came to the hospital on 3<sup>rd</sup> day. However, I do come regularly when my child has fallen sick.'* Participant 02.

The researcher wanted to find out what influenced the mothers to come for medical intervention. Most of participants said the child had suffered much. 100% of the participant said their children were presenting with severe signs and symptoms of infections. The participants said the children were presenting with the following manifestations: general body weakness, shortness of breath, cough, nasal flaring, chest in drawings and fevers.

On the same predisposing factors to pneumonia, participants were asked about their childrens' HIV and AIDS cell status. 30 %( n=3) of the participants said they know their HIV and AIDS status to be positive. Out of them, 20% (n=2) of them said they are breastfeeding. The remaining one percent (n=1) said is bottle feeding the baby to avoid contracting the infection from the mother.

#### **5. 4 BARRIERS TO HEALTH SEEKING BEHAVIOUR**

The researcher also wanted to find out the challenges these women have in health seeking behaviour. The participants were asked the distance they walk to a health facility when a child is sick. 30% of the participants said were coming from within Kasungu district hospital. The rest, 70 %( n=7) said they were coming from a far distance from Kasungu District Hospital. They said there nearest health facilities are health centers which are: Ngongodi, Mpapa, Kasalika, Mzowera, and Chiwala.

When asked how they travel to the nearest health facility or to Kasungu district hospital, 90% said they came on foot. 10 %( n=1) said she came on hired bicycle while 20% said they come by either on foot or by a hired bicycle.

The researcher wanted to find out the importance of male participation in the seeking of care. The participants indicated that they appreciate the involvement of men in seeking medical interventions .70% of the participants said they were escorted by their partners to a health facility. Most of them said the partner participation makes it easy for them to get transport expenses and courage. However, 30% of the participants indicated that they do not get support from their partners. When asked what effect this has on the care of children, this 30% indicated that they meet a lot of challenges in the provision of care for they lack monetary support and encouragement.



## **CHAPTER 6**

### **6.0 DISCUSSION OF FINDINGS**

#### **6.1 DEMOGRAPHIC DATA**

The findings of the study revealed that 90% of the children that suffer from pneumonia in underfive fall within the age group of 2 years and below. The remaining 10% children fall within the age range of above two years (Table 2). This is due to the developing immunity in this age group (Thompson J.M, 2002). This can also be attributed to unhygienic feeding practices and lack of exclusive breastfeeding practices as 30% of the participants revealed that they start feeding their babies at the age of below 6 months. Also, 10 % (n=1) of the participants revealed that they feed their babies using a bottle following prevention of mother to child transmission program (PMTCT). These bottles can harbour disease causing microorganisms in their nipples (Bulletin of the World Health Organization, 2008).

#### **6.2 OCCUPATION OF THE PARTICIPANTS**

According to the findings of the study, it's been revealed that 40% of the families depend on farming. This farming can be attributed as a having significance in development of pneumonia in that it can not sustain the family as a source of income throughout the year on its own if done on a small scale. It therefore implies that the family may be deprived of good balanced diets in times of financial crisis. The body cannot therefore fight against invading pathogens without strong immune system. This in collaboration with children's developing immunity predisposes these children to pneumonia.

The remaining 60%(n=6) said they depend on either farming, small scale business and lower class employment such as watchman, minibus conductor, hiring of bicycles(Kabaza). This also shows that the families are of low economic status to be sustained at an ideal standard throughout the year thus creating a lot of exposures for their children to fall sick. These include poor houses and poor nutrition only to mention a few. Poor house status would lead into overcrowding and dust if the floor is not cemented and the roof is of grass. This dust causes the ciliary muscles in the respiratory tract to fail to filter the air entering the respiratory tract thus making it very prone to infections. (Bulletin of the World Health Organization, 2008).

On education level it was revealed that 70 % (n=7) of the participants did not go to school or stopped school in primary junior level. This implies that pneumonia is common in those people with low literacy level (MDHS, 2004).

On the nature of the houses that these families live, it was revealed that 80 % (n=8) live in grass thatched and muddy houses. This means that children from these families are exposed to dusty environments. The swallowed dust will render ciliary muscles non functional thus it fails to filter the microorganism from the air that cause a lot of infections (Bulletin of the World Health Organization, 2008).

The findings also revealed that 40 % (n=4) of the children suffered 2- 4 episodes of pneumonia. This can be attributed to a number of reasons. One of the reasons can be mismanagement of pneumonia cases. Out of 8 cases which came from the health centers, none of them was referred. All of the pneumonia cases in health centers of Kasungu were treated as OPD condition regardless of the number of turn up to the hospital. This signifies lack of well knowledgeable practitioners in the health centers of Kasungu district.

On participants perception towards traditional healers, 30 % (n=3) were dependent on traditional healers in treatment of their children when suffering from pneumonia. This is not a welcome development for pneumonia can not be treated by tradition healers.

### **6.3. MOTIVATING FACTORS TO INITIATING HEALTHSEEKING BEHAVIOUR**

when asked how long did these parents take to start a health seeking behavior, 60% said they came to the hospital the 2<sup>nd</sup> to 4<sup>th</sup> day. This is bad because pneumonia is a serious respiratory tract infection which has to be attended to by medical personnel as soon as possible (Bulletin of the World Health Organization, 2008). The parents waited the symptoms of the infections to worsen for them to take their children to the hospital. In this course the child would die in the long run thus increasing the death rate of pneumonia.

### **6.4 BARRIERS TO HEALTH SEEKING BEHAVIOUR**

It was established that 70 % (n=7) of the participants came to Kasungu DHO by their own transport means. This is a negative contribution for some parents may not afford to take their children to the Kasungu DHO if not provided with good transportation means. The distance may be a challenge to others.

It was also established that 30% of the participants lacked partner support in the management of pneumonia conditions. This they said bring a negative impact for they lack transport and courage.

## 6.4 CONCLUSION AND RECOMMENDATIONS

This section presents the conclusions, and recommendations depending on the findings of the study.

### CONCLUSION

This research has revealed some hidden facts about pneumonia. It's been revealed that pneumonia is common in lower class group of people in society.

It's also been revealed that Kasungu DHO does not have a good referral system as far as referring of clients to the District Hospital. There is a need to improve on this one. Partner notification is essential also to boost hospital attendance by the affected families.

This research has revealed some hidden facts about pneumonia. It's been revealed that pneumonia is common in lower class group of people in society.

It's also been revealed that Kasungu DHO does not have a good referral system as far as referring of client to the District Hospital. There is a need to improve on this one. Partner participation is essential also to boost hospital attendance by the affected families.

### RECOMMENDATIONS

The following recommendations were isolated;

- Health education on pneumonia and its causes should be done to enrich people with knowledge on the disease and its preventive measures.
- Health talk on exclusive breastfeeding should also be emphasized in parents with children below the age of 6 months. Parents who are using bottle feeding should be taught the best practices in bottle feeding to prevent infection transmission from the bottles. The use of cups should be recommended instead of the bottles for cups are easy to clean.
- The government of Malawi should consider adult literacy classes so that many people in Malawi assist them able to conceptualise things in life when health education are being given. This will also assist them in creation of job capacity as individuals thus giving them monetary support to sustain their lives throughout the year.
- Kasungu DHO should also make sure that they have well trained personnel in all health centers of the district. This will help in proper management and referral of conditions that is including

pneumonia cases. Kasungu DHO should also improve its referral system so that parents from far areas should have access to free transport when coming with their children to the hospital.

- Parents should also be taught on disadvantage of taking the sick child to a traditional healer instead of the hospital. Traditional healers do not know the pathophysiological bases of the disease condition.
- There is a need for full partner participation in the health seeking behaviour for it's been revealed that women do get encouragement and support.

## **6.7 ISSUES FOR FUTURE RESEARCH**

Since the study was done on a small scale there is need for it to be done at a larger scale for generalisability of the findings.

There is also a need to do a research on the perception of male participation in health care seeking behaviour when a child is sick.

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## APPENDICES

### APPENDIX A: AN INTERVIEW GUIDE

CODE NO.-----

#### SECTION A: SOCIAL AND DEMOGRAPHIC DATA

1. Residence .....

2. Age in years

a. 13 – 15 ( )

b. 15 - 20 ( )

c. 20---24 ( )

3. Marital status

d. Married ( )

e. Single ( )

f. Divorced ( )

g. Widowed ( )

4. What is your level of education?

h. Std 1 -5 ( )

i. Std 5- 8 ( )

j. Form 1- 2 ( )

k. Form 2 – 4 ( )

l. Tertiary (college ) ( )

5. What is your occupation

a. Farmer ( )

- b. Businessman (     )
- c. Formal employment (     )
- d. Other (specify) (     )

## SECTION B: KNOWLEDGE ON PNEUMONIA AND ITS PREDISPOSING FACTORS

6. (a) What do know about pneumonia?

.....

.....

.....

.....

(b) How can you know that a child has pneumonia?

.....

.....

.....

7 (a). At what age do your children stop breastfeeding?.....

Give a reason your answer.....

.....

.....

(b) Can lack of exclusive breastfeeding contribute to suffering of pneumonia in a child?

Explain.....

.....

.....

8. (a) What crops do you grow?



.....  
.....

(d) Can a poor diet contribute to suffering from pneumonia in a child?

Explain

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

11. (a) How many rooms does your house got?

.....

(b)How many people do share a one room with the client? Explain the reason for your answer.....

.....  
.....

(c) How many of them presented with signs and symptoms of pneumonia?

.....  
.....

12. (a) Is there anyone who smokes in your house?

.....  
.....

(b) If yes, how often do they smoke per day?

.....

(c) How often do they smoke while in the house?

.....

13. What do you think are other factors that can predispose a child to pneumonia?

.....  
.....

**SECTION E: CHALLENGES /BARRIERS IN SEEKING MEDICAL CARE**

19(a). How far is the nearest clinic from your home?

.....

(b). How do you travel when going to the hospital?

Give a reason.....

.....

.....

(c). How much time do you take before reaching a health facility?

.....

(d).Does the distance you walk to the nearest health facility hinder you in seeking medical care?

.....

Explain.....

.....

.....

20(a). If you are married, do fathers participate in seeking medical care of children?

.....

(b) If yes, do you think is this important?

Explain.....

.....

.....

.....

## APPENDIX B- INTERVIEW GUIDE (CHICHEWA)

NAMBALA YACHINSINSI: \_\_\_\_\_

### GAWO A: ZAMBIRI YANU

1. Mumakhala kuti .....

2. Muli ndi zaka zingati

m. 13 – 15 ( )

n. 15 - 20 ( )

o. 20---24 ( )

p. Kuposera 24, tchulani.....

3. Zabanja. Ndinu:

q. okwatiwa ( )

r. osakwatira ( )

s. osiidwa ( )

t. ofedwa ( )

4. Sukulu munafika nayo kuti?

a. Std 1 -5 ( )

b. Std 5- 8 ( )

c. Folomu 1- 2 ( )

d. Folomu 2 – 4 ( )

e. kukoleji ( )

5. Mumagwira nthito yanji?

9. (a) Kodi pabanja panu mumalima mbewu zanzi?

Tchulani zonse.....

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

(b) Kodi mbewuzi mukakolola mumazisunga kuti?

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

(c) Pali mbewu zomwe mumasunga mnyumba momwe mwanayu amagona?

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

10 (a) Nanga mumaweta ziweto zanzi?

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

(b) Pa ziwetozi, Pali zomwe zimagona mnyumba momwe mumagona mwanayu?

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

11(a). Ndi chakudwa chanji chomwe mwanayu anadya komaliza?

Tchulani.....

(b) Mwana anadya chiani mu maola makumi awiri mphambu zinayi zapitazi?

Tchulani chakudya chilichonse

.....  
.....

.....  
.....  
15.Kodi chingachitike ndi chiani mutachedwa kupita ndi mwana amene wadwala chibayo kuchipatala?Fotokozani.....  
.....  
.....

16(a). Kodi mmudzi muno muli ndi asing'anga?  
.....

(b) Ngati alipo, amakuthandizani bwanji?  
.....

17. Mumapita kuti pakati pa kuchipatala kapena kwa sing'nga mwana wanu akadwala mwadzidzi?Fotokozani chifukwa pa yankho lanulo .....  
.....

**GAWO D: ZIFUKWA ZOMWE ZIMAWAKOKA AZIMAYI KUTI APITE KUCHIPATALA MWANA WAWO AKADWALA**

18. Kodi mwana wanu anayamba kudwala liti?  
.....  
.....

19. Kodi munatenga nthawi yayitali bwanji musanapite kuchipatala mwana wanu atadwala? Fotokozani zifukwa pa yankho lanulo.  
.....  
.....  
.....

20. Kodi chinakupangitsani inuyo ndi chiani kuti mubwere kuchipatala?

**GAWO D: ZOVUTA ZOMWE AMAYI AMAKUMANA NAZO POFUNA KUKALANDIRA  
CHINTHANDIZO KU CHIPATALA MWANA AKADWALA**

21(a). Kodi chipatala chapafupi chili kuti ndi kwanu?

.....  
.....

(b). Kodi mumayenda bwanji popita kuchipatala?

Fotokozani

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

(c ). Mumayenda nthawi yayitali bwanji kuti mukafike kuchipatala

.....  
.....

(d). Kodi mtunda omwe mumayenda angakusokonezeni kukafuna chinthandizo kuchipatala?

Fotokozani.....  
.....

22(a).Ngati muli ndi bambo a kunyumba, amatengapo mbali yanji mwana akadwala?

Fotokozani.....  
.....  
.....  
.....

(b)Kodi kutengapo mbali kwa abambo mwana akadwala ndikofunikira bwanji?

Fotokozani.....  
.....

.....  
.....  
(c) Kodi kusatengapo mbali kwa abambo, kungasokoneze bwanji chisamaliro cha mwana amene wadwala chibayo?

Fotokozani.....  
.....  
.....  
.....

23. Kodi ndi zinthu zina ziti zomwe zingasokoneze mayi kupita kuchipatala mwana atadwala?

Fotokozani.....  
.....  
.....  
.....

**ZIKOMO POTENGAPO MBALI MUKAFUKUFUKUYU**

APPENDIX C: PERMISSION REQUEST TO RPC

University of Malawi,  
Kamuzu College Of Nursing,  
Private Bag 1,  
Lilongwe.

2<sup>nd</sup> June, 2010.

The Chairperson,  
Research and Publications Committee,  
Kamuzu College Of Nursing,  
Private Bag 1,  
Lilongwe.

APPLICATION FOR PERMISSION TO CONDUCT A RESEARCH STUDY.

I am Grey Timothy Nkhanga, a fourth year study at Kamuzu College of Nursing. As a requirement to obtain the Bachelors of Science Degree, I am expected to conduct a research study. The title of my study is '**Factors contributing to high incidence of pneumonia in underfive children in Kasungu District.**'

The aim of this letter is to seek permission to conduct a research study.

I am looking forward to your consideration.

Yours faithfully

Grey Timothy Nkhanga.

Supervisor's signature

.....

.....





University of Malawi  
**KAMUZU COLLEGE OF NURSING**

**RESEARCH AND PUBLICATIONS COMMITTEE**

**APPROVAL CERTIFICATE**

**TITLE:** Factors contributing to High Incidence of Pneumonia in  
Underfive Children in Kasungu District

**INVESTIGATOR:** GREY TIMOTHY NKHANGA

**DEPARTMENT/YEAR OF STUDY:** Year 4

**REVIEW DATE:** 08 SEPTEMBER 2010

**DECISION OF THE COMMITTEE:**

**SIGNATURE:**

*[Signature]* DATE: 23/09/10  
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: 23/09/10 SIGNATURE(S): *[Signature]*

APPENDIX E: PERMISSION REQUEST TO DOWA

University of Malawi,  
Kamuzu College Of Nursing,  
Private Bag 1,  
Lilongwe.  
12 June, 2009.

The District Health Officer,  
Dowa District Hospital,  
P.O Box 25,  
Dowa.

APPLICATION FOR PERMISSION TO CONDUCT A PILOT STUDY AT DOWA HOSPITAL

I am a fourth year study at Kamuzu College of Nursing. As a requirement to obtain the Bachelors of Science Degree, I am expected to conduct a research study on any topic of interest in my faculty of study. The title of my study is '**an exploratory study on factors contributing to high incidence of pneumonia in underfive children in Kasungu District .**'

The aim of this letter is to seek permission to conduct a pilot study at your institution. The study will be conducted in October, 2010.

Your acceptance to this request will greatly be appreciated.

Yours faithfully,

Grey Timothy Nkhanga.

Cc: The DNO.

Pediatric ward in-charge.

University of Malawi

Kamuzu College Of Nursing

Private Bag 1,

Lilongwe.

2 June, 2010.

The District Health Officer,

Kasungu District Hospital,

P.O Box 19.

Kasungu.

*Noted 4/10/2010  
Allow him to do his research  
[Signature]*

APPLICATION FOR PERMISSION TO CONDUCT A RESEARCH STUDY AT  
KASUNGU DISTRICT HOSPITAL

I am Grey Timothy Nkhanga, a fourth year student at Kamuzu College of Nursing pursuing my Bachelors of Science Degree in Nursing. As a requirement to obtain the Bachelors of Science Degree, I am expected to conduct a research study on any topic of interest in my faculty of study. The title of my study is **'an exploratory study on factors contributing to high incidence of pneumonia in underfive children in Kasungu District'** as reported by the 2004 Malawi Demographic and Health survey. The aim of this letter is to seek permission to conduct the study at your institution. The study will be conducted on 4<sup>th</sup> - 6<sup>th</sup> October 2010.

I shall be grateful if my request meets your favorable consideration.

Yours faithfully,

Grey Timothy Nkhanga.

*[Signature]*

Cc: Unit matron.

Paediatric ward-incharge.

## APPENDIX G: CONSENT LETTER TO THE PARTICIPANT (ENGLISH)

University of Malawi,  
Kamuzu College Of Nursing,  
Private Bag 1,  
Lilongwe.

2 June, 2010.

### **INFORMED CONSENT LETTER**

Dear participant,

I am a fourth year student at Kamuzu College of Nursing a constituent college of the University of Malawi, pursuing a Bachelor of Science degree in Nursing. In partial fulfillment of my academic requirements, I am required to conduct a research study on any topic of interest within the nursing field. I am doing an exploratory study on the factors contributing to high incidence of pneumonia in underfive children in Kasungu District as revealed by the 2004 Malawi Demographic and Health Survey.

The purpose of this letter is to request your consent to participate in the above-mentioned study.

The study will reveal factors contributing to a reported high incidence of pneumonia in underfive children in Kasungu District. This will assist stakeholders to have specific and evidence based interventions to reduce child mortality, which is a goal of all nations

During research study, no harmful procedures will be performed on you. However, I perceive that some of the question may be embarrassing. You may also disturb your plans due to time needed for your participation in the study. Participation is voluntary, and you are free to withdraw from the study at any time you feel to do so. You will not be punished for withdrawing from the study or for not participating. No direct benefits are associated for participating in the study apart from indirect benefits which are health interventions that can be done after the revelation of the study by concerned arm bearers. We will be supposed to hold at least 30 minutes interview as a method of expressing your views on the above subject. To ensure that anonymity, privacy, confidentiality and dignity are observed, no names will be used instead the code numbers will be used.

If you agree to participate in the study, please sign below.

I the undersigned have fully understood the above information and wish to give consent for my participation in the study.

Participant's signature ..... Date.....

Researcher's signature .....Date.....

## APPENDIX H: CONSENT LETTER TO PARTICIPANT (CHICHEWA)

University of Malawi,  
Kamuzu College Of Nursing,  
Private Bag 1,  
Lilongwe.

2 June, 2010.

### KALATA YA CHILOLEZO KWA WOTENGA MBALI MU MKAFUKUFUKU

Okondeka Amayi,

Ine ndine m'modzi mwa ophunzira a mchaka chomaliza ku sukulu ya ukachenjede wa za unamwino ku Kamuzu Koleji. Ophunzira aliyense wa chaka chomaliza amayembekezedwa kuchita kafukufuku asanamalize maphunziro ake. chifukwa cha ichi, ine ndikupanga kafukufuku pa zifukwa zimene zikuchititsa kuti ana ambiri osakwanira zaka zisanu azidwala matenda a chibayo kuno ku Kasungu.

Ndalembe kalatayi kuti ndipemphe chilolezo kuti mutenge nawo mbali mu kafukufuku ameneyu.

Kafukufuku ameneyu athandiza kupeza njira zothandizira kuchepetsa imfa za ana omwe amamwalira kamba ka chibayo. Ichi ndi cholinga chimodzi cha maiko chofuna kuchepetsa imfa za ana ndi magawo awiri pa magawo atatu alionse pofika chaka cha 2015. Muli omasuka kutenga nawo mbali pakafukufuku ameneyu. Muli oyembekezereka kuyankha mafunso onse.

Ndinu omasuka kusiya kutenga mbali mu kafukufukuyu ngati mwaona kuti nkwabwino kutero ndipo simudzakakamizidwa kupitiliza. Palibe chilango chirichonse chomwe chidzapelekedwa pakutero. Mukuyeneronso kudziwa kuti palibe phindu la pa munthu payenkha potenga nawo mbali mukafukufukuyu kupatula zomwe zingachitidwe ndi boma komanso mabungwe okhudzidwa.

Mukutsimikiziridwa kuti zonse zomwe mundiuze zidzasungidwa mwachinsinsi ndipo wina aliyense wofuna kupeza zonsezi adzapempha chilolezo.

Pakafukufuku wathuyu dzina lamunthu silidzatchulidwa m'malo mwake tizagwiritsa ntchito nambala kuti pakhaledi chinsinsi.

↓

Tikupemphani kuti musayinire pansipa ngati mwalora kutenga nawo mbali. Umenewu ndi umboni oti mwalola mopanda kukakamizidwa kuchita nawo kafukufuku ameneyu.

Ine ndikuvomera kutenga nawo mbali pa kafukufuku ameneyu nditamva zonse momveka bwino.

Chizindikiro chaotenga mbali.....Tsiku.....

Chizindikiro cha ochita kafukufuku.....Tsiku.....

# APPENDIX I: TIME SCHEDULE

Activity/2010	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sept	Oct	Nov	Dec
Topic selection and formulation												
Formulation of objectives and planning of methods												
Literature review												
Proposal development												
Proposal submission												
Pilot study and data collection												
Data collection												
Data analysis and interpretation of results												
Report writing and submission of												



dissertation											
Dissemination of results											

## APPENDIX J: BUDGET

ITEM	AMOUNT	COST
Plain papers Rims	2 rims @ MK850	MK1,700
Lead pencils	5 pencils @ MK20 each	MK100
Pens	5 @ MK30	MK300
Flash ( USB )	1 @ MK4000	MK4,000
Medium envelops	5@ MK20	MK100
Large envelops	5 @ MK50	MK250
Sharpener (pencil)	1 @ MK100	MK100
Postage stamps	5 stamps @ MK40	MK200
Staples	1 box @ MK250.00	MK250
Punching machine	1 @ MK800	MK800
Erasers	2 @ MK100	MK200
Folders	5 @ MK200	MK1,000
Ruler	1@ MK100	MK100
SUBTOTAL		MK9,100
	5@400	MK2,000

Printing a proposal		
Printing a dissertations	5@400	MK2,000
Photocopying and binding of proposal	5 copies @ MK550	MK2,750
Photocopying and binding of dissertation	5 copies @ MK550	MK2,750
Photocopying of questionnaires	10 copies @k60	MK600
Printing of report	1 @ MK400	MK400
SUBTOTAL		MK11,500
<b>TRANSPORT AND TELEPHONE EXPENSES</b>		
To and from Kasungu	MK6,000	MK6,000
To and from QECH	MK3,000	MK3,000

Phone bills		MK2,000
Accommodation and meals	7 DAYS @MK2,500/DAY	MK17,500
SUBTOTAL		MK28,500
Contingency allowance		MK5,000

GRAND TOTAL: **MK54, 100.**