

LUSAKA APEX MEDICAL UNIVERSITY



LUSAKA APEX MEDICAL UNIVERSITY SCHOOL OF MEDICINE PUBLIC HEALTH (CBE 410)

TITLE: THE LEVELS OF AWARENESS AND UTILISATION OF INSECTICIDE-TREATED NETS AMONG PREGNANT WOMEN IN MUTENDERE COMPOUND

A 6th year proposal submitted to the Lusaka Apex Medical University, in partial fulfilment of the requirements for the Community Medicine (CBE 410).

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A research proposal submitted to the department of public health, Lusaka Apex medical university, as a requirement for the MBChB degree.

STUDENT DECLARATION

I MULENGA KABASO, student number MBCHB/16/02/000266, school of medicine, Lusaka Apex Medical University declare that this proposal is my original work. This research proposal has been complemented by referenced sources duly acknowledged from the internet, these are specifically accredited and references cited using Harvard System and in accordance with anti-plagiarism regulations.

Sign: 

SUPERVISOR DECLARATION

I hereby certify that this project proposal has been read and evaluated by me. I hereby acknowledge that this proposal has been submitted for appraisal with my approval as university supervisor.

Sign:..... 

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ABBREVIATIONS

AIDS	ACQUIRED IMMUNODEFICIENCY SYNDROME
BSc. HB	BACHELOR OF SCIENCE IN HUMAN BIOLOGY
CDC	CENTRE FOR DISEASE CONTROL AND PREVENTION
FGDs	FOCUS GROUP DISCUSSIONS
HIV	HUMAN IMMUNODEFICIENCY VIRUS
ITNs	INSECTICIDE-TREATED NETS
LLIN	LONG-LASTING INSECTICIDE-TREATED NET
MBChB	BACHELOR OF SCIENCE IN MEDICINE AND SURGERY
MPH	MASTERS OF PUBLIC HEALTH
NGOs	NON-GOVERNMENTAL ORGANISATION
NMCC	NATIONAL MALARIA CONTROL CENTRE
RBM	ROLL BACK MALARIA
UNICEF	UNITED NATIONS CHILDREN'S FUND
LAMUBREC	LUSAKA APEX MEDICAL UNIVERSITY BIO-MEDICAL RESEARCH ETHICS COMMITTEE

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ABSTRACT

BACKGROUND

The level of awareness and utilisations of insecticide-treated nets (ITNS) among pregnant women and their household members is still low despite the ministry of health and government policy through donors of free ITNS for vulnerable group and subsidized nets for other people. This calls for understanding the knowledge, on why the awareness and utilisations of ITNS among pregnant is low. This study aimed to assess levels of awareness and utilisations of ITNS among pregnant women in Mutendere compound Lusaka Zambia.

METHODS

A descriptive cross-sectional study was conducted aimed at determining the awareness and utilisation of insecticide treated nets among pregnant women from Mutendere compound, Lusaka Zambia. A self-administered questionnaire was given to 30 pregnant women and those with a history of pregnancy and stay in Mutendere compound of which 26 were retrieved giving a response rate of 86.6% Data was analysed using Stata 2014 version which generated the summarized statistics.

RESULTS

Results showed that the majority (71.03%) of the pregnant women were between 18-29 years of age. With another majority 50% were married and 93% of the respondents were aware of the insecticide –treated nets. All participants had heard or had some knowledge of awareness and utilisation of insecticide treated nets. 92.3% were using mosquito nets when sleeping at night. It was found that most pregnant women about 60.9% get the mosquito nets from the clinics but they occasionally use them during pregnancy.

CONCLUSION

Most pregnant women had awareness on insecticide treats nets (ITNs). The utilisation of ITNs was relatively low, with still a small bracket of pregnant women still not using ITNs. Majority respondents married, with the majority having gotten the ITNs from the clinics and majority of the pregnant women were between 18-29 years. These needs continued advocacy for ITNs use among pregnant women to reduce high rates of maternal anaemia ,fetal loss, premature delivery ,intrauterine growth retardation, and delivery of low birth –weight infants(<2500g or<5.5 pounds),a risk factor for death.

CHAPTER ONE

1.0 INTRODUCTION

1.1 BACKGROUND

Malaria is an intermittent and remittent fever caused by a protozoan parasite which invades the red blood cells and is transmitted by mosquitoes in many tropical and subtropical regions such as the sub Saharan Africa to which Zambia belongs (Steketee, 2019). Nationally, the overall, number of reported malaria cases (clinical and confirmed) to the National Health Management Information System (HMIS) increased from 4,260,235 to 5,094,073 (2010-2015) with HMIS reporting rates averaging about 70%. The use of long-lasting insecticidal nets (LLINs) is highly recommended, as they greatly reduce the cost and operational difficulties associated with retreatment of nets (Ntuku, 2017).

Malaria is a life-threatening disease caused by parasites that are transmitted to people through the bites of infected female anopheles mosquitoes. It is preventable and curable (WHO, 2020). There are 5 parasites that cause malaria in humans, and 2 of these species – *Plasmodium falciparum* and *Plasmodium vivax* – pose the greatest threat (WHO, 2020). Furthermore malaria infection in pregnant women is associated with both maternal and perinatal morbidity and mortality. While poorly investigated, pregnant women have reduced immune response and therefore less effectively clear malaria infection. In addition, malaria parasites sequester and replicate in the placenta. Pregnant women are three times more likely to develop severe disease than non-pregnant women acquiring infections from the same area. Malaria during pregnancy can lead to miscarriage, premature delivery, low birth weight, congenital infection and/or perinatal death. (Chitundu, 2021) Even though malaria is endemic in Zambia and is more common among pregnant mothers and under-five-year-old children. (Chitundu, 2021). Long lasting insecticide treated mosquito nets are effective against malaria among other measures. However, over the years, data has shown low utilisation of insecticide treated mosquito nets among pregnant women and children under-five. Health facilities should lobby and distribute long-lasting-insecticide treated nets in order to scale-up utilization of long lasting insecticide treated mosquito nets. More awareness should be created on the importance of sleeping under long lasting insecticide treated mosquito nets. (Ishal, 2013) Nevertheless Malaria is preventable and curable, and increased efforts are dramatically reducing the malaria burden in many places. One of the most effective ways of preventing malaria infection is the use of insecticide treated nets. Use of insecticide-treated nets is a cost effective method of controlling

malaria. The use of insecticide-treated mosquito bed nets is one of the strategies of the Roll Back Malaria initiative. Henceforth Long-lasting insecticidal nets are the most sustainable and effective malaria control tool currently available. Global targets are for 80% of the population living in malaria endemic areas to have access to (own) and use a LLIN (Musa, 2020). However, current access to LLINs in endemic areas is 56% due to system inefficiencies and budget limitations. Thus, cost-effective approaches to maximise access to effective LLINs in endemic areas are required. On the contrary it is assumed that public health benefit of LLINs is attained through sustained high net access at the community level, which is referred to as universal coverage. Currently, the global recommended target for population access to LLINs is > 80%, and is referred to as the minimum operational effectiveness coverage level that will translate to the community effect of LLINs (Moore, 2020). In addition Insecticide-treated net use is crucial for preventing malaria infection (Scott, 2021). Despite significant improvements in insecticide treated nets (ITNs) access and use over the past two decades, many malaria-endemic countries in sub-Saharan Africa have not yet reached global targets for universal coverage of ITNs. To reduce the gaps in ITNs use, it is important to understand the factors associated with ITNs use (Scott, 2021). However vector control using ITNs represents the cornerstone of malaria prevention, as ITNs provide a physical barrier between the user and mosquito vectors, and repel or kill mosquito vectors upon contact with the insecticide. It is estimated that 69% of the 663 million malaria cases averted in sub-Saharan Africa between 2000 and 2015 were attributable to ITNs (Kanyangarara, 2021). In areas of stable malaria transmission, ITNs also have the potential to reduce severe malaria by up to 45% and malaria-related mortality in children under five years of age by up to 55%. Furthermore, when ITNs usage is high, the protection of ITNs against malaria infection extends beyond the individual, affording the community indirect protection. Otherwise In order to substantially increase mosquito net coverage, African countries from 2002 started scaling up free of charge or highly subsidized provision of mosquito nets for under-5 years and pregnant women in rural areas (UNICEF, 2005). For instance, one in four households has at least one net and 12 percent own more than one in Uganda (Uganda HIV AIDS Sero-behavior survey 2004-2005). The proportion of children less than five years sleeping under a mosquito net the previous night was at 7.3 percent and those sleeping under an ITN the previous night were 3.2 percent. Furthermore despite it being an effective form of vector control measure, there exists discordance between awareness and utilization of insecticide treated nets and between net possession and use (WHO, 2006). There is low utilization of ITNs among pregnant women (Njoroge, 2014). Regardless a number of reasons have been cited for very low utilization of

ITNs which includes non-availability, low mosquito activity and high night time temperature (Ordinioha, 2012), intra-household factors such as the extent to which nets are used at all, fear to obtain nets due to husbands' influence, family sleeping patterns, decision making in regard to who should sleep under an Insecticide treated net and who actually uses the net. The limitedness of ITNs is due to the cost outlay of households required to make purchase of nets and inability to associate the effectiveness of the insecticide leading to low re-treatment rates in most settings and seasonality associated with spread of malaria (Binka, 2010). Otherwise proper use and care of insecticide treated nets and consistent use of the nets is required for maximum effectiveness. Therefore, promoting the use of insecticide-treated nets can be the key approach towards the reduction of morbidity and mortality. ITN has however been limited given the fact that malaria continues to be the major cause of child mortality and morbidity in Zambia despite massive accessibility to ITNs.

1.2 STATEMENT OF PROBLEM

According to the latest estimates by the WHO released in 2021, there were an estimated 241 million cases of malaria in 2020 and an estimated 627 000 deaths compared to 277 million in 2019 (WHO, 2021). Most of these deaths occur among children living in Africa, where a child dies every minute from malaria. Malaria affects more than 4 million Zambians annually, accounting for approximately 30 percent of outpatient visits and resulting in almost 8,000 deaths each year. Under five-year-old children and pregnant women are the most vulnerable, especially those in more remote and impoverished areas, with 35-50 percent of under-five mortality and 20 percent of maternal mortality attributable to malaria. The latest research in Zambia indicate that 3 children die per day within the country as a result of malaria (UNICEF, 2010). Due to this, Zambia started deploying insecticide treated nets as a cornerstone of the rapid scale up of malaria program coverage during the initial three years of the 2006-2011. In 2005-2006 a campaign had set out to distribute 3 free-to-the-user ITNs per household in high risk districts. However despite this good initiative, no concurrent studies on levels of awareness and utilization of these ITNs have been conducted in Zambia. However, studies from other African countries indicate that utilization has been unacceptably low: only 12 percent of African expecting mothers and 8 percent under 5 children are currently sleeping under an ITN, and about 20 percent are sleeping under any kind of net. Expanded ownership of ITNs can only make a substantial reduction in malaria mortality only if the nets are used properly by under-fives who however, do not have any say in this matter as mother and father are with the father

being the main decision maker in the house. The many questions that arise from this are that; what extent are nets that are owned actually used in the households by expecting mothers? If a household owns a net, are they likely to sleep under it? There seemed to be unanswered questions which this study sought to provide

1.3 RATIONALE.

With Zambia being in the sub-Saharan Africa, this study will seek to serve as a baseline for other studies. This will contribute positively to the already existing body of knowledge. It will equally provide information and therefore influence policy making which is very important in any developing country. The study can be useful to the policy makers, the Ministry of Health specifically in the department of malaria control. The information obtained will provide a useful guide for formulating appropriate policies and programs for the promotion of ITNs. It will ultimately benefit the community due to resultant improvement in prevention of disease. The findings of this study can be a source of information to non- Governmental Organizations, government and private enterprises who are involved in the promotion of ITNs in the fight against malaria among children. The findings also provide up to date literature for academicians and can be used as a basis for further research on ITNs in malaria prevention. The gaps identified can be explored for further research especially in regard to coverage.

1.4.0 GENERAL OBJECTIVE.

- ❖ To determine the level of awareness and utilization of insecticide-treated nets (ITNs) among pregnant women in Mutendere compound.

1.4.1 SPECIFIC OBJECTIVES.

- ❖ To ascertain the level of awareness on the importance of sleeping under an insecticide-treated net during pregnancy.
- ❖ To identify challenges and factors related to residents that may lead them not to use insecticide-treated nets.
- ❖ . To recommend ways of improving the knowledge, attitudes and practices of using insecticide-treated nets among pregnant women in mutendere compound.

RESEARCH QUESTIONS

1. What are the levels of awareness on the importance of sleeping under an insecticide-treated net during pregnancy?
2. What are the challenges and factors that residents face that may lead them not to use insecticide-treated nets?
3. What are some ways of improving the knowledge, attitudes and practices of using insecticide-treated nets among pregnant women in mutendere compound?

CHAPTER TWO

2.0 LITERATURE REVIEW

This section provides background understanding on other research studies that have been carried out regarding Insecticide treated mosquito nets use. It focuses on the accessibility of ITNs in the households by under-fives; knowledge, attitudes, perceptions and beliefs of caregivers towards ITNs and affordability of ITNs by the caregivers as the main thematic areas. It should be noted that, a lot of research studies have been carried out on ITNs especially in regard to availability, accessibility and utilization in general.

According to (Silweya, 2021), Zambia used to be an early adopter of insecticide-treated nets method in 2001, and policy for mass distribution with long-lasting insecticidal nets in 2005. Since then, the Zambia has implemented mass distribution supplemented with hobbies transport through antenatal care and under five clinics in health facilities. The country wide targets of familiar (100%) coverage and 80% utilization of LLINs have now not been attained. Free mass LLIN distribution marketing campaign in Zambia presents essential classes to inform future campaigns in the African region. Prior to mass distribution, only one million ITNs cumulative whole was finished in Zambia in the period 2000 to 2004, with limited effect on the malaria burden. Limited availability of ITNs due to insufficient funding was a major limiting thing to the attainment of elevated household possession of ITNs. By the end of the first NMSP 2001–2005, Zambia adopted the use of LLINs as hostile to traditional mosquito nets that wished re-treatments with pesticides and the national programme had mobilised extended technical assistance, economic and different resources for vector control to scale-up ITNS/IRS.

According to (Yirsaw, 2021) Malaria all through pregnancy and childhood is one of the foremost public health challenges globally. Its occurrence is large in Africa, especially in sub-Saharan countries and Ethiopia. Insecticide-treated mosquito net use is one of the essential malaria preventive strategies.

Although a number of studies have been conducted in this theme. Therefore, this find out about was once aimed at assessing the occurrence and associated factors of ITN utilization among pregnant female and beneath 5 kids in east Belessa district, northwest Ethiopia, The incidence of malaria contamination has been declined globally when you consider that 2010. However, its incidence and fatality fee remains consistent in Africa. In 2018, the estimated 228 million malaria instances and 405,000 deaths from malaria had been said globally. Of these, Africa bills 93% of the cases and 94% of the malaria deaths. Malaria is also among the main indirect motives of maternal and under-five children mortality.

Insecticide-treated bed net utilization is one of the nice malaria preventive strategies. It can stop malaria infection via reducing the contact and bite of mosquitoes if it is employed excellent and consistently. Evidence indicates that ITN utilization can decrease malaria related deaths through about 20% from all causes of mortality in malaria-endemic areas. Studies examining ITN effectiveness point out a discount in malaria episodes with the aid of 48–50%. If used universally, about 7% of global under-five mortality may want to be prevented. In addition to the direct advantage to the individual, ITN utilization gives the community an oblique protective benefit. Expanding ITN utilization in a community is far fine than focusing on ITN utilization with the aid of persons (Gebremariam, 2021).

Another study by (Diema Konlan, 2019) In Ghana, attempts to manipulate malaria via antimalarial medicines are currently threatened by way of the emergence and unfold of drug resistant malaria parasites. This, collectively with the increasing incidence of malaria, has heightened the need for an extra high-quality method of controlling the spread. The use of Insecticide Treated Bed Net has been recognised as a positive measure in the prevention of malaria.

The use of ITN is feasible in the context because undeniable nets can effortlessly be converted into ITN. Insecticide handled nets are nets that are made from cotton, polyethylene, polyester, polypropylene, or nylon and are treated with a exclusive chemical referred to as pyrethroid insecticide. WHO is still committing fund in the direction of the programme to ensure that targets in malaria morbidity and mortality reduction are achieved. In 2013, global and home funding for malaria manage and elimination totalled US\$ 2.7 billion.

According to (Ngouakam, 2021) Malaria in pregnant women stays an important health problem in Cameroon, with an unacceptably excessive annual maternal mortality rate pegged at 782 maternal deaths per 100,000 stay births. Despite the features made through the free distribution of Long Lasting Insecticide Treated Nets at some point of the antenatal go to and the mass campaign, there is a paucity of records about how pregnant ladies effectively care for LLITNs. Recent information of WHO indicated that between 2012 and 2017, the proportion of teens aged below 5 years who slept under an ITN elevated from 36% to 61%, that of pregnant women rose from 26% to 61% and households ownership of at least one ITN moves from 47% to 72%, while households with at least one ITN for each and every two humans from jumped from 20% to 40%. Unfortunately, nearly 40% of pregnant female did now not sleep under an ITN in 2018 and two-thirds did not obtain the endorsed three doses of intermittent preventive cure in being pregnant (IPTp). WHO estimated that, out of 25 million pregnancies in sub-Saharan Africa, some 11 million pregnant women were contaminated with malaria, resulting in almost 872 zero adolescents born with low beginning weight, Pregnant women are 3 instances greater possibly than non-pregnant ladies to come to be infected with *Plasmodium falciparum* malaria and, as soon as infected, there is a propensity to boost severe malaria.

Another study by (Ango, 2018) Malaria during pregnancy is a primary public fitness trouble in sub-Saharan African countries, and it is one of the main contributors to the unacceptably excessive maternal mortality ratio in the growing countries. Approximately 785, zero humans die of the ailment annually. It is responsible for maternal anaemia and negative pregnancy consequences such as low delivery weight and preterm birth all through pregnancy. Malaria in pregnant women has been cited as one of the leading contributors to the unacceptably excessive maternal mortality ratio in the growing countries. Malaria has many deleterious outcomes on both the mother and the fetus, and this underscores the importance of making available to this team of human beings ample and positive protection and case management.

According to (Edelu, 2010), Malaria constitutes 11% of the continent's general sickness burden, accounting for 40% of public fitness expenditure, 30-50% of in-patient hospital admissions and up to 50% of outpatient visits in areas of high transmission. The insecticide dealt with bed nets have been proven to limit the range of malaria episodes by means of as a great deal as 50% and childhood mortality by way of 20%. They determined that consciousness of ITN was 184 out of 230 mothers that were interviewed whilst only forty eight used it for their children. There used to be statistically considerable difference in phrases of ITN cognizance between the surprisingly skilled mothers and those with decrease academic qualification however in phrases of ITN usage, there was once no big distinction between the

two groups. Socio monetary type did no longer influence the use of ITNs. An increased number; have no motive for non-use. Reasons for non-use consist of use of windows and door nets (16.2%) and handy to spread (13.2%).

A research conducted in three nations Nigeria, Senegal and Zambia via (Baume, 2008) confirmed an awesome reap in awareness, ownership and use of nets between 2000 and 2004-2006. This was brought about due to a mix of demand creation, a bolstered industrial sector, reduced taxes and tariffs, and programs making ITNs available at decreased prices. In 2000, handled nets had just been added to the public. Awareness used to be low as in international locations such as Zambia few households had ever used any variety of bed net. By 2004-2006, cognizance of ITNs used to be almost normal in all international locations barring Nigeria, although attention there was very low to begin with and jumped from 7% to 60% between 2000 and 2004. In addition, there had been massive will increase in the ownership of nets and in the percentage of households owning a net or ITN, the average wide variety of nets owned by using net-owning households accelerated in three of the countries- from 1.6 to 1.9 in Nigeria; from 2.1 to 2.8 in Senegal; from 1.4 to 1.8 in Zambia (Michelo, 2009). Net usage is no longer a reflect of ownership charges due to the fact utilization is also affected with the aid of intra-household elements such as the extents to which nets are used at all, family sleeping patterns, and who in the household uses the net. Further, internet use varies by using season and is in all likelihood to be easiest in mid-end wet season, when mosquito density and malaria transmission is highest. The use of insecticide treated net has been confirmed to be a wonderful preventive modality in the management of malaria but its utilization has been proven to be low. Insecticide treated nets reduce human contact with mosquitoes and are high quality malaria prevention intervention. ITNs have been proven to decrease extreme sickness due to malaria in endemic regions and limit all-cause mortality by using about 20%. Studies of ITN effectiveness endorse a discount in malaria episodes by 45 to 50%. Despite the know-how that ITNs are superb in the prevention of malaria, ITN insurance and utilization still remain low in many African countries. Fewer than 10% of youngsters and pregnant girls regularly sleep below ITNs in most malaria endemic regions.

According (Ankomah, 2012), ITN use was once stated to lag properly at the back of ITN ownership. This appears to advocate that the modern mass distribution of ITNs at antenatal services and community ranges may also no longer always lead to use until it is accompanied by means of behaviour trade interventions that address the community stage perceptions, misconceptions and positively role ITN as a nice prevention device to forestall malaria.

Knowledge on malaria illness and ITNs was once excessive with majority of pregnant ladies having ample stage of know-how (86.9%). There used to be big affiliation between level of education and enough knowledge. Good mind-set on ITNs use was low. There was no association between accurate mind-set and any of the socio-demographic variables. The majority of pregnant women attending ANC owned ITNs (75.4%). ITNs usage used to be high. There is great affiliation between faith and right practice. Although ample degree of information on malaria and protective position of ITNs used to be high, there used to be no association between know-how with practice and attitude.

Another finding conducted by (Musa, 2009) indicated that out of 455 pregnant female interviewed, about (20.1%) of the respondents had been conscious of ITN in malaria prevention, but much less than a 1/3 124 (27%) had ever used it and solely 88 (19%) have been presently the use of it, whilst 104 (23%) of the total respondents had a member of their household using ITN. Some of the difficulties encountered or skilled through respondents presently the use of ITN had been shortage of new nets, problem in getting chemical substances for re-treatment of nets, non-availability of quality ITN for sale. Three hundred and thirty-one (73%) respondents have by no means used ITN earlier than because of lack of awareness 136 (41%), rate of ITN is too luxurious 26 (8%) and non-availability of ITN for purchase 67 (20%). Awareness and utilization of ITN among pregnant girls and their household participants used to be generally found to be low no matter Government policy of free ITN for vulnerable groups and backed nets for different people. From the many research conducted, it used to be normally mentioned that no matter cognizance of ITN being high, utility was low. Awareness was once high in the educated than in the non-educated which alternatively did now not have any have an effect on the usage. It was equally cited that ITN use lagged well in the back of ITN ownership.

According to (Nhama, 2020) Insecticide-treated net use is crucial for preventing malaria infection. Despite significant improvements in ITN access and use over the past two decades, many malaria-endemic countries in sub-Saharan Africa have not yet reached global targets for universal coverage of ITNs. To reduce the gaps in ITN use, it is important to understand the factors associated with ITN use. Insecticide-treated net use is crucial for preventing malaria infection. Despite significant improvements in ITN access and use over the past two decades, many malaria-endemic countries in sub-Saharan Africa have not yet reached global targets for

universal coverage of ITNs. To reduce the gaps in ITN use, it is important to understand the factors associated with ITN use.

Another study by (Mohammed, 2021) Malaria is a global health problem that poses an enormous burden on health systems and the broader economy, particularly in Africa. The World Health Organization (WHO) have reported over 200 million malaria cases and estimated over 400,000 deaths per year due to malaria, with almost 90% occurring in Africa. Net distribution is an integral part of a selective vector control strategy for malaria protection, having a significant impact on malaria. Regular use of ITNs reduces the overall death risk by 20% and the number of clinical malaria episodes in young children by 50% and is used as preventive measures against malaria. Moreover, ITNs and IRS are recommended as the cornerstone of the strategy for malaria control. Accordingly, the impressive decline in child mortality has been attributed to the implementation of vector control intervention.

CHAPTER THREE

3.0 METHODOLOGY.

1.0 STUDY DESIGN

This study is a descriptive cross-section survey aimed at determining the awareness and utilization of insecticide treated nets among pregnant women and women with pregnancy history in Mutendere compound, Lusaka Zambia.

2.0 STUDY AREA

Mutendere located in the centre of Lusaka province. As one approaches its vicinity, he/she is greeted by loud music from the taverns and high levels of street vending. It is a densely populated compound of Lusaka (total population >70 000, population density =294 persons/house) (Musa, 2009). However it is a compound known to have one of the most underdeveloped sewer systems and great flooding during the rainy season due to poor drainage. It has a number of water collecting bodies (stagnant water) due to poor drainage system and this provides an environment favourable for mosquito breeding.

3.0 STUDY POPULATION

The study population included pregnant women as well as women with pregnancy history (both married and single) of the age group (18 years and above) in Mutendere compound in Lusaka province.

4.0 STUDY VARIABLES

1. Dependent variable

- 1) Level of awareness and ITN utilization

2. Independent variable

- 1) Level of knowledge
- 2) Perception
- 3) Ownership
- 4) Age

TABLE 1 STUDY VARIABLES AND INDICATORS

Demographic characteristics	
Dependent variables	Indicators
Level of awareness and ITN utilization	The proportion of women who use ITN during pregnancy.
Independent variables	Indicators
Level of knowledge	Response to questions on ITN rating them as high, medium, low.
Perception of pregnant women towards ITN	Attitudes: -positive reasons for ITN use -negative reaction to ITN use
Age(above 18)	Response to questions on ITN use and importance during pregnancy.

3.3 STUDY SAMPLE SIZE

The sampling method employed in this study was Simple random in that most households have 75% chance of having adult women and pregnant women staying there that's why it's even densely populated. This sampling criterion was adapted based on the fact that all houses in this community have an equal and independent chance of being selected as a member of the sample. A sampling frame consisting of households with adult women with pregnant history and pregnant women was obtained using the simple random sampling which was included in the study, a list of females with a history of pregnancy, those are currently pregnant and stay in Mutendere and with help of the records of pregnant women at Mutendere clinic was used for sampling.

SAMPLE SIZE ESTIMATION AND ASSUMPTION

Sampling, is normally used because it reduces time and labor. The sample size of the research is obtained from a special formula for calculating the sample size (Cresswell, 2014)

Equation 1: Formula for Calculating Sample Size

$$n = \frac{z^2 \sigma^2}{e^2}$$

where n = Sample size

z = Standard variate at a given confidence level (it is 1.96 for a 95%)

σ = Standard deviation of the population (being estimated from past experience)

e = Acceptable error (the precision)

If the acceptable error is to be kept with ± 0.8 of the sample mean with 95% confidence and 4.998 as standard deviation of the population estimated from past experience the sample size can be expressed as equal to

$$n = \left(\frac{1.96 \times 4.998}{0.8} \right)^2 = 30$$

3.4 INCLUSION CRITERIA

Pregnant women and women with a history of pregnancy and reside in Mutendere during the course of their pregnancy. Participants must be 18 years and above.

3.5 EXCLUSION CRITERIA

1. Women who do not live in Mutendere during their pregnancy.
2. All women above 18 with no history of pregnancy.
3. Females who turned 18 years from December 2021.
4. Women who do not give consent to participate in the study freely.
5. Men will not be included.

3.6.0 DATA COLLECTION AND ANALYSIS

3.6.1 DATA COLLECTION TOOLS

The study involved questionnaire based interviews which were conducted with adult females with a pregnancy history or currently pregnant. The questionnaire was divided into a number of different sections. The different sections of the questionnaires consisted of socio-demographic characteristics, perceptions, utilization, ownership and importance. Project was carried out by the researcher with the help of some friends. This was done after a brief questionnaire administration orientation to ensure uniformity and accuracy of the data collection.

3.6.2 DATA MANAGEMENT

Before the data is analysed, the researcher will transcribe all transcripts. The process of transcribing allows the researcher to become acquainted with the data. The researcher will create Microsoft Word files for the transcripts. All files will be protected by setting a password. All files will be saved in the researcher's portable computer for which he only has access to. The researcher will use the meaning of analysis context as the unit of analysis for coding and also looked for description. This means that the data is not coded sentence by sentence or paragraph by paragraph, but coded for meaning. The researcher used the qualitative software Atlas.ti 4.52 program for data management and analysis.

Reliability and validity will be enhanced through pretesting of the research questions to be used during the interviews. Flaws in the research questions and sensitivity and reactions of the respondents about the research tool as well as all ethical issues will be considered and addressed while conducting a pilot study.

Trustworthiness or rigor of study refers to the degree of confidence in data, interpretation and methods used to ensure the quality a study (Alasuutar, 2018). The research study will have consent forms for the participants to fill in as a sign of trustworthiness.

Credibility refers to the extent to which a research account is believable and appropriate, with particular reference to the level of agreement between the participants and the researcher (Pernecky, 2018). The notion of credibility is most often associated with the framework (Bogdan et al., 2019). The participants were required to fill in a consent form as an arrangement to be part of the research study

Transparency is defined as the obligation to make data, analysis, methods and interpretive choices underlying their claims visible in a way that allows others, to evaluate them as a fundamental ethical obligation (Babbie et al., 2018). After the research proposal has been approved by Lusaka Apex Medical University Research Ethics Committee the data collection and analysis will follow. A research report will be written to show data analysis, methods and interpretive choices and discussion of results.

Conformability The participants (pregnant women and adult women) will be urged to verify the data before submission and the researcher will check for biased data using the inclusive and exclusive criteria

3.7 DATA ANALYSIS

Data analysis will be done using thematic analysis and the data collected will be entered in Excel spread sheet and exported to STATA by which it will be analysed. This will be presented as proportions and percentages and summarized using graphs and charts

3.8 ETHICAL ISSUES

- ❖ Ethical approval to undertake the study will be sought from Lusaka Apex Medical University Research Ethics Committee
- ❖ Informed consent will be obtained from all the participants of the study, this will be done once the purpose and objectives of the study have been transparently shared with the participants.
- ❖ Participants will be informed that participation in the study is voluntary and they are at liberty to stop the interview at any time without giving a reason. Moreover, participants will also be informed that refusal to participate in the study will not have any health care consequences on them or their families.
- ❖ Confidentiality will be fully maintained using routine precautions, such as substituting codes for participant identifiers from study documents as soon as possible and storing data in locked cabinets and using encrypt computer-based files.

3.9 DISSEMINATION PLAN

The findings of this study will be distributed to ministry of health, Public Health Faculty of Lusaka Apex Medical University, Lusaka Apex Medical University library for students and

other concerned readers. Furthermore, copies will be made available on educational forums and published in credible

Journal to raise awareness on the utilisation of insecticide-treated bed nets among pregnant women in the community.

CHAPTER FOUR: RESULTS

DATA ANALYSIS, PRESENTATION AND FINDINGS

4.0 INTRODUCTION

This chapter focuses on the data analysis with the view of establishing the main findings with respect to the research questions. The analysis of the data was guided by the following research objective: The levels of awareness and utilisations of insecticide-treated nets among pregnant women in Mutendere compound. The data was analysed using STATA while the visual descriptions showing the graphical presentation of data were analysed using Microsoft excel.

4.1 SOCIAL DEMOGRAPHIC CHARACTERISTICS

The study had 27 participants, and all gave written consent to participate in the study. The study was carried out in Mutendere compound. The table below summaries the description and social demographic characteristics of participants who took part in the study.

TABLE 2: SOCIAL DEMOGRAPHIC CHARACTERISTIC OF PARTICIPANTS

LOCATION OF STUDY	AGE GROUPS	GENDER	TOTAL	PERCENTAGE
MUTENDERE	Below 18 years	Women	3	11.5%
	18-29 years		19	73.1%
	30 Above years		4	15.5%
				26 participants

4.1.1 RESPONSE RATE

Research questionnaires were distributed randomly to the pregnant women and women with a history of pregnancy who stayed in Mutendere during the time they were pregnant. The total number of potential respondents was 30 pregnant women. Interestingly, 30 questionnaires were given to the respondents. Unfortunately, 26 questionnaires were completed out of the targeted 30. Thus, the calculated sample size was 30 but a total of 26 questionnaires were completed. The response rate which is $[(26/30 \times 100)]$ came to 86.6%

4.1.2 AGE OF RESPONDENTS

The findings in the figure 4.1.2 distribution by age revealed that the majority of the respondents fell in the 18-29 years age category with 20 respondents representing 73.1% followed by, the respondents who were between 30 and above years category with 4 respondents representing 15.4% and then, those below 18 years representing about 11.5%. This clearly shows that most of the respondents were in their health reproductive age.

Section 1 demographics characteristics 1. Age group

26 responses

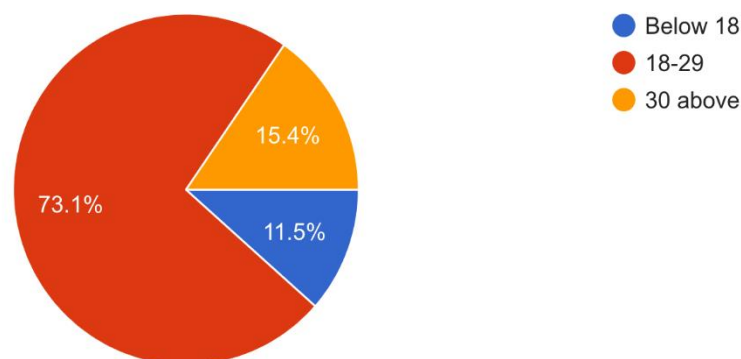


FIGURE 1: DISTRIBUTION BY AGE

4.1.3 DISTRIBUTION OF MARITAL STATUS

The majority of the respondent's 50% were married while 38.5% single women, 8 % divorced and 4% engaged. As shown by the figure below.

2. marital status

26 responses

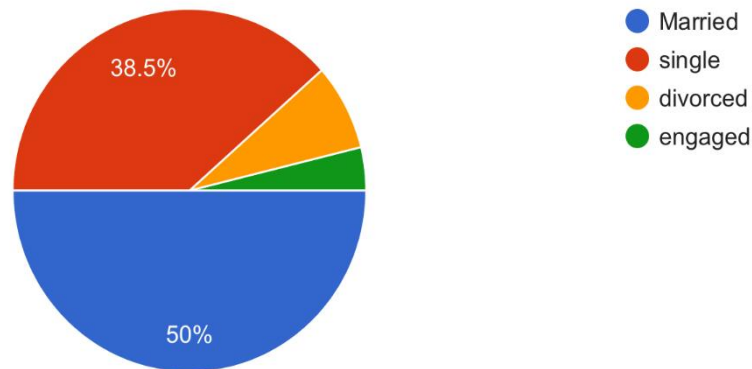


FIGURE 2: THE NUMBER OF ROOMS PER HOUSEHOLD

4.1.4 THE NUMBER OF ROOMS PER HOUSEHOLD

The figure below shows the highest percentage of respondents stay in 4 roomed houses with a 46.2% and about 34.6% stay in a house with 2 to 3 rooms. The minority of about 19.2% stay in single rooms with their families which is unfortunate.

4. how many rooms in the house?

26 responses

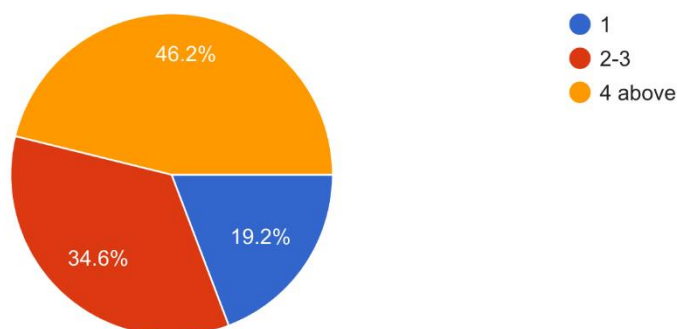


FIGURE 3; THE NUMBER OF ROOMS PER HOUSEHOLD

4.1.5 THE SEWER SYSTEM IN THE AREA

The figure below depicts respondent's response regarding the sewer system in the areas they stay 53.8% have good sewer systems which reduces the risk of mosquitoes to breed while 23.1% have better sewer systems in the areas were they stay, 15.4% have poor sewer system in their area and about 7.7% have a worst or poorest sewer system which makes them more susceptible to having mosquitoes around.

5. how is the sewerage system in your area?

26 responses

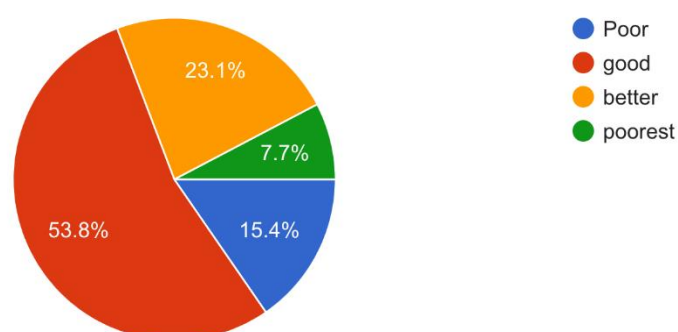


FIGURE 4: THE SEWERAGE SYSTEM IN YOUR AREA

4.1.6 LEVEL OF AWARENESS OF ITN USE AMONG PREGNANT WOMEN IN MUTENDERE COMPOUND

In terms of awareness of insecticide –treated nets (ITN) 93% of the respondents are aware of the insectide-treated nets and while only a fewer are not aware about 7% of the respondents. The figure below depicts the results.

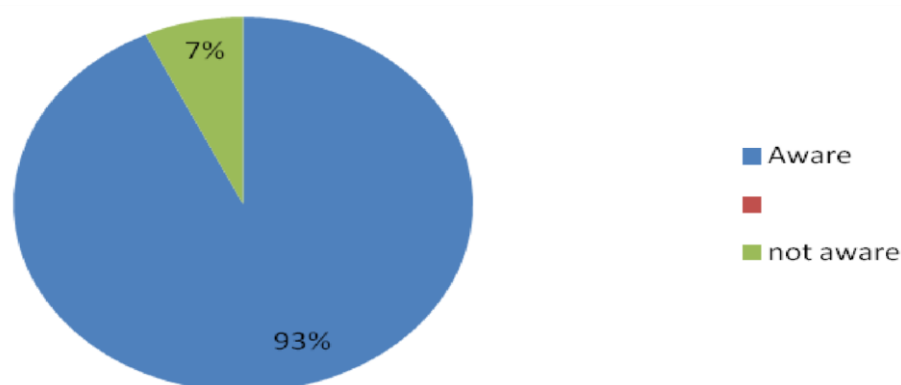


FIGURE 5: LEVELS OF AWARENESS OF ITNS USE AMONG PREGNANT WOMEN IN MUTENDERE COMPOUND

4.1.7 HAVE YOU EVER USED A MOSQUITO NETS (ITN)?

The figure below depicts respondent's response regarding the use of mosquito nets 92.3% agreed to using mosquito nets before at night and about 7.7% don't remember using a mosquito nets when sleeping at night.

2. Have you ever used a mosquito nets?

26 responses

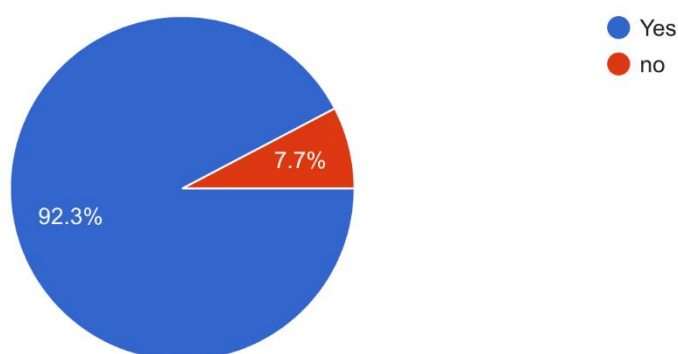


FIGURE 6: HAVE YOU EVER USED A MOSQUITO NETS

4.1.8 IF YES, WAS IT TREATED (INSECTICIDE)

The figure below depicts respondent's response regarding the use of treated nets or not treated and a majority was treated nets about 84% agreed to using treated nets while 16% disagreed to use treated nets .

4. If yes , was it treated(insecticide)

25 responses

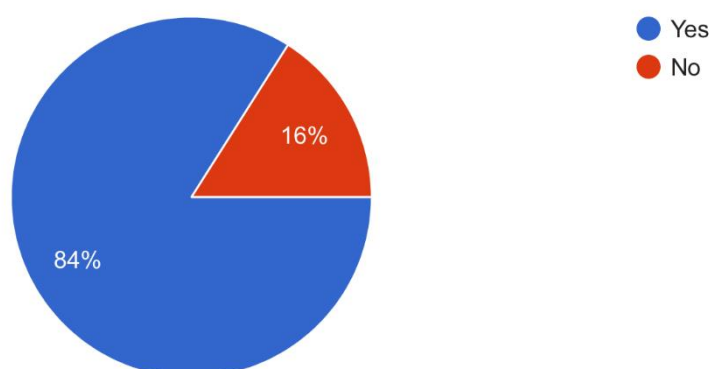


FIGURE 7 IF YES, WAS IT TREATED (INSECTICIDE)

)

4.1.9 POSSESSION OF ITN AMONG PREGNANT WOMEN IN MUTENDERE

The figure below depicts respondent's response regarding how many people possess a (ITN) mosquito nets at home about 60% pregnant women have ITN at home use the mosquito nets at night when sleeping and about 40% pregnant women don't have ITN at home.

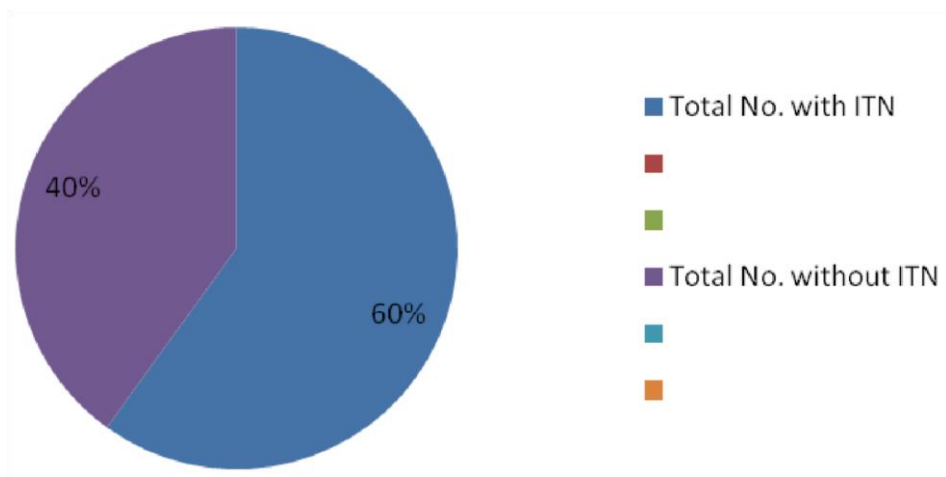


FIGURE 8: POSSESSION OF ITNS AMONG PREGNANT WOMEN

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4.2.0 WHERE DO YOU GET THE MOSQUITO NETS FROM

The majority of the respondents about 60.9% get the mosquito nets from the clinics while 21.7% get the mosquito nets from the hospitals and 17.4% get the mosquito nets from family and friends the figure below shows the results

9. where do you get the mosquito nets from?
23 responses

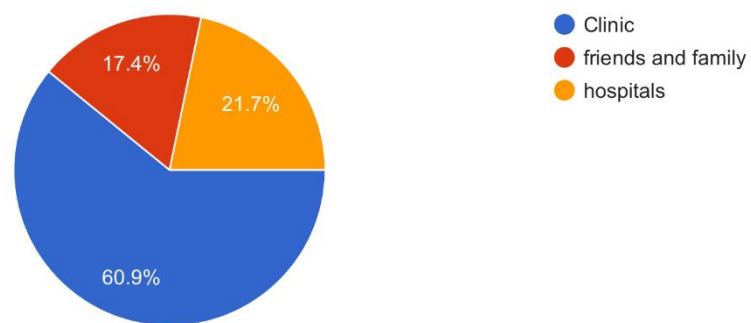


FIGURE 9: WHERE DO YOU GET THE MOSQUITO NETS FROM?

4.2.1 RATE OF USE OF ITN AMONG PREGNANT WOMEN IN MUTENDERE COMPOUND

The majority of the respondents about 56% pregnant women never use the ITN when sleeping at night while about 23% pregnant women always use the ITN when sleeping at night and 21% pregnant women just use sometimes when sleeping at night.

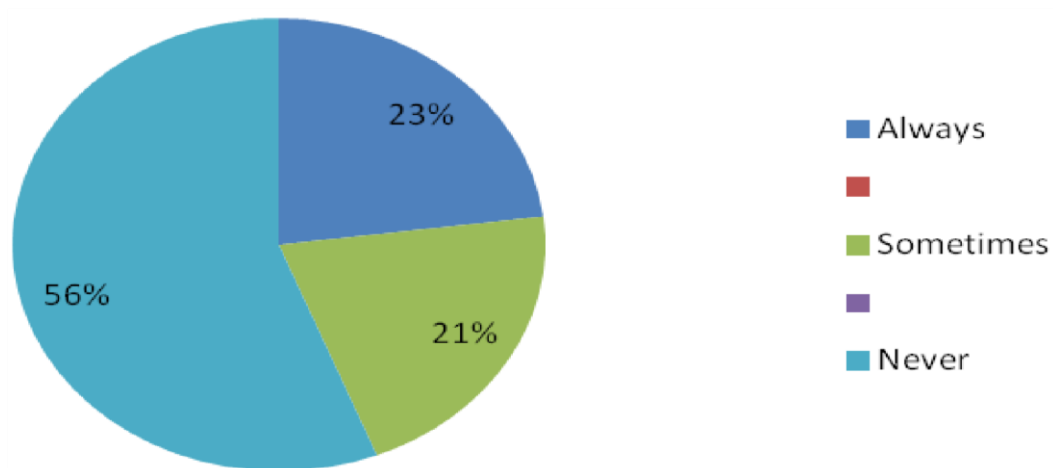


FIGURE 10: *RATE OF USE OF ITNS AMONG PREGNANT WOMEN IN MUTENDERE COMPOUND*

CHAPTER FIVE

DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.0 INTRODUCTION

This study investigated The awareness and utilisation of insecticide-treated nets among pregnant and women with the history of pregnancy in Mutendere compound This chapter gives a recap of the purpose and objectives of the study, it highlights on the research findings and further presents the conclusion and recommendations of the whole study.

5.1 DISCUSSION

In this study, it was found that the awareness level of 93% observed in the present study shows that most of the pregnant women attending antenatal clinics in Mutendere clinic were adequately informed about the use of ITNs during pregnancy. This suggests that a lot of health education has actually taken place. Reports from previous studies in Nigeria and other African countries put the awareness level at between 36 and 91% (Ganihu and Jimo, 2003; Gamble et al., 2006; Aluko and Oluwatosin, 2012; Adeyemi et al., 2007 Okoye and Isara, 2011; Salaudeen and Jimoh, 2009; Sangare et al., 2012). The present study thus shows an improvement in awareness level over the previous reports. In the South West zone of Nigeria, the awareness level was reported at between 41.1% in Oshogbo, Osun State (Adeyemi et al, 2007) and 91% in Lagos State (Aina and Ayeni, 2011). In the South-South zone of Nigeria, an awareness level of 88.6% was reported (Okoye and Isara, 2011) whereas the awareness level in the Northern zone of the country was reported at between 36% (Salaudeen et al., 2009) and 91% (Oche et al., 2011).

In other African countries, studies have reported an improvement in the awareness and use of ITNs over the years (Baume et al., 2008; Sangare et al., 2012). However, despite the high awareness level in Mutendere compound , the fact that only 60% of the women owned ITNs while an abysmal 44% used the nets either partly or completely is a cause for concern for health workers in the compound in particular and public health practitioners in general. Previous studies revealed low level of ownership and use of ITNs varying from 20 to 72% (Salaudeen and Jimo, 2009; Oche et al., 2011; Runsewe-Abiodun et al., 2012). The low level of ownership

could be attributed to failure to collect free samples from government agencies (Guyatt and Ochola, 2003; Pettifor et al., 2009), inability to purchase from the open market due to high cost, or ignorance of the importance of sleeping under ITNs during pregnancy, bearing in mind that a percentage of the women don't women just depend on their husband for financial support. Where some women who may not value the nets collect them only to dump them at home for one reason or another. Huge populations of pregnant women patronizing hospitals situated in major urban areas are often left out. The low level of actual use of ITNs by women was 21% pregnant women who just use the ITNs sometimes when sleeping at night which could be attributed to socioeconomic and cultural factors such as poor or inconvenient accommodation to hang the net, poor knowledge, attitude and practices (KAP) concerning the use of ITNs (Chukwuocha et al., 2010) and low level of education as has been reported by some studies (Wagbasoma and Aigbe, 2010; Baley and Deressa, 2008).

5.2 CONCLUSION

The present study concludes that though the level of awareness concerning the use of ITNs by pregnant women in Mutendere compound was high as shown in **figure 5** under results, the actual ownership and use was poor justifying the high prevalence of malaria which has been reported in Mutendere compound. The public health implication is that more work needs to be done by both the government and health workers in Mutendere compound to further raise the level of awareness through health education, increase the accessibility and affordability of ITNs through mass importation so as to motivate more pregnant women to use them and finally to raise the level of formal education through compulsory and free education to secondary level. There is need to provide enabling environments for scaling-up actions that would make ITN accessible, affordable and user friendly to people of low socioeconomic class.

5.2 LIMITATION

The present study has some restrictions that need not to be overlooked when interpreting the study results. The study population was made of pregnant women and those with a history of pregnancy and stay in Mutendere compound. Hence, the findings from this study cannot be generalized to all the pregnant women in Zambia. Hence more research has to be conducted in various areas of Zambia especially densely populated areas of the country. pregnant women have to be educated on the awareness and utilisations of ITN and the dangers that malaria can cause

to the mother and child and the other thing is pregnant don't want to give out information if they use the ITN during pregnancy as a result, there might be an information bias because some information perceived to be sensitive by the pregnant women might not be reported. Therefore, we cannot draw a predictive conclusion based on these results.

5.3 RECOMMENDATIONS

Establishing health campaigns and health programs on the utilisation and awareness of ITN during pregnancy will further help improve the actually utilisation of ITN hence reducing the rate of malaria during pregnancy and mortality. Hence, advocacy for ITN utilisation and awareness among pregnant women reproductive health education at antenatal clinics to promote the use of ITN during pregnancy and not just get and go pack them at home without actually using them. Having vast knowledge on the importance of ITN especially during pregnancy will not only greatly improve the efficiency of use but also reduce high mortality of deaths by malaria. Similarly, help further reduce the prevalence of causing stillbirth and prematurity and other complications caused by malaria during pregnancies in Mutendere compound, Zambian.

TABLE 3: WORK PLAN

march/April 2022	April 2022	April 2022	April 2022	April 2022
Project proposal writing				
	Project submission to LAMUREC for approval			

		Data collection and analysis		
			Data collection, analysis and Report writing	
				submission of report

TABLE 4: BUDGET

BUDGET	
Estimated budget for the study;	
Proposal typing, printing and photocopying	K100
Questionnaire printing and photocopying	K300
Contingency	K400

Internet fees for necessary information for research	K100
Talk time	K100
Report typing and printing	K200
Report binding	K50
Pencils and Pens	K15
	TOTAL K1,150

CHAPTER 6

6 .0 REFERENCES

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7.0 APPENDICES

INFORMATION SHEET

RESEARCH TITLE: THE LEVELS OF AWARENESS AND UTILISATION OF INSECTICIDE-TREATED NETS AMONG PREGNANT WOMEN IN MUTENDERE COMPOUND.

My names are **MULENGA KABASO**, a 6th year Medical student, pursuing a Bachelors of Science in medicine and surgery at Lusaka apex medical university. As part of my studies I need to conduct a research in Public Health in partial fulfillment of the requirements for the Community Medicine course. You are being invited to take part in this research but before you do so, it is important that you understand the purpose of this study and what it will involve. Please read the information below and decide whether you wish to take part or not.

ABOUT THE RESEARCH

The levels of awareness and utilization on the use of insecticide-treated nets among pregnant women remains a problem in communities .however the ministry of health and WHO work hand in hand to promote the use of insecticide-treated in homes to prevent get malaria which can lead to mortality and mobility in the community . The campaigns ensure that pregnant women are aware of the complications of malaria especially during pregnancy .this calls for understanding the knowledge and behavior on the utilization of insecticide-treated nets among pregnant women in the community. This study aims to assess the levels of awareness on the use of ITNs among pregnant women in Mutendere compound.

CONFIDENTIALITY

Should you agree to take part in this study, be assured that no personal information such as names, address or contact details will be obtained. Further, this information will be handled with utmost dignity and will not be distributed to anyone. It is solely for this research purpose.

BENEFITS OF THE STUDY

This study will help address problems to do with the levels of awareness on the use of ITNS among pregnant women and the fight against malaria.

VOLUNTARINESS

There are no monetary payments associated with participating in this study, it is completely voluntary. The data will not be used for commercial purposes and the research is not anticipated to cause you any disadvantages or discomfort.

CONSENT FORM

The purpose of the study has been explained to me and I understand the purpose, the benefits, the risks and confidentiality of the study. I further understand that if I agree to take part in this study, I can withdraw at any time without having to give an explanation and taking part is purely voluntary.

I _____ (names) agree to take part in this study.

Signed _____ Date _____ (participant)

Participant's signature or thumb print.

Signed _____ Date _____ (Researcher)

QUESTIONNAIRE

LUSAKA APEX MEDICAL UNIVERSITY

FACULTY OF MEDICINE

TITLE: THE LEVELS OF AWARENESS AND UTILISATION OF INSECTICIDE-TREATED NETS AMONG PREGNANT WOMEN IN MUTENDERE COMPOUND.

INSTRUCTIONS

1. Please answer all questions by circling the appropriate response and give belief answers in the columns provider.
2. No name should appear on the questionnaire
3. Participants should be free to ask questions during the course of interview.
4. Participants may or may not answer questions sensitive to them.
5. Indicate answers clearly
6. All information obtained will be confidential.

Section 1. Demographics Characteristics

1. Age group (years)

- A) Below 18 B) 18-29 C) 30+

2. Marital status.

- A) Married B) single C) Divorced

3. How many children?

- A) 0 B) 1-3 C) 4+

4. How many rooms in the house?

- A) 1 B) 2-3 C) 4+

5. How is the sewerage system in your area?

A) Poor B) Good C) Better

Section 2. Awareness on the use of insecticide-treated nets

1. Do you know about mosquito nets?

A) Yes B) No

2. If yes what do you know about them? Just belief answer

3. Have you ever used a mosquito net?

A) Yes B) No

4. If yes, was it treated (insecticide)

A) Yes B) No

5. If no, what do you use to avoid mosquito bites? Just belief answers

6. How is your surrounding at home

A) No long grass B) A lot of long grass C) Water ponds

Section 3. Accessibility of insecticide treated mosquito nets

7. How do you acquire mosquito nets?

A) Buy B) Get free of charge

7. How many people have mosquito nets at home?

A) Only the parents B) Only the children C) All of you D) None

8. Where do you get the mosquito nets from?

A) Clinics B) Friends and family C) Hospitals

9. How many family members use the mosquito nets at home?
A) All of you B) None C) Fewer
10. How often do you use the mosquito net?
A) Every day B) Sometimes C) Not at all
11. How is the sewerage system in your area?
A) Poor B) Good

**LUSAKA APEX
MEDICAL UNIVERSITY**



LUSAKA APEX MEDICAL UNIVERSITY

PROPOSAL REVIEW APPLICATION FORM

Telephone: + 260-978482235/966821353

Foxdale campus

P.O. Box 31909

Lusaka, Zambia

E-mail: lamurec@lamu.edu.com

FWA00028892

IRB 00012669

**APPLICATION FOR ETHICAL APPROVAL FOR PROPOSED
RESEARCH INVOLVING HUMAN PARTICIPANTS**

1. TITLE OF STUDY: THE LEVELS OF AWARENESS AND UTILISATION OF INSECTICIDE-TREATED NETS AMONG PREGNANT WOMEN IN MUTENDERE COMPOUND.

2. PRINCIPAL INVESTIGATOR:

Name: MULENGA KABASO
STUDENT

Qualifications:

Present Appointment/Affiliations:

3a. OTHER INVESTIGATORS:

Name: Qualifications:

Present Appointment/Affiliations:

Name: Qualifications:

Present Appointment/Affiliations:

Name: Ms. S. Namwawa
MPH.

Qualifications: BSc.,

Name: _____ Qualifications: _____

To include aims and objectives, participants to be studied, research methods (questionnaires, physical examination, specimens to be collected, laboratory investigations, standard and experimental therapies, environmental changes, etc.) and statistical analyses. Simple or lay terminology should be used as much as possible.

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5. ARE THE PARTICIPANTS DEPENDENT ON ANY OF THE INVESTIGATORS?

As students: Yes/No*

As employees: Yes/No*

As patients: Yes/No*

In other ways: Yes/No*

If 'Yes' to any of the above, give details:

6. POSSIBLE BENEFITS TO PARTICIPANTS:

7. POSSIBLE RISKS TO PARTICIPANTS:

8. POSSIBLE BENEFITS TO THE COMMUNITY:

9. BUDGET:

(a) Financial support (requested or granted): Yes/No* **Sponsor:**
Yes/No*

(b) Are there costs which will be carried by other institutions (e.g. the Hospital)?
Yes/No*

(c) Are there costs which will be carried by the participants involved (e.g. travel, Accommodation, meals, treatment)?

Yes/No*

(d) Will the care or the time spent in hospital be prolonged?
Yes/No*

If 'Yes' to any of the above, give details:

10. SUBMISSION:

Attachments include the following in 4 copies each:

(a) The full protocol	Yes/No*
-----------------------	---------

(b) Questionnaire Yes/No/NA*

(c) Informed Consent Form Yes/No*

(d) Approval from the appropriate Research Committee Yes/No*

* Delete as appropriate.

NA: Not applicable

11. DECLARATION:

I MULENGA KABASO
..... (Full Name)

Apply to the Research Ethics Committee of the Lusaka Apex Medical University for approval of the above research proposal involving human participants, as conforming with recognized ethical standards and as not impinging on the rights of the individuals.

Date. 03/05/2022.

Signed: 

PRINCIPAL INVESTIGATOR

Contact Address: CHILANGA, LUSAKA.....

.....

.....

Telephone No.: 0975817631

Email: Mcmulengakabaso24@gmail.com

Full name of Head of Department:

.....

Signed:

Date:

.....

HEAD OF DEPARTMENT

Full name of Supervisor: Ms. SAMPA NAMWAWA

Signed: 

Date:

...04/05/22.....

SUPERVISOR

PAYMENT FOR APPROVAL TO ETHICS

72 12:05 Pmp/16/02/000266

Cash / Cheque Deposit Slip

No. **247788**

Date **3 4 22**

access
Access Bank Zambia Limited

Please ensure that all cheques are crossed before paying in

Title of Account
LUSAKA APEX MEDICAL UNIVERSITY

A/C No. **030011356451**

Depositor's Full Name
MULENGA KABASO

Depositor's Address
Chilanga LUSAKA

Depositor's Contact Tel No. **0975817631** Depositor's ID No. (int'l Passport NRC No.) **179581551**

Amount in words
Three hundred Kwacha

Signature **MR G.**

THIS DEPOSIT IS SUBJECT TO FINAL VERIFICATION

CHEQUE PAYMENT				CASH PAYMENT			
Bank	Chq. No.	Location	Kwacha	Ngwee	Cash	Kwacha	Ngwee
					K 100	300	00
					K 50		
					K 20		
					K 10		
					K 5		
					K 2		
					K 1		
					50 Ngwee		
					10 Ngwee		
TOTAL						TOTAL	300 00

White: Bank Copy Green: Customer Copy Pink: Control Copy

NOTE: Customer are informed that the Bank reserves the right at its discretion to postpone payment of cheque (s) drawn against uncleared effects which may have been credited to the account.

LUSAKA APEX
MEDICAL UNIVERSITY



**LUSAKA APEX MEDICAL UNIVERSITY BIO-MEDICAL
RESEARCH ETHICS COMMITTEE
(LAMUBREC)**

Telephone: +260 976051832/0977480460

Foxdale Campus
Plot N° 3073
P O Box 31909
LUSAKA, ZAMBIA

Email: lamubrec@lamu.edu.zm

FWA 00029892

IRB 00001131

Ref: 00201-22

13th May 2022

The Principal Investigator
M/s Mulenga Kabaso
C/O Lusaka Apex Medical University
Faculty of Health Sciences
LUSAKA



Dear M/s Mulenga Kabaso,

**RE: THE LEVELS OF AWARENESS AND UTILIZATION OF INSECTICIDE-
TREATED NETS AMONG PREGNANT WOMEN IN MTENDERE COMPOUND**

The above mentioned research proposal was submitted to Lusaka Apex Medical University Bio-Medical Ethics Committee (LAMUBREC) on 4th May 2022. The review was based on the following documents that were submitted.

- a. Study Proposal
- b. Questionnaires
- c. Participant's Consent Form

We are pleased to inform you that your research proposal has been approved with minor corrections as shown on the feedback report. Kindly make the corrections to the satisfaction of your Supervisor.

Ref: 00201-22

APPROVAL NUMBER

LUSAKA APEX
MEDICAL UNIVERSITY



Faculty of Medicine and Surgery
Mutandwa Campus
P O Box 31909
LUSAKA
2nd September, 2022

To Whom it may Concern

Dear Sir /Madam

RE: REQUEST FOR PERMISSION TO CONDUCT A RESEARCH STUDY AT YOUR FACILITY -Mr MULENGA KABASO-PMP/16/02/000266

The above subject matter refers

The bearer of this letter **Mr MULENGA KABASO -PMP/16/02/000266** is a 6th year bonafide student of the Lusaka Apex Medical University in the Faculty of Medicine and Surgery. Currently she is undergoing a rotation in Pubic health and the component requires that students carry out studies in any area of interest in Public Health.

The student wishes to conduct a Research Study on the Topic: **THE LEVELS OF AWARENESS AND UTILISATION OF INSECTICIDE-TREATED NETS AMONG PREGNANT WOMEN IN MUTENDERE COMPOUND**

The purpose of this letter is to request for permission to allow the student to conduct this study at your Faculty. The study has been granted ethical approval by the Lusaka Apex Medical University Biomedical Research Ethics Committee (LAMUBREC.) The Approval Letter is attached.

The assistance rendered will be highly appreciated.

Yours Faithfully,

