

**KNOWLEDGE AND ATTITUDES OF NURSING MOTHERS TOWARDS THE USE OF
MOSQUITO TREATED NET AT OREDO**

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**A RESEARCH PROJECT SUBMITTED TO THE DEPARTMENT OF
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CERTIFICATION

We, the undersigned, acknowledge that this research work was carried out by **Oseghale Georgina** in the Department of Health, Safety and Environmental Education, Faculty of Education, University of Benin.

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DEDICATION

This research undertaking is solely dedicated to the Great God, for He is the spring from whence all the wisdom and courage expended in this work are derived.

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ABSTRACT

Malaria remains a significant public health concern, particularly in sub-Saharan Africa, posing a substantial risk to vulnerable populations, including nursing mothers and their infants. Mosquito-treated nets (MTNs) serve as an effective preventive measure against malaria transmission. This study aimed to investigate the knowledge and attitudes of nursing mothers towards the use of MTNs in Oredo, Benin City, Edo state.

A total of 400 nursing mothers were surveyed to assess their demographic characteristics, knowledge, attitudes, and utilization of MTNs. The findings revealed that a majority of respondents were aged between 31 and 40, with a

predominant educational background in secondary school education. Self-employment was the most common occupation among respondents.

In terms of knowledge, nursing mothers exhibited a commendable understanding of the purpose and proper usage of MTNs. They demonstrated a high level of awareness regarding the diseases preventable by these nets, primarily malaria. Furthermore, respondents showed confidence in their knowledge of the correct installation and maintenance of MTNs.

Attitudes towards MTNs were generally positive, with nursing mothers recognizing the importance of MTNs for their health and that of their children. Most found using MTNs comfortable during sleep and did not consider it inconvenient in their daily routines. Positive experiences of others and healthcare professionals' recommendations positively influenced their attitudes.

Utilization of MTNs was prevalent among respondents, and they believed that their knowledge and attitudes played a significant role in their consistent use. The study highlighted the importance of awareness campaigns and recommendations from healthcare professionals in further encouraging net usage.

This study provides valuable insights into the knowledge and attitudes of nursing mothers towards the use of MTNs in Oredo. The findings underscore the significance of education and awareness campaigns tailored to the community's specific needs. Furthermore, community engagement, accessibility, affordability, monitoring, and evaluation are crucial elements for promoting the consistent and widespread use of MTNs, ultimately contributing to improved public health outcomes in the region.

CHAPTER ONE

INTRODUCTION

Background of Study

The use of insecticide treated mosquito nets is one of the strategies of the Roll Back Malaria initiative in Nigeria and it is a form of vector control measure but, there is a discordant between the knowledge of insecticide treated nets and its uses (USAID, 2014). Malaria is a preventable and curable disease but, its burden remains a challenge despite the existence of effective technologies and measures for its prevention and control (Amaran and Onwube, 2012). The World Health Organization (WHO, 2010) stated that, malaria is a life-threatening disease that is transmitted to people through the bites of infected female anopheles' mosquito, and it is responsible for the high morbidity and mortality rates amongst children under 5years and nursing mothers. Udonwa, Gyuse and Etokidem (2010) posited that, malaria is a quite common disease of the tropics and one of the leading causes of death and illness in Nigeria. It is a public health issue where it accounts for more cases of death than any other country in the world, according to United States Agency for International Development (USAID, 2014).

During an interaction the researcher had with 24-year-old staff on admission with plasmodiasis, she admitted that she had no knowledge of ITNs, a lady in

outpatient clinic declared that she had little knowledge of it but doubt if it is effective. Hence the emergence of treated bed nets with insecticide distributed to endemic regions in Africa of which Nigeria is one. Having known the efficacy of ITNs as a core intervention to prevent malaria, so much research has been coined out in countries to assess the level of knowledge and use of ITNs. However, there are variations hence, this study investigated the knowledge and use of ITNs among nursing mothers in Oredo Local Government Area of Edo State.

Furthermore, in endemic areas the disease is responsible for 60% of all outpatient's visits to clinics and 30% of hospitalization among children and adults in Nigeria. Malaria remains a major problem in Nigeria which can be controlled using insecticide treated nets. Insecticide treated nets like the name implies are nets that are treated with chemicals which repel or kills insects. Insecticide Treated Nets (ITNs) have been employed as main vector control tool for personal protection of vulnerable groups. According to Olisa (2012), insecticide treated nets are mosquito nets that are treated as recommended that maintain effective level of insecticide for at least 3 years even after repeated washing. Household Survey Indicators for Malaria Control (2013) stated that, an ITN was defined as a factory-treated net that did not require any further treatment or a net that had been soaked with insecticide within the past 12 months. In the bid to reduce the

scourge the effects of malaria, some number of program initiatives were put in place. The chief among them is Roll Back malaria (RBM) initiative introduced in 1998. This has a relief on malaria burden by 75% by the year 2015 there are other measures to accomplish this namely-prompt and adequate treatment of mosquito window nets, use of ITNs and environmental management which includes cleaning of drains and in door residual spraying of all these measure, ITNs has been related very efficacious and cost effective method of controlling malaria. There are four types of malaria parasite which infect man: plasmodium Vivax, plasmodium falciparum, plasmodium oval, plasmodium malaria. Malaria is an acute and chronic disease caused by an obligate intracellular protozoan of the genus plasmodium (Eneanta, 1996). Malaria has also been one of the world's worst killer diseases throughout recorded human history. Despite attempt to eradicate it, it remains one of the worst diseases in terms of death annually.

Statement of Problem

Malaria's prevalence and its escalating impact, both in Nigeria and globally, are alarming, emphasizing the urgent need for comprehensive interventions. The surge in cases can be attributed to the transmission of the Plasmodium parasite through the bite of female Anopheles mosquitoes. To combat this deadly disease effectively, a proactive response by the government is imperative. This involves

not only raising public awareness about the prevalence of malaria but also disseminating vital information about its symptoms, transmission, and prevention methods (Abba et al., 2011). Justification for these measures lies in the fact that informed individuals are better equipped to take preventive actions, seek timely medical care, and adopt practices that minimize mosquito breeding grounds.

Moreover, the gravity of the malaria situation is evident in Oredo Local Government Area of Edo State, where malaria accounts for a substantial proportion of health issues within the community (Adeoye et al., 2017). The empirical data provided by Adeoye and colleagues (2017) underscores the pressing need for targeted interventions in this specific region. The reasons behind this malaria burden are multifaceted and include poor hygiene practices and environments conducive to mosquito proliferation (Okeibunor et al., 2016). Justifying the significance of addressing these factors stems from the understanding that eradicating malaria requires not only treating infected individuals but also creating an environment that impedes mosquito breeding and transmission.

Nursing mothers and children under the age of five emerged as particularly vulnerable groups within Oredo Local Government Area (Adeoye et al., 2017).

This finding highlights the critical importance of tailoring interventions to these demographic segments. The research conducted by Adeoye et al. (2017) delves into the local community's perceptions of malaria transmission, recognition of symptoms, healthcare-seeking behaviors, and preventive practices. This comprehensive exploration acknowledges that effective solutions must encompass not just medical aspects but also the cultural, social, and contextual dimensions of the issue (Adeoye et al., 2017).

Understanding the socio-cultural attributes and demographics of the community, as emphasized by Okeibunor et al. (2016), further strengthens the rationale for targeted interventions. This knowledge equips authorities and healthcare professionals with insights that facilitate the formulation of contextually appropriate strategies. The assertion that addressing malaria comprehensively requires a multifaceted approach is reinforced by the complex interplay of factors driving its prevalence.

Research Questions

The following research questions are raised to guide the study:

1. What is the level of knowledge of nursing mothers about mosquito-treated nets in Oredo?

2. What are the attitudes of nursing mothers towards the use of mosquito-treated nets in Oredo?

3. To what extent do nursing mothers use of mosquito treated nets in Oredo?

4. Do attitude influence the practice of nursing mothers on the use of mosquito-treated nets in Oredo?

Purpose/Objectives of Study

The main purpose of this study is to examine the knowledge and attitudes of nursing mothers towards the use of mosquito treated net at Oredo. The specific objectives of this study are hence given below:

1. To assess the level of knowledge of nursing mothers about mosquito treated nets.

2. To determine the attitudes of nursing mothers towards the use of mosquito treated nets.

3. To ascertain the extent to which nursing mothers make use of mosquito treated net in Oredo.

4. To ascertain if attitude influences the use of mosquito treated nets among nursing mothers in Oredo.

Significance of the Study

This research work is truly relevant in several ways to communities, personnel, individual, and government.

The work will expose the prevalence of malaria and enlighten nursing mothers on the necessity of using treated mosquito nets in Benin City mostly in Oredo Local Government Area. Also, it will proper measures for preventing this deadly disease.

This study will also enlighten people on the signs and symptoms of malaria and how the parasite plasmodium invades the host body through the transmission by the vector mosquito.

The study will encourage the government of Edo State to swing into actions by creating medias for extensive creation of awareness to nursing mothers in the state.

Scope of Study

This project work focuses on the knowledge and attitude of nursing mothers on the use of treated mosquito nets years in Oredo Local Government Area. This study will cover areas and quarters in Oredo Local Government Area, Benin City, as sample study where resident's opinion will be sampled.

However, there is delimitation of this study to just three area because of time constraint and means of transportation.

Definition of Terms

Children: Plural child. Children are human who is not yet an adult.

Fever: Fever is an abnormally high body temperature and also the state of nervous excitement.

Malaria: Is a disease caused by parasites from infected female anopheles mosquitoes which often presents as fever, headache, cold etc.

Parasite: This is an organism that live inside or outside living organism and derives its nutrients.

Prevalence: This is a condition that is common or widespread.

Protozoan: These are microscopic and unicellular organism found in both marine and fresh water.

Symptoms: Symptoms is a change in the body or mind which is the sign of a disease.

CHAPTER TWO

REVIEW OF LITERATURE

This chapter will be discussed under the following subheadings:

- Concept of Mosquito Treated Nets
- Knowledge of Nursing Mothers on Mosquito Treated Nets
- Attitude of Nursing Mothers towards the use of Mosquito Treated Nets
- Uses of Mosquito Treated Nets by Nursing Mothers
- Influence of Knowledge on the use of Mosquito Treated Nets
- Influence of attitudes on the use of Mosquito Treated Nets
- Summary of Review of Related Literature

Concept of Mosquito treated nets.

Treated bed nets (ITNs) are a form of personal protection that has been shown to reduce malaria illness, severe disease, and death due to malaria in endemic regions (KCC, 2015). In community-wide trials in several African settings, ITNs were shown to reduce the death of children under 5 years from all causes by about 20%. Treated mosquito nets are an essential tool in the fight against mosquito-borne diseases, particularly malaria. They are a type of bed net that is treated with insecticides to enhance their effectiveness in preventing mosquito bites and reducing the transmission of malaria and other vector-borne diseases. Nets may

vary by size, shape, color, material, and/or insecticide treatment status. Most nets are made of polyester, polyethylene, or polypropylene.

Only two insecticides classes are approved for use on ITNs (pyrroles and pyrethroids), (Hutchinson,2014). These insecticides have been shown to pose very low health risks to humans and other mammals but are toxic to insects and kill them. Previously, nets had to be retreated every 6 to 12 months, or even more frequently if the nets were washed (Isabirye and Wendo, 2014). Nets were retreated by simply dipping them in a mixture of water and insecticide and allowing them to dry in a shady place. The need for frequent retreatment was a major barrier to widespread use of ITNs in endemic countries (Hutchinson, 2014). In addition, the additional cost of the insecticide and the lack of understanding its importance resulted in very low retreatment rates in most African countries.

Recent studies have suggested that the rise of pyrethroid resistance may undermine the effectiveness of nets. To help manage resistance, some net products incorporate piperonyl butoxide (PBO) along with a pyrethroid insecticide, but there is not yet evidence that this significantly improves ITN effectiveness in areas with high levels of pyrethroid resistance, and WHO currently does not consider nets that incorporate PBO to be tools for managing pyrethroid resistance (Guytt, 2015).

The concept behind treated mosquito nets is straightforward: they create a physical barrier between individuals sleeping under the net and disease-carrying mosquitoes. The insecticides used in the treatment of these nets serve two main purposes:

1. Repelling mosquitoes: The insecticides used on treated nets act as a repellent, deterring mosquitoes from landing on or passing through the netting. This helps to keep the mosquitoes outside the net, reducing the chances of getting bitten during sleep.

2. Killing mosquitoes: In addition to repelling mosquitoes, the insecticides used in the treatment are designed to be lethal to the insects. If a mosquito does happen to land on the net, the insecticide can kill it, preventing it from spreading the disease.

The most used insecticides for treating mosquito nets are pyrethroids, which are relatively safe for humans and have been proven effective in controlling mosquito populations (DISH, 2015B). Pyrethroids are used because of their low toxicity to humans and ability to repel and kill mosquitoes effectively (Collins, 2015).

Treated mosquito nets are a cost-effective intervention in areas where mosquito-borne diseases are prevalent, especially in regions with limited access to healthcare facilities. They provide protection to individuals while they sleep,

which is when they are most vulnerable to mosquito bites and have been shown to significantly reduce the incidence of malaria and other vector-borne diseases (Deboru, 2013).

Efforts to distribute and encourage the use of treated mosquito nets are typically part of broader public health campaigns aimed at combating malaria and other mosquito-borne illnesses (Diema, et al., 2017). Proper and consistent use of treated nets can substantially contribute to reducing the burden of these diseases and saving lives, particularly among vulnerable populations like children and pregnant women in malaria-endemic regions.

Knowledge of Nursing Mothers on Mosquito Treated Nets

The nexus between knowledge and behavior is a pivotal determinant in public health interventions, particularly in the context of preventive strategies like the use of mosquito treated nets. While nursing mothers in Nigeria exhibit a commendable level of understanding regarding the significance of these nets in preventing malaria (Fapohunda et al., 2013; Fatungase et al., 2012), the transition from awareness to effective utilization remains a complex challenge that warrants a comprehensive exploration. This essay dissects the intricate interplay between knowledge and the adoption of mosquito treated nets, substantiated by a diverse array of references.

Fapohunda et al.'s study (2013) on the home-based management of fever in Uganda underscores the need for knowledge enhancement regarding the correct usage of mosquito treated nets. While awareness of their efficacy is well-established, misconceptions and incorrect beliefs hinder the realization of their full potential. Fatungase et al. (2012) highlight the transformative impact of health education interventions on caregivers' knowledge in Nigeria. This emphasizes that while knowledge forms the foundation, it needs active reinforcement and clarification to align with recommended practices.

Giming's research (2011) on the use of insecticide-treated nets in Mali emphasizes the catalytic role of educational interventions in bridging the gap between knowledge and action. Similar conclusions are drawn by Isabirye and Wendo (2014), revealing that management of malaria in rural Rukungiri district depends heavily on knowledge transfer and community education. This highlights the pivotal role of informational campaigns in contextualizing knowledge and fostering behavior change.

The economic lens brought forth by Goodman et al. (2015) casts light on the broader implications of knowledge-driven interventions. By comprehending the potential economic impact of mosquito-borne diseases, stakeholders can recognize the value of knowledge dissemination and utilization. Guytt et al.'s

study (2015) in highland Kenya distinguishes between different prevention strategies, elucidating the balance between indoor residual spraying and insecticide-treated bed nets. This highlights the intricate nature of decision-making, where knowledge influences the selection of the most effective approach.

Hutchinson's background paper (2014) on malaria in Uganda accentuates the necessity of holistic education campaigns that consider local dynamics. The amalgamation of cultural acceptance, accessibility, and awareness is pivotal in ensuring knowledge translates into action. Collins' report (2015) on insecticide-treated materials promotion echoes this sentiment, highlighting that disseminating knowledge should be a multipronged effort involving community engagement and local leaders.

Attitudes of Nursing Mothers towards Mosquito Treated Nets

The attitudes of nursing mothers towards mosquito treated nets play a pivotal role in determining the efficacy of malaria prevention efforts, particularly in regions where mosquito-borne diseases pose a significant threat. This essay delves into the intricate landscape of nursing mothers' attitudes towards mosquito treated nets, drawing insights from a diverse range of references that span both qualitative and quantitative studies.

KCC's baseline assessment (2015) in Kampala underscores the importance of understanding nursing mothers' attitudes towards mosquito treated nets, as it directly influences net coverage. The assessment, while unpublished, hints at the significance of local perceptions and preferences in shaping net utilization patterns. Similarly, Kengeya et al.'s study (2013) on rural women in Uganda unveils the complex interplay between recognition, treatment-seeking behavior, and causal perceptions of malaria. These attitudes contribute to nursing mothers' decision-making processes regarding the use of preventive measures like mosquito treated nets.

Kilian and Byamukama's surveillance (2013) using primary school-based data collection in Kabarole, Kamwenge, and Kyenjojo provides quantitative insights into net coverage. The data-rich approach offers a glimpse into how attitudes translate into practical utilization patterns. Kilian et al.'s research (2015) on women's attitudes towards pre-packed malaria treatment unveils a nuanced aspect of nursing mothers' perspectives. While not directly related to nets, it underscores the broader context of attitudes towards malaria-related interventions.

The pilot project on Uganda's ITN voucher scheme (Kilian, 2013) is an exemplar of understanding nursing mothers' attitudes towards innovative approaches. Analysis of the data from this project sheds light on their acceptance of such

schemes, which indirectly reflects on their broader attitudes towards malaria prevention strategies. The malaria situation analysis conducted by Kilian et al. (2013) in Kabarole and Bushenyi Districts adds a qualitative dimension to the discussion. This unpublished study showcases the value of qualitative insights in unraveling the tapestry of attitudes.

Studies like Leku's dissertation (2015) contribute context-specific perspectives, emphasizing how community knowledge, attitudes, and contributions collectively shape malaria control efforts. Insights from such grassroots studies highlight the mosaic of factors influencing nursing mothers' attitudes. Luanniale and Rajais' work (2014) among the Baganda community underscores the delicate balance between local and biomedical concepts of malaria. This interplay directly informs nursing mothers' attitudes towards preventive strategies like mosquito treated nets.

In a broader context, Lutalo et al.'s report (2015) on the monitoring and evaluation of Roll Back Malaria in Uganda establishes a quantitative baseline, showcasing nursing mothers' attitudes within the broader context of national efforts. Maia et al.'s review (2018) of mosquito repellents offers an additional dimension, underscoring the importance of considering nursing mothers' preferences in preventive measures beyond just treated nets.

Influence of Knowledge of Nursing Mothers on the Use of Treated Mosquito Nets

The knowledge of nursing mothers plays a crucial role in influencing the use of treated mosquito nets to protect themselves and their infants from malaria (Fapohunda, et al., 2013). Here are some ways in which knowledge can impact the utilization of treated mosquito nets:

1. Awareness of Malaria Transmission: Nursing mothers who are educated about how malaria is transmitted, especially through the bites of infected mosquitoes, are more likely to understand the importance of using mosquito nets as a preventive measure.

2. Understanding the Benefits of Treated Mosquito Nets: Knowledgeable nursing mothers will be aware of the effectiveness of treated mosquito nets in reducing the risk of malaria infection. They will know that these nets are treated with insecticides that can kill or repel mosquitoes, offering added protection compared to untreated nets.

3. Knowledge of Vulnerability: Mothers who are informed about the higher vulnerability of pregnant women and young children, including infants, to malaria

will be more motivated to use treated mosquito nets to safeguard their health and that of their babies.

4. Proper Usage and Maintenance: Educated nursing mothers are more likely to understand the correct way to use and maintain treated mosquito nets. They will know the importance of keeping the nets in good condition and regularly re-treating them with insecticides when needed.

5. Health-seeking Behavior: Knowledgeable nursing mothers are more likely to adopt positive health-seeking behaviors, such as seeking antenatal care and advice from healthcare providers, who can further emphasize the importance of using mosquito nets during pregnancy and for their infants.

6. Overcoming Misconceptions: Sometimes, there might be misconceptions or cultural beliefs surrounding the use of mosquito nets. Knowledgeable nursing mothers can help dispel these myths and promote the appropriate and consistent use of treated nets.

7. Role Modeling: When nursing mothers are well-informed about the benefits of treated mosquito nets, they can act as role models for their families and communities, encouraging others to adopt similar preventive measures. It is essential to provide targeted health education and information to nursing mothers

through various channels, including antenatal care clinics, community health workers, and educational campaigns. By empowering nursing mothers with accurate and relevant knowledge, the utilization of treated mosquito nets can be significantly improved, contributing to the reduction of malaria cases and protecting the health of both mothers and infants.

Uses of Mosquito Treated Nets by Nursing Mothers

Mosquito-borne diseases cast a shadow over global health, prompting a multifaceted approach to mitigate their impact. Among the spectrum of interventions, the use of mosquito treated nets emerges as a vital preventive strategy, particularly for nursing mothers and their infants. This essay explores the profound significance of mosquito treated nets for nursing mothers, incorporating insights gleaned from diverse studies.

The study by Luanniale and Rajais (2014) sheds light on the nuanced interplay between local perceptions of malaria and biomedical understandings within Uganda's Baganda community. This coexistence shapes the acceptance and utilization of preventive measures, including mosquito treated nets. While biomedical knowledge underscores the efficacy of treated nets, cultural beliefs and local interpretations can wield influence over their adoption. The Baganda's

perceptions underscore the importance of context-specific considerations in fostering the uptake of mosquito treated nets.

Lutalo et al.'s (2015) report delves into the crucial realm of monitoring and evaluating Roll Back Malaria in Uganda. The study's focus on baseline data is crucial in providing insightful benchmarks regarding malaria prevalence and the effectiveness of preventive measures, including mosquito treated nets. This underscores the role of data-driven strategies in refining and targeting interventions toward nursing mothers and other vulnerable populations.

Maia et al.'s (2018) Cochrane review elucidates the potential of mosquito repellents as adjunctive tools to mosquito treated nets. While nets serve as physical barriers, repellents confer an additional layer of protection, particularly during outdoor activities. This realization holds implications for nursing mothers, who may require safeguarding beyond the confines of their sleeping quarters. It underscores the importance of a comprehensive approach to malaria prevention.

Makanga's (2014) study, centered on Ndeeba Parish's peri-urban region, unravels the community's mosaic of malaria control methods. This localized perspective is vital in comprehending the dynamics of preventive measures, including treated nets, within authentic settings. Such studies bridge the gap between policy

recommendations and on-the-ground realities, revealing the contextual facets that shape nursing mothers' choices concerning treated nets.

Mangeni's (2015) exploration of acceptance and compliance with intermittent presumptive treatment (IPT) in Busia District offers insight into the intricate tapestry of preventive strategies, including treated nets and IPT. For nursing mothers, discerning these dynamics is pivotal, as it informs their decisions regarding preventive measures in alignment with their unique circumstances.

In line with these studies, Mathur's (2015) comprehensive textbook underscores the imperative of a holistic approach to community medicine and preventive strategies. This approach resonates with the intricate nature of mosquito-borne disease prevention, which encompasses the use of treated nets by nursing mothers. It underscores the importance of amalgamating factors such as knowledge, attitudes, access, and cultural beliefs to devise effective interventions.

Influence of Knowledge on the use of Mosquito Treated Nets

The use of mosquito treated nets as a frontline defense against mosquito-borne diseases has garnered immense attention, especially in regions where these diseases are endemic. However, the effective utilization of these nets hinges

significantly on the level of knowledge possessed by communities regarding their benefits, correct usage, and the broader context of malaria prevention.

Batega's research (2015B) offers a nuanced exploration of the sociological dimensions surrounding the home-based management of malaria and fever in Uganda. This study illuminates how knowledge intertwines with acceptability, accessibility, and compliance with treated nets. It becomes evident that the adoption of preventive strategies is closely linked to the community's awareness of their effectiveness and how seamlessly they integrate with local lifestyles. The assessment conducted by Batega et al. (2013) further underscores the significance of accurate knowledge dissemination, revealing that higher utilization rates are aligned with proper operationalization of the strategy at district and community levels. Collins' report (2015) serves as an echo, accentuating the role of knowledge promotion in enhancing the utilization of insecticide-treated materials.

The Centers for Disease Control and Prevention (CDC, 2010) reiterates the pivotal role of accurate knowledge in healthcare decision-making. However, Deboru's study (2013) conducted in Arua Municipality introduces a disconcerting element—the potential of misinformation or insufficient awareness amplifying malaria prevalence. This underscores that communities lacking comprehensive knowledge about the genuine benefits of treated nets might falter in their optimal

utilization. This scenario emphasizes the urgency of concerted efforts to disseminate accurate information about the preventive benefits of mosquito treated nets.

However, the relationship between knowledge and utilization isn't linear; it is intricately influenced by local contexts. Diema et al.'s (2017) study conducted in the Upper East Region of Ghana exemplifies this complexity by highlighting barriers that impede the sustained use of insecticide-treated bednets. These barriers, ranging from cultural practices to infrastructural limitations, interact with the level of knowledge possessed by communities. Hence, a comprehensive understanding of the local dynamics is indispensable to designing interventions that harness the potential of knowledge and adapt it to the community's unique circumstances.

In sum, the multifaceted relationship between knowledge and the utilization of mosquito treated nets is underscored by the comprehensive array of references examined. While knowledge is pivotal for informed decision-making, it is not devoid of challenges stemming from varying levels of awareness, cultural intricacies, and contextual factors. The references collectively emphasize that strategic, tailored interventions grounded in insights from studies such as Batega's and Diema's are pivotal to optimizing the positive influence of knowledge on the

utilization of mosquito treated nets. Efforts to bridge knowledge gaps and address local dynamics will undoubtedly be central in maximizing the impact of this fundamental preventive measure.

Influence of the Attitudes of Nursing Mothers on the Use of Treated Mosquito Nets

The attitudes of nursing mothers can significantly influence the use of treated mosquito nets as a preventive measure against malaria (Giming, 2011). Here's how their attitudes can impact the utilization of mosquito nets:

1. Perceived Susceptibility: If nursing mothers believe that they and their infants are at risk of contracting malaria, they are more likely to have a positive attitude towards using treated mosquito nets. Understanding their vulnerability can motivate them to take proactive steps to protect themselves and their babies.

2. Perceived Effectiveness: Positive attitudes towards the effectiveness of treated mosquito nets as a means to prevent malaria can encourage nursing mothers to use them consistently. If they trust that the nets will indeed provide protection, they are more likely to adopt them as part of their daily routine.

3. Barriers and Facilitators: Attitudes can shape how nursing mothers perceive barriers to using mosquito nets (e.g., discomfort, inconvenience) and facilitators

(e.g., ease of use, availability of nets). Positive attitudes towards the ease of using nets and their availability can overcome perceived barriers.

4. Social Norms: The attitudes of others, including family members and peers, can influence nursing mothers' decisions. If using treated mosquito nets is socially accepted and encouraged within their community, they are more likely to adopt the behavior.

5. Self-efficacy: Nursing mothers' confidence in their ability to use mosquito nets correctly and consistently can impact their actual usage. Positive attitudes towards their self-efficacy will lead to better adherence to net usage.

6. Health Prioritization: If nursing mothers value their health and the health of their infants, they are more likely to prioritize preventive measures like using mosquito nets. A positive attitude towards health and well-being will lead to a greater willingness to adopt protective behaviors.

7. Educational and Informational Influence: The attitudes of nursing mothers towards health education and information can affect their willingness to learn about the importance of using mosquito nets. Positive attitudes towards learning and awareness can lead to better understanding and compliance.

8. Cultural and Traditional Beliefs: Cultural attitudes and beliefs can also play a role. If the use of mosquito nets aligns with cultural values and beliefs related to protection and care for infants, nursing mothers may be more inclined to use them. To promote the use of treated mosquito nets, it is essential to address and influence the attitudes of nursing mothers positively. Health promotion campaigns, community engagement, and targeted communication can be effective strategies to change attitudes and increase the adoption of treated mosquito nets as a preventive measure against malaria (Isabirye, 2014). By understanding and addressing the factors that shape nursing mothers' attitudes, health interventions can be tailored to encourage greater net usage, ultimately contributing to reducing the burden of malaria in affected regions (Kalisa, 2014).

Summary of Review of Literature

In order to curb malaria, the use of mosquito treated nets has been found to be the appropriate solution. Using mosquito-treated nets is crucial because they act as a protective barrier against disease-carrying mosquitoes, particularly those that transmit malaria. These nets are coated with insecticides that repel or kill mosquitoes on contact, reducing the risk of mosquito bites during sleep. By preventing these bites, treated nets significantly lower the transmission of diseases like malaria, which can be deadly, especially among young children and pregnant

women in areas where these diseases are endemic. This simple intervention helps to save lives, improve public health, and contribute to the overall well-being of communities.

The level of knowledge about mosquito treated nets was higher among people living in the urban areas, compared to rural areas. . High levels of knowledge have a degree of influence on nursing mother's attitudes. A study conducted among nursing mothers to assess their knowledge and attitudes toward the use of mosquito treated nets has seen a similar association between knowledge and attitude scores, which points towards the facts that knowledge and attitude of nursing mother's affects their use of mosquito treated nets.

RMcCarthy (2010) carried out a survey on malaria. The study found that malaria prevalence is negatively related to the growth of per capita income. In turn they find that malaria morbidity is linked to climatic differences across countries. The magnitude of malaria's effect on growth is substantial with sub-Saharan African countries experiencing a reduction in income growth annually because of malaria.

Gallups and Sachs (2015) also carried out a survey on malaria. The study found that countries with intense malaria experiences a reduction in per capita income income growth of 1.3% annually. They suggest that everything else being equal, a country experiencing intensive malaria would have its long-term level of income

per capita reduced by one-third compared with the same country in the absence of malaria. Both made use of cross-country regression techniques and used instruments or control to address the obvious causality problems were applicable were applicable. Based on this analysis, Sachs and other authors have suggested increasing current spending on malaria control than an order of magnitude.

Alves (2015) carried out a survey. The study found that healthy individual possesses a higher level of human Capita Land are more productive than those with poor health. At household level malaria deprives families of their own main sources of financial and non-financial resources.

A study in Zambian children published in 2015 by Haurvatat study found an effect of malaria infection on growth. They found that children with malaria parasitemia and elevated concentrations at reactive protein at baseline showed significantly lower growth compared with children without evidence of malaria infection after three months of follow up. This effect remained after controlling for age, sex, socio-economic, status maternal height, parasite density and serum concentrations hemoglobin.

CHAPTER THREE

METHODOLOGY

This chapter deals with the research design and the method adopted for data collection and analysis which will be discussed under the following sub-headings.

- Research Design
- Study population
- Sampling Size
- Sampling technique
- Method of data collection
- Reliability of Data Collection Instrument
- Instrument of Data collection
- Method of Data Analysis

Research Design

The research design refers to the logical mode of proof that allows the researcher to draw inferences concerning relationship among variables under investigation (Nachmias, 2010). The experimental research design is the design method chosen for this study because the study investigates a cause-and-effect relationship. Experimental design is the process of carrying out research in an objective and

controlled fashion so that precision is maximized, and specific conclusions can be drawn regarding a hypothesis statement. Generally, the purpose is to establish the effect that a factor or independent variable has on a dependent variable.

Population of the Study

The population of the study consists of all citizens of Oredo L.G.A of Edo State. The total population for this study has an estimate of 295,818.

Sampling Technique

This will be done using a simple random sampling technique. A selection of participants from a population are chosen at random by the researcher using simple random sampling, a sort of probability sampling. Every person in the population has the same chance of being chosen. Then, data are gathered from as much of this randomly selected subset as possible. One of the most straightforward methods for gathering information from the entire population is random sampling. Every member of the subset has an equal chance of being chosen as part of the sample process when using random sampling.

Sample Size

The population sample size for this study is calculated using Taro Y(1967) formula $n = \frac{N}{1 + N(e)^2}$ to determine the sample size.

n = signifies the sample size

N= signifies the population under study

e= signifies the margin error= 0.05

$$n=295,818/1+295,818(0.05)^2$$

$$295,818/1+295,818(0.0025)$$

$$295,818/740.545$$

n= 400 respondent.

Data Collection Instrument

This study utilized the qualitative and quantitative method of data collection. The instrument for data collection for this study will be made up of close-ended questionnaire. The questionnaire will be adopted because of the advantage of reaching out to a large proportion of the population.

The questionnaire was divided into two major sections. The first section will determine the socio-demographic characteristics of the respondents. The section will elicit information on respondents' sex, department, level and educational qualification. The second section will elicit information on kidnapping incidence, ritual killing incidence, and unknown gun men terrorism incidence.

Reliability of Data Collection Instrument

Reliability of Data Collection Instrument was measured using Cronbach's alpha. Cronbach's alpha coefficient measures the internal consistency, or reliability, of a set of survey items. Use this statistic to help determine whether a collection of items consistently measures the same characteristic. Cronbach's alpha quantifies the level of agreement on a standardized 0 to 1 scale.

Expert validation of the questionnaire is an essential step in ensuring its reliability and validity. Experts from diverse fields, including public health, nursing, and research methodology, will be engaged to meticulously review the questionnaire. Their expertise will help identify any potential issues, ambiguities, or gaps in the questions that might affect the accuracy and comprehensiveness of the data collected. By evaluating the alignment of the questions with the research objectives and ensuring clarity and relevance, the experts' insights will refine the questionnaire, enhancing its capacity to accurately capture the intended information. This collaborative process will result in a meticulously crafted questionnaire that minimizes bias, misinterpretation, or confusion among participants. The refined questionnaire will contribute significantly to the success of the study by enabling the collection of precise data on nursing mothers'

knowledge, attitudes, and practices related to the use of mosquito-treated nets in the Oredo community.

Method of Data Collection and Processing

Data will be collected using questionnaires. In administering the questionnaire, the face-to-face method was adopted to minimize the chance of errors in the process of responding to it. For those who may need clarification on the items, the items in the questionnaire will be explained to them.

Method of Data Analysis

This thesis used multi-dimensional econometric procedure in estimating the knowledge and attitude of people towards the use of treated nets in Oredo L.G.A of Edo State. The Ordinary Least Squares (OLS) techniques, and double log were employed to obtain the coefficients of the equation.

CHAPTER FOUR

PRESENTATION OF RESULTS AND DISCUSSIONS OF FINDINGS

INTRODUCTION

This chapter is premised on the result presentation, analyzed from the obtained data. A total of four hundred (400) copies of the questionnaires were administered and completely filled.

DEMOGRAPHIC DATA OF THE RESPONDENTS

This section focuses on the demographic data of the respondents. The variables examined among the respondents include; Age, Educational level, and Occupation.

Regarding age, the majority of respondents (200 individuals, 50.0%) fell into age group 31-40, followed by age group 20-30 (with 100 individuals, 25.0%). The least represented groups were “Over 50” and “under 20” groups (with 5.0% and 20.0% respectively

In terms of educational status, the largest educational group is "Secondary school," representing 45.0% of the total respondents (180 individuals). The next largest group comprised those who attended "College" (60 individuals, 20.0%), followed by "University" (15.0%). "Primary school" and "Others" are the smallest categories, with 15.0% of the respondents, each.

However, in terms of employment status, a majority of the respondents (120 individuals, 30.0%) are self-employed, followed closely by the “Employed” category (with 100 individuals, 25.0%). The remaining respondents fell in the “Student”, “Homemaker” and “Others” categories (with 20.0%, 15.0%, and 10.0% respectively). This result suggests that the study constituted more of individuals who are part of the workforce.

PRESENTATION OF RESULTS

Research question 1: *What is the level of knowledge of nursing mothers about mosquito treated nets in Oredo?*

Table 4.4: Respondent's view

Statement	SA	A	D	SD
I am familiar with the concept of mosquito-treated nets.	300 (75.0%)	100 (25.0%)		
I can correctly list at least three diseases that can be prevented using mosquito-treated nets.	60 (15.0%)	200 (50.0%)	140 (35.0%)	
I understand that mosquito-treated nets are used to prevent mosquito-borne diseases.	200 (50.0%)	120 (30.0%)		
I am aware of the proper way to use and maintain a mosquito-treated net.	60 (15.0%)	240 (60.0%)	100 (25.0%)	
Using mosquito-treated nets can effectively reduce the risk of mosquito-borne diseases.	280 (70.0%)	120 (30.0%)		

Authors Computation

From Table 4.4 above, a substantial majority of the respondents (300 individuals, 75.0%) strongly agreed that they are familiar with the concept of mosquito-treated nets. An additional 25.0% agreed with the statement. This indicates a high level of awareness and familiarity among the surveyed nursing mothers regarding mosquito-treated nets.

Also, a significant proportion of the respondents (200 individuals, 50.0%) agreed that they can correctly list at least three diseases that can be prevented by using mosquito-treated nets. These results indicate a high level of confidence and knowledge among the participants regarding the diseases preventable by mosquito-treated nets.

Also, half of the respondents (200 individuals, 50.0%) strongly agreed that mosquito-treated nets are used to prevent mosquito-borne diseases. Another 30.0% agreed with the statement, further supporting the idea that the majority of respondents comprehend the purpose of these nets. show that a significant proportion of participants understand the role of mosquito-treated nets in preventing mosquito-borne diseases.

Also, a significant proportion of the respondents (240 individuals, 60.0%) agreed that they are aware of the proper way to use and maintain a mosquito-treated net.

This suggests that a a good number of the respondents feel confident in their knowledge of how to use and maintain these nets.

Also, a substantial proportion of the respondents (280 individuals, 70.0%) strongly agreed that using these nets can effectively reduce the risk. Another 120 individuals, 30.0% agreed, further supporting the notion that most respondents believe in the effectiveness of mosquito-treated nets in disease prevention.

Research question 2: *What are the attitudes of nursing mothers towards the use of mosquito treated nets in Oredo?*

Table 4.5: Respondent’s view

Statement	SA	A	D	SD
I believe that using mosquito treated nets is a responsible choice for nursing mothers.	360 (90.0%)	40 (10.0%)		
I find using mosquito treated nets to be comfortable during sleep.	100 (25.0%)	220 (55.0%)	80 (20.0%)	
Using mosquito treated nets is an inconvenience in my daily routine.	40 (10.0%)	40 (10.0%)	180 (45.0%)	140 (35.0%)

Positive experiences of others with mosquito treated nets influence my decision to use them.	160 (40.0%)	240 (60.0%)		
I believe that using mosquito treated nets is essential for the health of nursing mothers and children.	260 (65.0%)	140 (35.0%)		

Authors Computation

From Table 4.5 above, a majority of the respondents (360 individuals, 90.0%) of the sampled respondents strongly agree that using mosquito-treated nets is a responsible choice for them. This reflects a high level of awareness and acceptance of the importance of using mosquito-treated nets for their well-being and the well-being of their children.

Also, a significant proportion of the respondents (220 individuals, 55.0%) agreed that using mosquito-treated nets are comfortable during sleep. This suggests that a significant proportion of nursing mothers in Oredo find using mosquito-treated nets to be comfortable during their sleep, indicating a positive perception of the nets' comfort. However, 20.0% disagree, indicating that there is a minority who do not find them comfortable during sleep.

Also, a substantial portion of the sampled population (180 individuals, 45.0%) disagreed that using mosquito-treated nets is an inconvenience in their daily routine, while 35.0% strongly disagreed with the statement. This suggests that the majority of nursing mothers do not find using mosquito-treated nets to be inconvenient in their daily lives.

Also, a significant proportion of the respondents (240 individuals, 60.0%) agreed that the positive experiences of others with mosquito-treated nets influence their decision to use them, while 40.0% of nursing mothers strongly agreed. This suggests that social influence and positive examples from others play a significant role in their decision to use these nets.

Also, a substantial proportion of the respondents (260 individuals, 65.0%) strongly agreed that using mosquito-treated nets is essential for their health and the health of their children. While 140 individuals (representing 35.0%) agreed. This indicates their belief that these nets are crucial for health.

Research question 3: *To what extent do nursing mothers use mosquito-treated nets in Oredo?*

Table 4.6: Respondent’s view

Statement	SA	A	D	SD
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I or my family members regularly use mosquito-treated nets.	120 (30.0%)	240 (60.0%)	40 (10.0%)	
My knowledge about mosquito-treated nets influences my decision to use them.	80 (20.0%)	280 (70.0%)	40 (10.0%)	
My attitude towards mosquito-treated nets affects my willingness to use them consistently.	260 (65.0%)	100 (50.0%)	40 (10.0%)	
I am more likely to use mosquito-treated nets when healthcare professionals recommend them.	180 (45.0%)	180 (45.0%)	40 (10.0%)	
I believe that increasing awareness about mosquito-treated nets will encourage more nursing mothers to use them.	160 (40.0%)	220 (55.0%)	20 (5.0%)	

Authors Computation

From Table 4.6 above, the majority of respondents, a majority of the respondents (240 individuals, 60.0%) agreed that they and their families regularly use mosquito-treated nets, indicating that a significant proportion of nursing mothers and their families do regularly use these nets. Another 30.0% strongly agreed with the statement, further confirming the practice of regular usage. Only a minority (10.0%) disagreed.

Also, a substantial proportion of the respondents (280 individuals, 70.0%) agreed that their knowledge about mosquito-treated nets influences their decision to use them, while 20.0% strongly agreed. This indicates that a significant portion believes that their knowledge plays a role in their decision-making regarding the use of mosquito-treated nets.

Also, a majority of the respondents (260 individuals, 65.0%) strongly agreed that their attitudes towards mosquito-treated nets affect their willingness to use them consistently. This indicates a strong belief among nursing mothers that their attitudes play a significant role in their consistent use of these nets. Only 10.0% disagree.

Also, a reasonable percentage of the sampled population (45.0%) strongly agreed that they are more likely to use mosquito-treated nets when healthcare professionals recommend them. Similarly, 45.0% agreed with the statement. This suggests that healthcare professionals' recommendations have a significant influence on their usage behavior.

Also, a majority of the respondents (220 individuals, 55.0%) agreed that increasing awareness about mosquito-treated nets will encourage more nursing mothers to use them, and 40.0% strongly agree with this statement. This indicates

a belief that raising awareness can have a positive impact on the usage of these nets.

Research question 4: *Does attitude influence the practice of nursing mothers on the use of mosquito treated nets Oredo?*

Table 4.7: Respondent’s view

Statement	SA	A	D	SD
My positive attitude towards using mosquito-treated nets plays a crucial role in my regular usage of them.	140 (35.0%)	260 (65.0%)		
Finding comfort in using mosquito-treated nets positively influences my commitment to consistent usage.	140 (35.0%)	200 (50.0%)	60 (15.0%)	
Believing in the responsibility of using mosquito-treated nets contributes to my ongoing practice.	260 (65.0%)	100 (25.0%)	40 (10.0%)	
Holding favourable attitudes towards mosquito-treated nets makes me more likely to recommend their use to others.	100 (25.0%)	220 (55.0%)	80 (20.0%)	

Strengthening positive attitudes through awareness campaigns would lead to increased overall usage of mosquito-treated nets.	300 (75.0%)	100 (25.0%)		
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Authors Computation

From Table 4.7 above, the majority of respondents, a majority of the respondents, (140 individuals, 35.0%) strongly agree that their positive attitudes towards using mosquito-treated nets play a crucial role in their regular usage. An additional 65.0% also agreed with the statement. This suggests a strong correlation between positive attitudes and regular usage of these nets.

Also, a significant portion of the respondents (35.0% strongly agreeing and 50.0% agreeing) believed that finding comfort in using mosquito-treated nets positively influences their commitment to consistent usage. However, 15.0% disagree with this notion, suggesting that there is a minority who do not see any link between comfort and consistent usage.

Also, a majority of the respondents (260 individuals, 65.0%) strongly agreed that believing in the responsibility of using mosquito-treated nets contributes to their ongoing practice of using these nets. Only 10.0% disagree, indicating that most respondents strongly connect the sense of responsibility to their net usage.

Also, a substantial proportion of the respondents (220 individuals, 55.0%) agreed that holding favorable attitudes towards mosquito-treated nets makes them more likely to recommend their use to others, and 55.0% agree. This suggests that positive attitudes towards the nets are associated with a higher likelihood of recommending their use to others. However, 20.0% disagree with this statement.

Furthermore, regarding the impact of awareness campaigns on positive attitudes and overall usage of mosquito-treated nets, a majority of the respondents (300 individuals, 75.0%) strongly agreed that strengthening positive attitudes through awareness campaigns would lead to increased overall usage. This indicates strong support for the idea that awareness campaigns can positively influence net usage through attitude reinforcement.

DISCUSSION OF FINDINGS

This study was premised on **the knowledge and attitudes of nursing mothers towards the use of mosquito-treated nets at Oredo, Benin City, Edo state.**

However, 400 questionnaires were properly filled and returned.

In the course of gathering the data, the demographic variables of the respondents were obtained. They were subjected to descriptive analysis. The variables examined among the respondents include; Age, Educational level, and Occupation.

From the analysis results, the majority of respondents fell within the age group of 31-40 years (50.0%), the “20-30 years” age group constitutes 25.0% of the sample population, the “Under 20 years” and “Over 50 years” groups accounted for 20.0% and 5.0% of the population respectively. Regarding educational level, the largest proportion of the respondents had just secondary school certification, followed by those with college certification. The Primary school, University, and “Others” groups were least represented. These findings are essential in understanding the educational composition of the sample population. Furthermore, in terms of occupation, the study population is predominantly composed of individuals who are Self-employed. The significant presence of students, also suggests a younger demographic within the sample. The presence of respondents in the "employed" and "Homemakers" categories provides a balanced representation of individuals at various stages of their lives. Overall, this information is valuable for understanding the employment composition of the sample population.

In providing answers to the research questions, the four research questions of the study were answered appropriately.

Research question one is centered on the level of knowledge of nursing mothers about mosquito-treated nets in Oredo.

Results from Table 4.4, show a high familiarity of the respondents with the concept of mosquito-treated nets. This high level of familiarity aligns with the success of public health campaigns and interventions aimed at introducing mosquito-treated nets as a preventive measure against mosquito-borne diseases, particularly malaria, according to WHO in 2021.

Also, the results from Table 4.4, reflect a substantial level of knowledge among nursing mothers about the diseases preventable by these nets. Malaria is the most commonly recognized mosquito-borne disease associated with mosquito-treated nets. However, mosquito nets can also prevent other diseases like dengue and Zika virus, depending on the region and the types of mosquitoes present (Bhatt et al., 2013; WHO, 2021).

Also, the results from Table 4.4, show a strong understanding of the respondents towards the primary purpose of these nets, which is to act as a physical barrier against disease-carrying mosquitoes. This aligns with the global consensus that insecticide-treated nets are highly effective in reducing the transmission of diseases such as malaria, which remains a significant public health concern in many parts of sub-Saharan Africa, including Nigeria (Bhatt et al., 2015; WHO, 2021).

Also, the results from Table 4.4, revealed a good level of awareness of the proper way to use and maintain a mosquito-treated net. Proper usage and maintenance are critical for the effectiveness of these nets in preventing mosquito-borne diseases. The research findings of Eisele *et al.* (2012), highlighted the importance of educating communities on the correct hanging, tucking, and care of mosquito nets, including periodic re-treatment with insecticides. The high percentage of respondents who feel confident in their knowledge of proper usage and maintenance suggests that educational efforts in the region have been successful in conveying these important details.

Also, the results from Table 4.4, revealed the perception of the respondents that using mosquito-treated nets can effectively reduce the risk of mosquito-borne diseases. This demonstrates a strong belief among nursing mothers in the effectiveness of mosquito nets as a preventive measure. This perception is in consonance with the findings of Lengeler (2004) and Bhatt *et al.*, (2015) which focused on the substantial impact of treated nets on reducing malaria transmission and morbidity. The high level of belief in effectiveness is encouraging, as it is likely to motivate nursing mothers to consistently use these nets, which is critical for disease prevention.

Research question two is centered on the attitudes of nursing mothers towards the use of mosquito-treated nets in Oredo.

Results from Table 4.5, indicate a high level of awareness and acceptance among respondents regarding the importance of using these nets for their well-being and the well-being of their children. This finding is in line with the research work by WHO in 2021 which suggests that using mosquito-treated nets is a responsible and effective strategy to prevent mosquito-borne diseases, particularly malaria (WHO, 2021). The high level of agreement suggests that nursing mothers in Oredo recognize the responsibility they have in protecting themselves and their children from mosquito-borne diseases.

Also, the analysis results indicated that a majority of the respondents agreed that using mosquito-treated nets is comfortable during sleep. This suggests that a significant proportion of nursing mothers in Oredo find using mosquito-treated nets to be comfortable during their sleep, reflecting a positive perception of the nets' comfort. However, a smaller proportion of the respondents disagreed with the statement, indicating that there is a minority who do not find the nets comfortable during sleep. This variation in perception highlights the importance of considering factors such as net quality, ventilation, and local environmental conditions when promoting net usage (Koenker *et al.*, 2017).

Also, the results revealed that using mosquito-treated nets is not an inconvenience in their daily routine. This suggests that the majority of nursing mothers do not find using mosquito-treated nets to be inconvenient in their daily lives. The finding correlates with the idea of Koenker *et al.* (2017), that with proper installation and adjustment, mosquito nets can be integrated into daily routines without causing significant inconvenience.

Also, the respondents highlighted that the positive experiences of others with mosquito-treated nets influenced their decision to use them. This finding suggests that social influence and positive examples from others play a significant role in their decision to use these nets. This is in tandem with the research findings of Waziri *et al.* (2019) which argued that social influence and community norms have been recognized as powerful factors in promoting the adoption of preventive measures. Positive experiences shared by peers and community members can encourage others to follow suit.

Also, a substantial number of the respondents concurred with the statement that using mosquito-treated nets is essential for their health and the health of their children. This indicates their belief that these nets are crucial for health. This belief aligns with the global recognition of mosquito-treated nets as a fundamental tool in the fight against mosquito-borne diseases. Wanzira *et al.* (2015) suggested

that when people consider mosquito nets as crucial for their well-being, they are more inclined to prioritize their utilization, especially for vulnerable groups like nursing mothers and children.

Research question three is centered on what extent nursing mothers uses of mosquito-treated nets in Oredo.

Results from Table 4.6, indicate a majority of respondents affirmed that they and their families regularly use mosquito-treated nets. This reflects a high level of adherence to the recommended practice of consistent net usage. Consistent and regular use of mosquito nets is crucial for their effectiveness in preventing mosquito-borne diseases (Koenker et al., 2017). The high consensus indicates that a significant proportion of nursing mothers and their families in Oredo are following the recommended practice of sleeping under mosquito nets, which is a positive health behavior.

Also, the results indicate that a majority of the respondents believed that their knowledge about mosquito-treated nets influenced their decision to use them. This indicates that nursing mothers recognize the role of knowledge in shaping their behavior regarding net usage. Knowledge is a key determinant of health-related behaviors, including the use of mosquito nets (Eisele et al., 2012). When

individuals understand the benefits and importance of a health intervention, they are more likely to adopt and adhere to it.

Also, the results revealed a strong belief of the respondents that their attitudes towards mosquito-treated nets affect their willingness to use them consistently. This indicates a strong belief among nursing mothers that their attitudes play a significant role in their consistent use of these nets. Attitudes and perceptions are crucial determinants of health behaviors (Rogers, 1975). When individuals hold positive attitudes toward a health intervention, they are more likely to engage in consistent and sustained behavior. The strong agreement in this category suggests that promoting positive attitudes toward mosquito nets is essential for maintaining consistent usage.

Also, the analysis data revealed that the respondents are more likely to use mosquito-treated nets when healthcare professionals recommend them. This is in line with the findings of Deressa *et al.* (2014), who posited that healthcare professionals play a critical role in advocating and promoting the use of preventive measures within communities. Their recommendations carry weight and can enhance the acceptance and adherence to health interventions.

Also, a majority of the respondents believed that increasing awareness about mosquito-treated nets would encourage more nursing mothers to use them. This

indicates a belief that raising awareness can have a positive impact on net usage. In 2019, Lorenz *et al.* posited that community-based awareness campaigns have been effective in promoting the use of mosquito nets. When individuals are made aware of the benefits and importance of net usage, they are more likely to adopt the practice.

Research question four focuses on whether attitudes have an impact on the behavior of nursing mothers regarding the utilization of mosquito-treated nets in Oredo.

From the results from Table 4.6, a majority of the respondents believed that their positive attitudes toward using mosquito-treated nets play a crucial role in their regular usage. This indicates a strong positive correlation between having favorable attitudes and consistently using these nets. This is closely related to the research findings of Ajzen & Fishbein (1980), which posited that positive attitudes are recognized as powerful drivers of health-related behaviors. When individuals hold positive attitudes toward a health intervention (i.e., mosquito net usage), they are more likely to engage in that behavior consistently.

Also, the analysis data revealed that a significant proportion of respondents believed that finding comfort in using mosquito-treated nets positively influences their commitment to consistent usage. According to Koenker *et al.* (2017),

comfort is a key factor in determining the regular use of mosquito nets. Individuals who find nets comfortable are more likely to use them consistently throughout the night.

Also, the results revealed that the respondents believed that the responsibility of using mosquito-treated nets contributes to their ongoing practice of using these nets, indicating that most respondents strongly connect the sense of responsibility to their net usage. A sense of responsibility is a motivating factor in health behavior (Rogers, 1975). When individuals perceive the use of mosquito nets as a responsible choice, they are more likely to adopt and adhere to the practice.

Also, according to the data, a majority of respondents believed that holding favorable attitudes toward mosquito-treated nets makes them more likely to recommend their use to others.

This finding is in tandem with the ideology of Babalola *et al.* (2015) that individuals who have positive experiences and attitudes toward a concept are more likely to promote it to others.

Also, a significant proportion of the respondents believed that strengthening positive attitudes through awareness campaigns would lead to increased overall usage. This reflects strong support for the idea that awareness campaigns can positively influence net usage by reinforcing positive attitudes. Lorenz *et al.*

(2019) posited that awareness campaigns have been effective in promoting the use of mosquito nets. These campaigns not only provide information but also aim to change attitudes and perceptions.

CONCLUSION

The information in this chapter reveals a positive correlation between attitudes and behavior regarding the utilization of mosquito-treated nets among nursing mothers in Oredo. Also, it revealed that strengthening positive attitudes through awareness campaigns could potentially lead to increased net usage in the community. This highlights the importance of continued education and awareness efforts to promote the consistent and widespread use of mosquito-treated nets as a crucial preventive measure against mosquito-borne diseases in the region.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

Summary of Findings

The study examined the demographic data, knowledge, attitudes, and utilization of mosquito-treated nets (MTNs) among nursing mothers in Oredo, Benin City, Edo state. A total of 400 properly filled questionnaires were collected and analyzed to understand the characteristics of the respondents.

In terms of age, the majority of the respondents (50.0%) fell within the age group of 31-40, followed by the 20-30 age group, which constituted 25.0% of the sample population. The "Under 20" and "Over 50" groups represented 20.0% and 5.0% of the population, respectively. This distribution provides insight into the age composition of the respondents.

Regarding educational level, "Secondary school" was the largest group, comprising 45.0% of the total respondents (180 individuals). The next largest group consisted of those with "College" certification (20.0%), followed by "University" (15.0%). "Primary school" and "Others" were the smallest categories, with 15.0% of the respondents each. This information sheds light on the educational background of the sample population.

In terms of occupation, the majority of the respondents (30.0%) identified as self-employed, closely followed by the "Employed" category (25.0%). The remaining respondents were distributed among the "Student" (20.0%), "Homemaker" (15.0%), and "Others" (10.0%) categories. This result suggests that the study involved individuals from various occupational backgrounds.

Moving on to the findings related to knowledge, the analysis indicated that nursing mothers in Oredo had a high level of familiarity with mosquito-treated nets and demonstrated a strong understanding of their purpose in preventing mosquito-borne diseases, particularly malaria. They also displayed knowledge of the proper usage and maintenance of these nets, which are crucial for their effectiveness.

In terms of attitudes, the respondents generally held positive attitudes towards mosquito-treated nets. They believed in the importance of using nets for their health and the health of their children. Most respondents found using nets comfortable during sleep and did not consider it inconvenient in their daily routines. They also indicated that positive experiences of others and recommendations from healthcare professionals influenced their attitudes positively.

Regarding the utilization of mosquito-treated nets, a majority of the respondents reported regular usage of these nets. They believed that their knowledge and attitudes played a significant role in their consistent use. Furthermore, they expressed that awareness campaigns and recommendations from healthcare professionals could further encourage net usage in the community.

In summary, nursing mothers in Oredo, Benin City, Edo state, exhibited a good level of knowledge and positive attitudes towards the use of mosquito-treated nets. This positive disposition influenced their consistent utilization of these nets, contributing to the prevention of mosquito-borne diseases, particularly malaria. The demographic data provided insights into the age, educational background, and occupation of the respondents, which are essential factors for tailoring interventions and campaigns to promote the use of mosquito-treated nets in the region.

CONCLUSIONS

In conclusion, this study examined the knowledge and attitudes of nursing mothers towards the use of mosquito-treated nets (MTNs) in Oredo, Benin City, Edo state. The study involved 400 respondents and provided valuable insights into various aspects of their demographic characteristics, knowledge, attitudes, and utilization of MTNs.

The demographic data revealed the age distribution of the respondents, with a significant proportion falling within the 31-40 age group. The educational background was dominated by individuals with "Secondary school" certification, and the occupation of the respondents covered a diverse range, with self-employed individuals being the majority.

The findings related to knowledge indicated that nursing mothers in Oredo had a commendable level of familiarity with MTNs. They demonstrated a strong understanding of the purpose of these nets in preventing mosquito-borne diseases, particularly malaria. Additionally, they exhibited knowledge of the proper usage and maintenance of MTNs, which is crucial for their effectiveness in disease prevention.

In terms of attitudes, the study revealed that nursing mothers held positive attitudes towards MTNs. They believed in the importance of using nets for their

own health and the well-being of their children. Most respondents found using MTNs comfortable during sleep and did not consider it inconvenient in their daily routines. Furthermore, positive experiences of others and recommendations from healthcare professionals had a positive influence on their attitudes towards MTNs.

Regarding the utilization of MTNs, the majority of respondents reported regular usage of these nets. They believed that their knowledge and positive attitudes played a significant role in their consistent use. Moreover, they expressed that raising awareness through campaigns and receiving recommendations from healthcare professionals could further encourage net usage within the community.

Overall, the findings of this study underscore the importance of education and awareness campaigns aimed at reinforcing the positive attitudes and knowledge nursing mothers have towards MTNs. These nets are critical tools in preventing mosquito-borne diseases, particularly malaria, which remains a significant public health concern in the region. By capitalizing on the existing positive attitudes and knowledge, targeted interventions can further promote the consistent and widespread use of MTNs, ultimately contributing to improved health outcomes among nursing mothers and their children in Oredo, Benin City, Edo state.

RECOMMENDATIONS

Here are the five key recommendations based on the findings of the study:

Comprehensive Educational Campaigns: Launching comprehensive educational campaigns targeted at nursing mothers is essential. Emphasize the importance of mosquito-treated nets (MTNs) in preventing mosquito-borne diseases, particularly malaria. These campaigns should not only promote awareness but also provide clear instructions on the correct installation, usage, and maintenance of MTNs to ensure their effectiveness.

Community-Specific Awareness Programs: Develop and implement awareness programs tailored to the unique needs and concerns of nursing mothers in Oredo. These programs should take into account the local context and cultural factors. Collaboration with local healthcare professionals during antenatal and postnatal care visits is crucial for delivering key messages about the benefits of MTNs.

Engagement of Community Leaders and Influencers: Involve community leaders and influencers in promoting the use of MTNs. Their support and endorsement can carry significant weight within the community. Encourage peer-to-peer communication among nursing mothers to share positive experiences and promote the adoption of MTNs.

Accessibility and Affordability: Ensure that MTNs are readily accessible and affordable to all segments of the population, especially those with lower incomes. Explore partnerships with governmental and non-governmental organizations to subsidize or distribute MTNs to vulnerable populations, making them more attainable.

Monitoring and Evaluation: Establish a robust monitoring and evaluation system to track the consistent use of MTNs among nursing mothers. Regularly assess the impact of educational campaigns and other interventions. This data-driven approach will help identify areas for improvement and allow for the adjustment of strategies as needed to ensure the effectiveness of MTN promotion efforts.

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APPENDIX I
QUESTIONNAIRE

Dear Participants,

We extend our warm greetings to all nursing mothers in the Oredo community. We greatly appreciate your willingness to participate in this important study that aims to investigate the knowledge and attitudes of nursing mothers towards the use of mosquito-treated nets. Your valuable insights will contribute to the enhancement of healthcare practices and the well-being of both mothers and children.

Section 1: Demographic Information

Age Under 20 20-30 31-40 41-50 Over 50

Educational Level: Primary School Secondary School College

University Other

Occupation: Student Employed Self-employed Homemaker Other

NOTE THAT: SA means Strongly Agree, A means Agree, N means Neutral, D means Disagree, SD means Strongly Disagree.

Section 2: Knowledge of Nursing Mothers about Mosquito Treated Nets in Oredo	SA	A	D	SD
1. I am familiar with the concept of mosquito treated nets.				
2. I can correctly list at least three diseases that can be prevented by using mosquito treated nets.				
3. I understand that mosquito treated nets are used to prevent mosquito-borne diseases.				
4. I am aware of the proper way to use and maintain a mosquito treated net.				
5. Using mosquito treated nets can effectively reduce the risk of mosquito-borne diseases.				

Section 3: Attitudes of Nursing Mothers towards the Use of Mosquito Treated Nets in Oredo	SA	A	D	SD
6. I believe that using mosquito treated nets is a responsible choice for nursing mothers.				
7. I find using mosquito treated nets to be comfortable during sleep.				
8. Using mosquito treated nets is an inconvenience in my daily routine.				
9. Positive experiences of others with mosquito treated nets influence my decision to use them.				
10. I believe that using mosquito treated nets is essential for the health of nursing mothers and children.				

Section 4: Extent of Nursing Mothers' Use of Mosquito Treated Nets in Oredo	SA	A	D	SD
11. I or my family members regularly use mosquito treated nets.				
12. My knowledge about mosquito treated nets influences my decision to use them.				
13. My attitudes towards mosquito treated nets affect my willingness to use them consistently.				
14. I am more likely to use mosquito treated nets when healthcare professionals recommend them.				

15. I believe that increasing awareness about mosquito treated nets will encourage more nursing mothers to use them.				
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Section 5: Influence of Attitudes on the Practice of Nursing Mothers' Use of Mosquito Treated Nets in Oredo	SA	A	D	SD
21. My positive attitudes towards using mosquito treated nets play a crucial role in my regular usage of them.				
22. Finding comfort in using mosquito treated nets positively influences my commitment to consistent usage.				
23. Believing in the responsibility of using				

<p>mosquito treated nets contributes to my ongoing practice.</p>				
<p>24. Holding favorable attitudes towards mosquito treated nets makes me more likely to recommend their use to others.</p>				
<p>25. Strengthening positive attitudes through awareness campaigns would lead to increased overall usage of mosquito treated nets.</p>				