

KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY

COLLEGE OF HEALTH SCIENCE

FACULTY OF ALLIED HEALTH SCIENCE

DEPARTMENT OF NURSING

DIPLOMA PROGRAMME



**TOPIC: KNOWLEDGE, ATTITUDE AND PRACTICE OF PREGNANT WOMEN IN
THE USE OF IPT IN PREVENTION OF MALARIA IN PREGNANCY - A RESEARCH
OF PREGNANT WOMEN ATTENDING ANC AT HOLY FAMILY HOSPITAL,
BEREKUM.**

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AUGUST, 2024

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DECLARATION

We the undersigned students here by declare that this project is our own work towards the award of diploma in nursing/midwifery certificate and that, to the best of our knowledge it contains no material previously published by another person(s) nor materials which have been accepted for the award of any certificate by NMC or any institution, except where due acknowledgement has been made in text.

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ABSTRACT

Introduction: Malaria infection at early pregnancy disrupts the normal placentation as the maternal placenta continues to develop, which, in turn, impairs and decreases the placenta's ability to transport nutrition to fetus and decreases maternal hemoglobin level (Huynh, et al., 2014). The purpose of this research study is examine knowledge, attitude and practice of pregnant women in the use of IPT in prevention of malaria in pregnancy - A research of pregnant women attending ANC at Holy Family Hospital, Berekum. Enough literature related to the study was reviewed as this served as a basis for subsequent comparison of findings and discussion of the research.

Methodology: The study applied a descriptive cross-sectional study design using quantitative research approach. Convenience sampling under non-probability sampling technique or method was used to gain access to respondents for the study group. Base on this sampling type, the respondents are specifically selected for the purpose of the research. The total sample size for this study was 30 pregnant women. The sample size was drawn from the population of pregnant women attending Antenatal Clinic at Holy Family Hospital, Berekum. They were conveniently. A well-structured interview guide with open and close ended questions were used to collect data from respondents. With the open ended questions, respondents were given their opinion about the question posed to them. Close ended questions limit respondents to only the answers provided by the researcher, that is "Yes" or "No". Questionnaires were administered to the respondents, which comprises of both open ended and closed ended questions.

Findings and Conclusions: Most of the pregnant women in this study have heard of IPTp-SP and have average knowledge of IPTp-SP as most of them know that it is given to prevent malaria

during pregnancy. Fairly practice since the majority 80.0% received IPTp-SP free at the health facility and 14 (46.7%) responded on IPTp-SP tablet consumption (swallowing) take place in the facility under observation by health care providers.

Recommendations: We therefore recommend education to be intensified by WHO for the pregnant women on the importance of IPTp-SP both on maternal health and foetal /newborn's health especially in malaria-endemic regions in Ghana. Meanwhile, more qualitative studies are needed to fully understand the individual factors that influence the intake of IPTp-SP to enhance policy decisions for the prevention of malaria associated pregnancy. Based on the result of this study, we recommended public health nurses, midwives and policy makers of the hospital help implement appropriate intervention strategy to create awareness of malaria in pregnancy as to increase treatment-seeking behavior of SP/Fansidar.

TABLE OF CONTENT

CONTENT	PAGE
DECLARATION.....	i
ABSTRACT.....	ii
TABLE OF CONTENT.....	iv
LIST OF TABLES	viii
LIST OF FIGURES	ix
LIST OF ABBREVIATION.....	x
ACKNOWLEDGEMENT.....	xi
CHAPTER ONE	1
INTRODUCTION.....	1
1.0 Background of the study	1
1.1 Problem Statement	4
1.2 Purpose of the Study	5
1.3 Objectives of the Study.....	5
1.3.1 Main Objective.....	5
1.3.2 Specific Objectives	5
1.4 Research Questions	6
1.5 Significance of the Study	6

1.6 Organization of Study	7
1.7 Operational Definition of Terms and Abbreviations	7
CHAPTER TWO	8
LITERATURE REVIEW	8
2.0 Introduction.....	8
2.2 Knowledge of pregnant women on IPT	10
2.3 Attitude of pregnant women on IPT	15
2.4 Practice of pregnant women on IPT.....	17
CHAPTER THREE	19
MATERIALS AND METHODS	19
3.0 Introduction.....	19
3.1 Study Design.....	19
3.2 Research setting	19
3.3 Study Population.....	20
3.4 Sample and Sampling Technique.....	20
3.5 Tool for data Collection	21
3.6 Validity and Reliability.....	22
3.7 Data Collection Procedures.....	22
3.8 Data Analysis	22
3.9 Ethical Consideration.....	23

3.10 Limitation.....	23
CHAPTER FOUR.....	24
DATA ANALYSIS AND RESULTS	24
4.0 Introduction.....	24
4.1 Data Analysis and Results	24
4.2 Section A- Socio-Demographic Characteristics of Study Population	24
4.3 Section B- Knowledge of Pregnant Women on IPTp-SP Utilization.....	29
4.4 Section C- Attitude of Pregnant Women On IPTP-SP Utilization	34
4 Section C- Practice of Pregnant Women On IPTP-SP Utilization	37
CHAPTER FIVE	42
DISCUSSION OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS	42
5.0 Introduction.....	42
5.1 Discussion.....	42
5.1.1 Demographic Data	42
5.1.2 Pregnant Women Knowledge on IPTP-SP Utilization	43
5.1.3 Pregnant Women Attitude on IPTP-SP Utilization	44
5.1.4 Pregnant Practice on IPTP-SP Utilization	45
5.2 Conclusion	46
5.3 Recommendations.....	46
REFERENCES.....	48

LIST OF TABLES

Table 4.1: Age distribution of respondents.....	24
Table 4.2: Marital status Distribution of Respondents	25
Table 4.3: Level of Education of respondents.	25
Table 4.4: Gravidity of respondents.....	28
Table 4.5: Parity of respondents.	28
Table 4.6: Respondents source of information on IPT-SP.	30
Table 4.7: Respondents knowledge on number of times should IPTp-SP should be taken during pregnancy.....	32
Table 4.8: Respondents knowledge on stage of pregnancy should IPTp-SP be start taken	32
Table 4.9: Respondents knowledge on number of tablets of IPT should be partaken at once.	33
Table 4.10: Respondents knowledge recommended schedule of IPTp-SP intake.....	34
Table 4.11: Respondents response on Permission for of IPTp-SP utilization.	36
Table 4.12: Respondents response on visit to ANC.	37
Table 4.13: Respondents response on ways of obtaining IPTp-SP drugs.....	39
Table 4.14: Respondents response on method of IPTp-SP tablet consumption (swallowing) take place	40
Table 4.15: Respondents response on reason of not swallowing IPTp-SP tablet under Observation by health workers	41

LIST OF FIGURES

Figure 4.1: Occupation of respondents.	26
Figure 4.2: Religion of respondents.....	27
Figure 4.3: Respondents knowledge on how they heard of IPTp-SP Drug	29
Figure 4.4: Respondents knowledge on Why are IPTp-SP taken during pregnancy	31
Figure 4.5: Respondents response on whether they were convinced on IPTp-SP consumption ..	34
Figure 4.6: Respondents response on reason for not taking the malaria prevention drugs	35
Figure 4.7: Respondents response on harmful it is of taken IPTp-SP	36
Figure 4.8: Respondents response on when they started taking of IPTp-SP tablet.	38

LIST OF ABBREVIATION

ANC: Antenatal Care

CDC: Centers for Disease Control and Prevention

DOT: Direct Observed Treatment

GHS: Ghana Health Service

IPT: Intermittent preventive treatment

IRS: Indoor residual spray

ITN: Sleeping under a treated net the previous night.

LLINs: long-lasting insecticide nets

SP: Sulphadoxine Pyrimethamine

WHO: World Health Organization

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CHAPTER ONE

INTRODUCTION

1.0 Background of the study

Malaria is a serious, notifiable infectious illness characterized by periodic chills, fever, sweating and splenomegaly. Serious and often fatal complications may arise in falciparum malaria. It is endemic in parts of Africa, Asia, and Central and South America and is estimated to occur at the rate of 100 million cases each year throughout the world. The disease is caused by a parasite of the genus *Plasmodium* introduced into the blood by anopheles mosquitoes (Global malaria report, 2017).

Although preventable, malaria continues to be the major public health issue in developing countries, including the Sub-Saharan regions, where 90% of the world's malaria deaths occur (Kinney, et al., 2017). Malaria is caused by a microparasite, of the genus *Plasmodium*, which infects red blood cells (Centers for Disease Control and Prevention [CDC], 2013). About 156 species of *Plasmodium* that infect many types of animals have been identified; however, only *P. falciparum*, *P. vivax*, *P. ovale*, *P. malariae*, and *P. knowles* are known to infect humans (CDC, 2013).

Mosquitoes are the dominant vectors for transmitting infectious diseases, such as malaria, dengue fever, yellow fever, and filariasis; the major vector for malaria parasites in Sub-Saharan Africa is the *Anopheles* genus (Menger, Otinu, de Rijik, Mukabana, Van Loon, & Takken, 2014).

Symptoms of malaria include fever, profuse sweating, shivering, vomiting, severe headache, dehydration, nausea, diarrhea, convulsions, jaundice, myalgia, backache, and joint pain; it can also be asymptomatic, while still causing anemia in some people who live in high malaria transmission areas (Choge, Ng'wena, Akhwale, Koech, Ngeiywa, Oyoo-Okoth & Kweka,

2016). *P. falciparum* is the major cause of malaria infection during pregnancy in Sub-Saharan Africa, which increases the risk of maternal anemia, LBW (LBW), premature birth, and neonatal mortality (Webster, et al., 2013). Over 25 million pregnant women are at risk of the infection each year worldwide. Malaria in pregnancy may result in maternal and foetal anaemia, prematurity, stillbirths, rarely congenital malaria as well low birth weight which is the single greatest risk factor for neonatal deaths (World Health Organization [WHO], 2017)

Sub-Saharan Africa shares a greater burden of malaria infection, in that more than 70% of total global morbidity occurs in Africa (Snow & Marsh, 2017). Over 30 million women are exposed to malaria in pregnancy annually in Sub-Saharan Africa (Huynh, Fievet, Gbaguidi, Dechavanne, Borgella, Guezo-Mevo & Cot, 2014). As a result, malaria is a major public health issue and is the major cause of infant mortality in Sub-Saharan Africa (Falade, Tongo, Ogunkunle, & Orimadegun, 2019). In high malaria transmission area such as Ghana, primigravida (first pregnancy) mothers are at greater risk for malaria infection and the consequences than multigravida (three or more pregnancies) mothers who have built immunity from repeated infection (Ouedraogo, Bodeau-Livinec, Briand, Bich-Tram, Koura, Accrombessi & Cot, 2015).

As recommended by World Health Organization (WHO), the following combination has been shown to be effective in reducing the prevalence of LBW in first and second pregnancies (Mwandama, et al., 2015): (a) intermittent preventive treatment for pregnancy with sulfadoxine-primethamine (IPTp-SP), (b) preventive methods using insecticide-treated bed nets (ITNs), and (c) insecticide residual spray (IRS). Following the recommendation of the World Health Organization (WHO) in 2000, Ghana adopted a new malaria treatment policy in 2004. The country thus moved from the use of mono-therapy to combination therapy using Artemisinin-Based Combination Therapy (World Health Organization [WHO], 2017). As

part of this policy was the change from use of weekly Chloroquine Chemoprophylaxis to Sulphadoxine-Pyrimethamine (SP) as Intermittent Preventive Treatment (IPT) for malaria prevention during pregnancy. This was based on growing concerns of resistance to Chloroquine and the fact that only 11.6% were adhering to the policy of using Chloroquine as IPT (Ghana Malaria Programme Review, 2013)

However, use of these treatment and preventive measures remains low; as a result, malaria during pregnancy is still a public health issue and causes 75,000 to 10,000 infant deaths annually in Sub-Saharan Africa (Esu, Effa., Udoh, Oduwole, Odey, Chibuzor & Meremikwu, 2019).

Intermittent preventive treatment of malaria in pregnancy is based on the assumption that every pregnant woman living in areas of high malaria transmission has malaria parasites in her blood or placenta, whether or not she has symptoms of malaria. It involves the administration of treatment doses of SP in at least monthly intervals during pregnancy with the first dose administered as early as possible in the second trimester and the last dose administered up to the time of delivery (World Health Organization, 2015).

The NMCP promotes IPTp of malaria using the World Health Organization (WHO) recommended SP, for all pregnant women. This is taken monthly starting from quickening or 16 weeks of pregnancy through to delivery. From the onset of implementation of IPTp in Ghana, the required number of SP doses was three to be received between 4 to 6 months of gestation as per the WHO recommendation (WHO, 2019).

Malaria infection at early pregnancy disrupts the normal placentation as the maternal placenta continues to develop, which, in turn, impairs and decreases the placenta's ability to transport nutrition to fetus and decreases maternal hemoglobin level (Huynh, et al., 2014). Like many other endemic countries, Ghana's ability to achieve the global target of 80% IPT coverage

still poses a great challenge. However, not much has been documented about knowledge, attitude and perception of pregnant women in the use of IPT in prevention of malaria in pregnancy. This therefore evinces the need to research on knowledge, attitude and practice of pregnant women in the use of IPT in prevention of malaria in pregnancy - A research of pregnant women attending ANC at Holy Family Hospital, Berekum.

This chapter covers the following topics: background of the study, problem statement, purpose of the study, research questions, and significance.

1.1 Problem Statement

Malaria is still the leading cause of maternal and infant morbidity and mortality in Ghana. Malaria has been identified as the major disease in the Berekum East Municipality (Municipal Assembly Annual Report, 2021/2022). Malaria admission over the period has been increasing despite the numerous efforts to reverse the incidence. Malaria admissions at the Municipality for 2021 and 2022 were 50072 and 58528 respectively showing an increase of 8456 in the trend despite efforts that has been put in place to reduce malaria cases in the Municipality (Municipal Assembly Annual Report, 2021/2022).

Currently, IPTp-SP and ITNs, which are distributed at ANCs, are recommended by WHO to prevent *P. falciparum* infection in pregnancy. They are effective malaria prevention methods that can prevent maternal anemia and LBW deliveries (Webster, et al., 2013). However, the use of SP by pregnant women is still low, in part due to mixed and unclear national-level malaria control program implementation/policy across Sub-Saharan Africa. As a result, there is a lack of consistency in delivery of malaria prevention methods and education for pregnant women at ANCs (Gomez, et al., 2017). Given the problem of low coverage of IPTp-SP in pregnancy across Sub-Saharan Africa, the Global Call to Action Seminar held in 2014 to Scale-Up IPTSP by updating the malaria control program's policy (Agarwal, et al., 2015).

The updated policy may increase knowledge of malaria risk among pregnant women, thereby increasing their willingness to attend ANCs and seek treatment.

Several studies have been conducted on the use of IPTp-SP among pregnant women in other places, which concentrated on effectiveness of IPTp-SP in malaria control, practice, accessibility, knowledge, availability, ownership and use of IPT-SP. Due to the fact that the researchers are not aware of any previous studies that assessed knowledge, attitude and practice of pregnant women in the use of IPT in prevention of malaria in pregnancy - this study intends to fill this gap and also in effect will seek to determine knowledge, attitude and practice of pregnant women towards IPT.

1.2 Purpose of the Study

The purpose of this study is to determine knowledge, attitude and practice of pregnant women in the use of IPT in prevention of malaria in pregnancy.

1.3 Objectives of the Study

1.3.1 Main Objective

The main objective of this study is to determine knowledge, attitude and practice of pregnant women in the use of IPT in prevention of malaria in pregnancy.

1.3.2 Specific Objectives

The specific objectives of this study are;

1. To explore the knowledge of pregnant women attending ANC at Holy Family Hospital, Berekum towards the use of IPT in malaria prevention.
2. To determine attitude of pregnant women attending ANC at Holy Family Hospital, Berekum towards the use of IPT in malaria prevention.

3. To determine the practice of pregnant women attending ANC at Holy Family Hospital, Berekum towards the use of IPT in malaria prevention.

1.4 Research Questions

1. What is the Knowledge of pregnant women attending ANC at Holy Family Hospital, Berekum towards the use of IPT in malaria prevention?
2. What is the attitude of pregnant women attending ANC at Holy Family Hospital, Berekum towards the use of IPT in malaria prevention?
3. What is the level of practice of pregnant women attending ANC at Holy Family Hospital, Berekum towards the use of IPT in malaria prevention?

1.5 Significance of the Study

This study sought to provide clarity about knowledge, attitude and practice of pregnant women in the use of IPT in prevention of malaria in pregnancy - A research on pregnant women attending ANC at Holy Family Hospital, Berekum, which could help public health workers design effective malaria infection prevention and treatment measures for this population. The results of the study could help establish sustainable malaria education, increase treatment-seeking behaviors among pregnant women, increase the use of available malaria prevention method resources, and spread knowledge about malaria and treatment modalities. The results could also be used to enhance treatment-seeking behavior and compliance with the recommended preventive and treatment measures for pregnant women, such as SP, ITNs, and IRS.

This study has implications for social change. The findings could be used to inform policy, which could help increase the use of malaria infection treatment and prevention measures among pregnant women. The findings could help reduce the malaria infection rate and increase the use of IPTp-SP of pregnant women. Reducing malaria infection rate in

pregnancy would reduce the associated maternal anemia and mortality, and LBW, thereby reducing infant mortality risk, economic loss due to medical costs and lost productivity (Centers for Disease Control and Prevention [CDC], 2016a)

1.6 Organization of Study

The study is presented according to six chapters. Chapter one presents the introduction of the study where the background to the study, problem statement, justification, objectives and research questions are presented. Chapter two presents the literature review of existing studies on the subject under discussion and conceptual framework. Chapter three is where the methods applied to collect empirical data for subsequent analysis are presented. Chapter four also presents the results analysed from the responses to the questions administered to the pregnant women attending ANC at Holy Family Hospital, Berekum. Chapter five is where the discussions of the study findings and their relationship to existing literature are presented. The summary, conclusions and recommendations of the study are presented in chapter six.

1.7 Operational Definition of Terms and Abbreviations

Malaria: is a serious, notifiable infectious illness characterized by periodic chills, fever, sweating and splenomegaly, mostly caused by *Plasmodium falciparum*.

Knowledge: the fact or condition of being aware of something.

Attitude: a feeling, action or emotion towards a fact or something

Practice: to perform or work at repeatedly so as to become proficient.

IPT (Intermittent Preventive Treatment): is a drug given to pregnant women in malaria prevention.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter entails review of theories, practices and surveys that have been carried out on the knowledge, attitude and perception of pregnant women on IPT-SP. A lot of research studies have been done on IPT-Sp especially in regard to availability, accessibility and utilization in general, but this particular study is going to determine the knowledge, attitude and practice of pregnant women on Intermittent Preventive Treatment among pregnant women attending ANC at Holy Family Hospital, Berekum East Municipality. The purpose of this literature review is to identify gaps that are needed to be filled.

The relevant literature is under the following headings:

1. Overview on IPT
2. Knowledge of pregnant women on IPT.
3. Attitude of pregnant women on IPT.
4. Practice of pregnant women on IPT.

2.1 Overview on IPT

All asymptomatic pregnant women receive regular doses of Sulphadoxine–Pyrimethamine (SP) as an Intermittent Preventive Treatment (IPT) during the second and third trimesters, while mothers with signs and symptoms of malaria get prompt treatment according to the national treatment guidelines. The IPT with SP should be provided as part of a comprehensive antenatal package with other drugs like haematinics and anti-helminthics to control maternal anaemia that is highly prevalent during pregnancy in the country (GHS, 2014)

What Is Intermittent Preventive Treatment?

Intermittent preventive treatment (IPT) is based on the use of anti-malarial drugs given in treatment doses at predefined intervals after quickening to clear a presumed burden of parasites (GHS, 2014).

Why IPT?

According to GHS (2014), Intermittent preventive treatment (IPT) of malaria during pregnancy is based on the assumption that every pregnant woman living in areas of high malaria transmission has malaria parasites in her blood or placenta, whether or not she has symptoms of malaria. Malaria infection in the mother, therefore, increases the risk of:

- Spontaneous abortion
- Stillbirth
- Pre-term birth
- Low birth weight
- Maternal anaemia

Drug of Choice in Ghana

According to GHS (2014), the drug of choice for IPT in Ghana is *Sulphadoxine Pyrimethamine (SP)*

This is because of:-

- a. **Effectiveness:** SP is the single-dose anti-malarial with the best overall effectiveness for prevention of malaria in pregnancy in areas of Africa with stable transmission of *Plasmodium falciparum* malaria as in Ghana, and also where resistance to SP is low.
- b. **Efficacy:** Very good in clearing placental parasites

- c. **Safety:** No significant side effect when used appropriately in pregnancy
- d. **Acceptance:** Demonstrated high levels of IPT acceptance by pregnant women
- e. **Programme feasibility:** Good programme feasibility and can be delivered as a single dose treatment under observation by the health worker and thereby minimizing compliance problems
- f. **Low resistance:** Resistance to SP is quite low in Ghana. (i.e. Low treatment failure rate in Ghana as at now).

Dosage

The NMCP promotes IPTp of malaria using the World Health Organization (WHO) recommended SP, for all pregnant women. This is taken monthly starting from quickening or 16 weeks of pregnancy through to delivery. From the onset of implementation of IPTp in Ghana, the required number of SP doses was three to be received between 4 to 6 months of gestation as per the Sulphadoxine-Pyrimethamine should be given at the ANC clinic or at where there is supervision of a midwife/health worker through a directly observed treatment (DOT) method WHO recommendation (WHO, 2019)

2.2 Knowledge of pregnant women on IPT

Intermittent Preventive Treatment is based on the use of anti-malarial drugs given in treatment doses at predefined intervals after quickening to clear a presumed burden of parasites. All asymptomatic pregnant women receive regular doses of SP as an IPT during the second and third trimesters while mothers with signs and symptoms of malaria receive rapid treatment according to the national treatment guidelines. The IPT with SP is provided as part of a comprehensive antenatal package with other drugs like haematinics and anti-helminthics to control maternal anaemia that is highly prevalent during pregnancy in the country (Global Fund Training Manual, 2015).

IPT of malaria during pregnancy is based on the assumption that pregnant woman living in areas of high malaria transmission has malaria parasites in her blood or placenta, whether or not she has symptoms of malaria. Malaria infection in the mother, therefore, increases the risk of Spontaneous abortion, Stillbirth, Pre-term birth Low birth weight and maternal anaemia. These effects are caused by malaria parasites being present in the placenta. These parasites are at the placenta sites, impairing passage of nutrients and oxygen from passing from the mother to the foetus. The use of the anti-malarial drugs given in treatment doses clears the sites of these parasites, allowing the free passage of nutrients and oxygen to the foetus. The free movement of nutrients and oxygen enables the foetus to develop normally, reducing the chances that a foetus will suffer the effects of malaria. IPT is important because many pregnant women can have malaria parasites without symptoms (Global Fund Training Manual, 2015).

IPT is given to all asymptomatic pregnant women who report at the antenatal clinic in the second or third trimester but more especially; those of low gravidity (i.e., primigravida and secundigravida), those infected with HIV, adolescents and youth (10- 24 years) and those with unexplained anaemia. The drug of choice for IPT in Ghana is Sulfadoxine-Pyrimethamine. It is important to achieve an uninterrupted supply of SP for IPT use. The institutional management and midwife should check stock levels frequently, estimate for stock and dispense SP using the general principles for stock management and control (Global Fund Training Manual, 2015).

Dosage: The NMCP promotes IPTp of malaria using the World Health Organization (WHO) recommended SP, for all pregnant women. This is taken monthly starting from quickening or 16 weeks of pregnancy through to delivery. From the onset of implementation of IPTp in Ghana, the required number of SP doses was three to be received between 4 to 6 months of

gestation as per the Sulphadoxine-Pyrimethamine should be given at the ANC clinic or at where there is supervision of a midwife/health worker through a directly observed treatment (DOT) method WHO recommendation (WHO, 2019)

The DISH II (2015), qualitative study also reports that most respondents knew about the existence of SP, however, they did not know its dosage schedules. SP was perceived to be too strong for treatment of malaria in pregnancy. Health workers (midwives) knew the signs and symptoms of malaria, its transmission process, the drugs used and its importance among other illnesses, but they did not appreciate the danger signs and symptoms for severe and complicated malaria. Surprisingly, in the same study health workers reported that SP was too strong for pregnant women and should be reserved for severe cases, contrary to the Ministry of Health policy guidelines. Several of the health workers and caretakers were unaware of Intermittent Presumptive Treatment (IPT), and most health workers did not know the generic name (SP) of Fansidar.

A baseline survey conducted by Chukwurah, et al., (2016), titled Knowledge, attitude and practice on malaria prevention and sulfadoxine-pyrimethamine utilization among pregnant women in Badagry, Lagos State, Nigeria found that, majority of women, 355 (79%), had knowledge of SP. The majority 380 (84.4%) who claimed to know what SP is used for said it was for treatment of malaria; 69 (15.2%) said it was for prevention of malaria while 0.3% said it is used for the treatment of typhoid fever. SP was taken once for malaria prevention during pregnancy by 337 (75%) of the women; twice by 28 (6%) or monthly by 28 (6%), while 20 (5%) took it three times. The result showed that another 8 (2%) took SP more than three times during pregnancy but 29 (6%) claimed that SP was taken whenever they were ill. The SP was taken between week 4 - 36. Fifteen per cent of pregnant women took SP in the first trimester and up to 15 weeks of pregnancy; 33% took it in the second trimester up to 27

weeks of pregnancy, and 14% took it in the third trimester (28-36 weeks). Two per cent could not remember when they took the SP, while 37% said they did not use SP during pregnancy. Two tablets of SP were taken by 8% of pregnant women while 92% took three tablets through self-medication. No explanation was given for taking 2 tablets of SP instead of 3. The SP medication was purchased from patent medicine vendors and was not prescribed by any doctor or adjusted to body weight. When probed whether the SP prevented malaria, 97% of pregnant women said it did while 3% said it did not. Side effects experienced after taking SP included dizziness and nausea by 27.3% and 18.2%, respectively; itching of the body by 18.2%. Another 9% complained of sleeping excessively.

In another study in Ghana by Orish, et al., (2023), on assessing nursing mothers' knowledge, perceptions and uptake of Sulphadoxine perceptions and uptake of Sulphadoxine the Ho Teaching Hospital of the Volta Region of Ghana found that, 38 (12.5%) of the nursing mothers had not heard about the IPTp-SP and thus were not eligible for the subsequent questions. Of the 87.5% (265/303) who responded knowing the use of IPTp-SP, only a little above average (51.3%) correctly pointed out malaria prevention as the main purpose of IPTp-SP. Nonetheless, 86.8% and 47.9% indicated that IPTp-SP should be taken up to 5 five times and at least three times respectively during the pregnancy. Most of the pregnant women (240, 98%) however did not know the recommended schedule of IPTp-SP uptake in Ghana. Overall, we found that a little above half of the nursing mothers, 52.1% (138/265) had average knowledge of IPTp-SP utilization.

A study conducted by Akinleye, Falade, and Ajayi (2015), revealed that about half [109 (52.2%)] of the respondents, said they have heard about IPTp. The sources of information on IPTp shows the rating of respondents' knowledge of IPTp, drug used, the dose and timing of IPTp use. Twenty six of the 109 (23.9%) who have heard about IPTp were able to give a

good definition of IPTp and sixty-three (57.8%) said IPTp can be given to pregnant women. When asked when IPT drugs can be given during pregnancy, 67(61.5%) mentioned that it can be used between 4th and 6th months of pregnancy, 12 (11.0%) mentioned between 7th and 9th months and one mentioned 1st to 2nd months. About two thirds of those that have heard of IPTp (73/109; 67.0%) knew that SP is the recommended drug for IPTp. Using the different brand names of SP in the market, 13(17.8%) identified Fansidar 18(24.7%) identified Amalar, 42(57.5%) identified Malareich which was the major brand given to them in the ANC clinic as drug used for IPTp. Forty-nine (67.1%) of those who mentioned SP knew the correct dose of SP for IPTp.

Study conducted in Ghana by Antwi (2017), shows that the knowledge of the pregnant women on IPT was significantly associated with the number of doses of SP received. The pregnant woman's knowledge about the purpose of taking SP at the ANC, the number of doses of SP to be taken during pregnancy, the timing of taking the SP as well as the effects of malaria on the mother and the baby influenced women to return for subsequent doses of SP. Perhaps, if a larger proportion are aware of the total number of doses of SP to be received during pregnancy, this would have increased the percentage that received all the three doses.

Nganda, et al., (2014), showed that in Tanzania, attendance at health education sessions at the Maternal Child Health (MCH) clinic was the only determining factor for IPT-SP use among pregnant women. Although, there were no structured health education plans for IPT at the ANCs when they were visited, this did not greatly affect the health education talks that were given by the health workers as not less than 70% of the respondents received their knowledge about IPT from the staff of the ANC. This proposed that education about IPT went on somehow during the ANC visits and this helped to increase coverage.

2.3 Attitude of pregnant women on IPT

Mangeni (2013), has also reported the same observation as one of the attitudes of community members towards IPT services in Busia district. A later study has also indicated that a good number of women studied considered IPT as a good measure to prevent malaria during pregnancy, treat a sick foetus or treat unsuspecting mother. However, some considered SP to be very strong and likely to cause miscarriage, kill the mother or make her very weak. Such mothers thought that it was not wise to take SP for malaria in pregnancy control.

Out of the 209 respondents, 68 (32.5%) mentioned they were afraid to take drugs in pregnancy, 73 (34.9%) said there were times they did not take drugs given to them in the clinic and 108 (51.7%) mentioned they will take drugs in clinic if allowed to use their own drinking cups. When those who had heard of IPTp were considered, 44 (40.4%) were afraid of taking drugs in pregnancy, 62 (56.9%) said they did not take drugs given to them in the clinic and 62 (56.9%) mentioned they will like to do so if allowed to use their own drinking cups in the clinic. (Akinleye, Falade, & Ajayi, 2015)

Mubyzai, Bloch, Kamugisha, Kitua, and Ijumba (2015), at times the pregnant women were uninformed or misinformed about the standard dosage of SP. A woman in Kwamsisi village stated: *'The drug we are given is sometimes little. Imagine, half a tablet for a child?'* In Tabora and Kitifu villages, the majority of the respondents alleged that one of the drawbacks linked to low acceptance of SP is a perceived relationship between SP side effects and HIV infection. Some women reported developing adverse reactions after using SP. Because of their belief and fear of the Steven-Johnson Syndrome, which was referred to as *'the burning of the skin'*, it was openly asserted that some women threw away the SP tablets after leaving the dispensary. This problem was reported in all four study villages. One woman stated: *"At least nowadays at Magunga (i.e. the district hospital), there is a new system of DOT intended*

to minimise the chances for those who could throw the drug away". Similar statements were given by women in Tabora village. An example: "Some women hesitate even to take the drugs at clinics. Some of them (and these are the majority) take them but either hide them and throw them later in the bush on their way home or when they reach home". At Kwamsisi village other concerns were non-specific. One woman indicated: "I do not like SP because it makes me feel bad'. At Kitifu village it was argued that SP is an effective anti-malarial drug although some people find it less effective and opt for other drugs. When asked about choice of alternative drugs, Metakelfin® was preferred. It was further argued that some women believed SP taken during pregnancy could cause abortion, whilst others decided to take smaller dosage than what is recommended. Other participants in the same FGD said that SP does not lower body temperature and that it causes one's (especially children's) body to weaken.

A study conducted in Korogwe District, North-Eastern Tanzania viewed IPTs-SP as harmful, suggesting that it caused miscarriages and side effect that included mouth sores, fatigue, fever, rashes and itchiness; however these studies suggested that although these perceptions exist, there were very few cases of adverse effects, and that these ideas were based on hearsay rather than personal experience (Amoran, Ariba, & Iyaniwura, 2016).

According to Mohammed, et al., (2022) research conducted on Knowledge, Attitude and Practice regarding Intermittent Preventive Treatment (IPTs) of Malaria among Pregnant Women Attending for Antenatal Care in Benadir Hospital at Benadir Region, Somalia, showed that the majority of the respondents 34 (57%) were said yes while 26 (43%) were said no, 39 (65%) were said Yes while 21 (35%) were said no, 13 (22%) were said It's not good for the baby, followed by 6 (10%) were said It will cause abortion, while only 2 (3%) were said It will cause death of the fetus, 56 (93%) were said Yes while 4 (7%) were said no,

55 (91%) were taking permission from their husbands for the consumption IPTp-SP during their pregnancies, while the rest of respondents 1 (2%) were taking permission from their parent

A study conducted by Anthonia, Joy, John, and Uchehi (2017), On the attitude of the respondents towards IPTp this study reveals good attitude since the majority 66.8% would like to take the drugs and about 73.4% of the respondents feels it has no side on the newborn baby this may be because of the belief that since the treatment is prescribed by medical personnel and in a health facility, it is not likely to harm their unborn baby. Pregnant women know that medical personnel and hospitals are ethically bound to ensure that prescribed therapy is beneficial and will not cause harm. The study also assessed the reason why it is unsafe to use IPT-SP during the first trimester. Among the 140 participants interviewed, 30.9% had the opinion that it causes abortion, 10.9% said it causes vomiting, 9.1% premature labor and 7.3% said it causes fatigue as well as other reasons.

2.4 Practice of pregnant women on IPT

A study conducted by Anthonia, Joy, John, and Uchehi (2017) on knowledge, attitude and utilization of intermittent preventive treatment for malaria among pregnant women attending antenatal clinic in Usmanu Danfodiyo University Teaching Hospital(UDUTH) shows that majority of pregnant women 87.4% were prescribed of IPTp drugs while 57.0% of the respondents took their drugs at home, 13.2% took their drugs in the hospital without supervision of health worker and 29.8% respondents did not take it. There was low IPTp drug utilization in their study since those who took the drugs at home might not have taken the right dosage. Also, many respondents may not have taken the medication because of fear of potential side effects and other unfounded reasons.

A Study revealed that 41 (68%) respondents were had ANC visit while 19 (31%) did not, 27 (45%) of them were attended Mother and child health center (MCH) for their ANC visit. And Overall, 28 (47%) were had used (utilized) IPTp-SP drugs at their current pregnancy, Of the 27 (45%) had taken one dose while 4 (6%) took two doses, 1 (2%) took three doses. This study showed that overall respondents 22 (37%) started IPTp-SP tablet consumption during the period in 4 - 6 months (13 - 24 Weeks), while 10 (16%) started IPTp-SP tablet consumption during in 7 - 9 months (25 - 36 weeks) of their gestational period. In all, 12 (20%) of respondents took their IPTp-SP tablet under the direct observation of the health care worker at the health facility (DOTs). furthermore 32 (53%) did not used (utilized) IPTp-SP drugs at their current pregnancy of the 21 (32%) were lack of awareness, 19 (32%) were lack ANC attending during their pregnancies, (10%) were lack of IPTp-SP drugs at ANC center and overall when level of education, parity, IPTp awareness, Convenience of IPTp-SP consumption, ANC visit of the respondents were cross tabulated with their IPTp-SP intake (Mohammed, et al., 2022).

According to Akinleye, Falade, and Ajayi (2015), the description of use by respondents, 53 respondents mentioned that three tablets were dispensed to them, out of which 41 used the three tablets, giving compliance rate of (77.4%). Twenty one of the 57 respondents (36.8%) who had received SP in current pregnancy used it in the ANC of which only three (3/21; 14.3%) were supervised by a health worker at the time of ingestion. Six out of the 21 (28.6%) that took the drug in the clinic used the cup provided by the clinic. Twenty two of the 36 women (61.1%) who did not take their drugs in the clinic would have liked to do so if allowed to bring their own drinking cups. Almost half (25/57; 43.9%) of those who had used IPTp during the index pregnancy expressed concern about possible adverse effect of SP on their pregnancies.

CHAPTER THREE

MATERIALS AND METHODS

3.0 Introduction

This chapter includes study design, study population, sample size determination, sampling techniques, sampling procedure, data collection method, data collection tools, data collection procedure, pre-testing, ethical consideration, study limitations and dissemination of results.

3.1 Study Design

The study applied a descriptive cross-sectional study using quantitative research methods. Cross-sectional study is simply a snapshot of the outcome situation at a point in time (Alexander, Lopes, Ricchetti-Masterson, & Yeatts, 2015). It is also a type of observational study, in which associations between a factor of interest and a particular disease or outcome are investigated. Quantitative research method is used to produce generalizable results. Conclusions made from the analysis of quantitative data will help the researcher to know the effects of factors, and where the bull's eye of impact is, and what the key variables are (Choy, 2017).

3.2 Research setting

The study was conducted at Holy Family Hospital, Berekum. Holy Family Hospital is located on Berekum to Biadan road, about twenty meters from the main Berekum Lorry station. The hospital is a secondary hospital that provides general services to its numerous clients.

Berekum Holy Family Hospital (HFH) is a Catholic Diocesan Hospital which serves as the Municipal Hospital. It is part of the Sunyani Diocesan Health Service (DHS) and the Diocesan Health Service Board (DHSB) serves as the Governing Board. It was established in 1948 by the Medical Mission Sisters (MMS) and became a Diocesan Hospital in 1978.

HFH since 1969 has been connected to a private hospital and community-based facilities and it is coordinated by the Municipal Health Management Team (MHMT). The catchment area of the hospital stretches beyond the Berekum-west District to some parts and has a catchment population of about a hundred thousand people. The hospital's total bed capacity currently stands at 280.

The Hospital provides 24-hour services which include Out-patient, Laboratory, Under five clinic, Child Welfare Clinic, Scan, Maternity, Emergency, Voluntary counselling and testing for HIV, Theatre, Pharmacy, Stores and records keeping, Accounts, and many more.

Antenatal Clinic is a unit under Maternal Child Health (MCH). Antenatal Clinic is the first point of call for pregnant women. The clinic offers some services like, health education, counseling of pregnant women, and many more.

3.3 Study Population

A study or target population is the universal set of respondents that contain the characteristics of interest that the researcher requires his or her respondents to have before being part of his or her study population. A research population is a well-defined collection of individuals, groups or objects known to have similar characteristics (Labaree, 2016). In this study, the study population was the pregnant women who reported at the Antenatal Clinic of the hospital for services during the duration of the study.

3.4 Sample and Sampling Technique

Grove, Burns, and Gray (2015), define sampling as the process of selecting subjects, events, behaviours or elements for participation in a study. The proportion of the population selected ought to be representative of the entire group, and have characteristics similar to that of the population under study to allow generalize ability of the results to represent the population;

and should not be excessively larger too small. Sampling is used to enable and ensure that results obtained are representative of the target population. Sampling aims to practically deal with the population without necessarily including everyone. It also helps to reduce the time, effort and resources that would have been used to study the entire population. (Grove, Burns, & Gray, 2015). In this study, convenience sampling under non-probability sampling technique or method was used to gain access to respondents for the study group. Based on this sampling type, the respondents were selected based on those who were available at the time of research. Convenience sampling technique was adopted because it is quick and easy and easy to use without investing too much money.

The sample size was drawn from the population of pregnant women attending Antenatal Clinic at Holy Family Hospital, Berekum. The total sample size for this study was 30 pregnant women. They were conveniently selected.

3.5 Tool for data Collection

The study used a structured questionnaire to solicit information from participants because relative to interviews, questionnaires are less costly, and require less time to administer; as well as offering the participants relative anonymity. They are also very useful for the large population, where interviews would be impossible or impractical. A questionnaire is a research instrument, usually printable, consisting of a series of questions for the purpose of gathering information that can be analysed for usable information (Mcleod, 2018).

The questionnaire covered the various aspects under study, including the demographic characteristics, knowledge and attitudes related to pregnant women on IPT. The questionnaire was divided into 4 sections and the sections consist of the following; section I the respondent socio-demographic data, section II the Knowledge of pregnant women on IPT, section III attitude of pregnant women on IPT, and section IV practice of pregnant women on IPT.

3.6 Validity and Reliability

Validity refers to the extent to which a concept is accurately measured in a study and reliability refers to the consistency of a measure which results from the accuracy of the instrument of measure which in this study is questionnaires. The researcher ensured the validity and reliability of this research by ensuring that; questionnaires used in this research covered all the contents it was supposed to cover with respect to the purpose and objectives of this research, the questioners for data collection were pretested to identify flaws and ambiguities to be corrected.

3.7 Data Collection Procedures

The questions on the said questionnaire were written in English, a language understood and spoken by all participants. English is Ghana's official and standard language used for educational instructions (Ghana Embassy, 2018). Both primary and secondary data sources were used in this study as articles and publications were used to obtain the secondary data. Primary data was collected through administration of questionnaires to the participants of the study.

3.8 Data Analysis

Data analysis is the process of organizing, interpreting and communicating numeric data through a statistical or logical technique with the goal of discovering useful information that can inform conclusions and support decision-making (Polit & Beck 2017). The main purpose of data analysis is to make meaning from data collected in a study. In this study, the different items and responses in the questionnaire were assigned codes and then analyzed with SPSS Version 23.

The data from the questionnaire was imputed onto it and analytical diagrams drawn using the data view option of the SPSS. These diagrams were then be transferred to Microsoft excel

where statistical analytic figures drawn and copied to their appropriate location. Data was analyzed in a table form, of facts derived from the questionnaire. Responses were broken into, percentages, bar charts and pie charts of each issue of relevance with the writer dominating on issues relating to the core objectives of the study. The data consist of socio-demographic data such as sex of respondents, age of respondents, marital status, educational background and occupation. This data analysis technique was used because it provides a plethora of basic statistical functions, cross tabulation and bivariate statistics and also enables the researcher to build and validate predictive models using advanced statistical procedures.

3.9 Ethical Consideration

Ethics in research refers to the principles a researcher must adhere to in order to protect the dignity, rights, and welfare of prospective human participants, animals, organizations, communities and the environment (USAID, 2018). The researchers sought approval from the research and publications committee board of the Holy Family Hospital, Berekum. Verbal consent from the participants was sought subsequently. The anonymity and confidentiality of participants was assured throughout the study since there was no means of identifying participants on the questionnaire. Participants joined the study at their will and will be free to withdraw at any stage.

3.10 Limitation

The study was limited to only pregnant women who were available at the time of the study. Due to time and financial constraints, the study was not covered every pregnant woman.

CHAPTER FOUR

DATA ANALYSIS AND RESULTS

4.0 Introduction

This chapter of the study comprises discussion of the findings based on the administered questionnaire conducted by the researchers. The primary objective of the study is to determine knowledge, attitude and perception of pregnant women in the use of IPT in prevention of malaria in pregnancy. The questionnaires were collected for quantitative analysis of data from responses from the area who in opinion of the research has informed knowledge of the subject matter. The analysis is divided into two parts. The first part shall provide the demographics of the respondents, which includes the age, gender, and the second part entails the main and specific objectives of the research.

4.1 Data Analysis and Results

4.2 Section A- Socio-Demographic Characteristics of Study Population

Table 4.1: Age distribution of respondents.

Age	Frequency	Percentage (%)
15 – 24yrs	8	26.7
25– 36yrs	16	53.3
37 – 44yrs	6	20.0
Total	30	100.0

Source: Field study, 2024

Table 4.1 shows the distribution of the ages of the respondents. The majority 16 (53.3%) of the respondents were between the ages of 25 to 36 years, 8 (26.7%) were 15-24 years, and 6 (20.0%) were 35-44 years.

Table 4.2: Marital status Distribution of Respondents

Marital Status	Number of respondents	Percentage (%)
Single	10	33.3
Married	20	66.7
Divorced	0	0.0
others	0	0.0
Total	30	100

Source: Field data, 2024

From Table 4.2 above, shows 10 (33.3%) of the respondents were single and 20 (66.7%) respondents were married. None of the respondents was divorced or other.

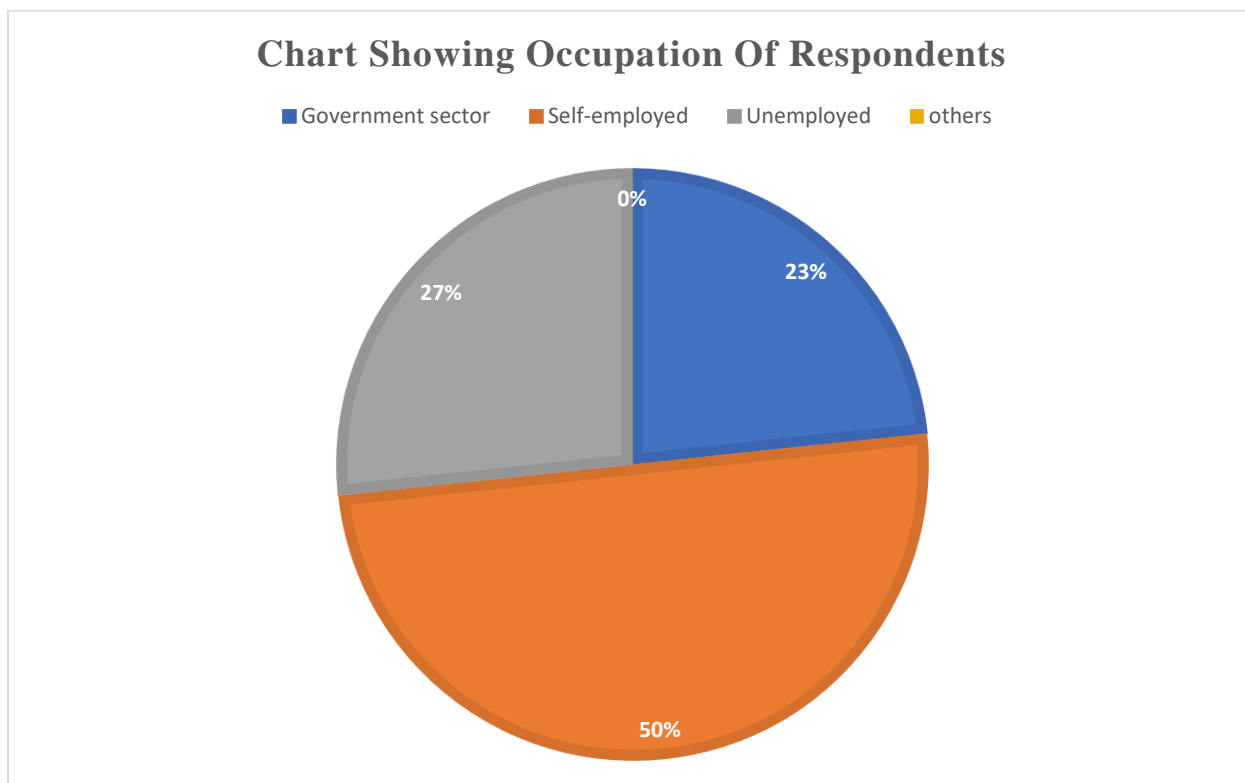
Table 4.3: Level of Education of respondents.

Level of Education	Frequency	Percentage (%)
Primary	10	33.3
JHS	6	20.0
SHS	8	26.7
Others	6	20.0
Total	30	100

Source: Field study, 2024

Table 4.3 shows the level of education of respondents. The majority 8 (36.7%) had attained a SHS, 10 (33.3%) Primary, 6 (20.0%) JHS and others.

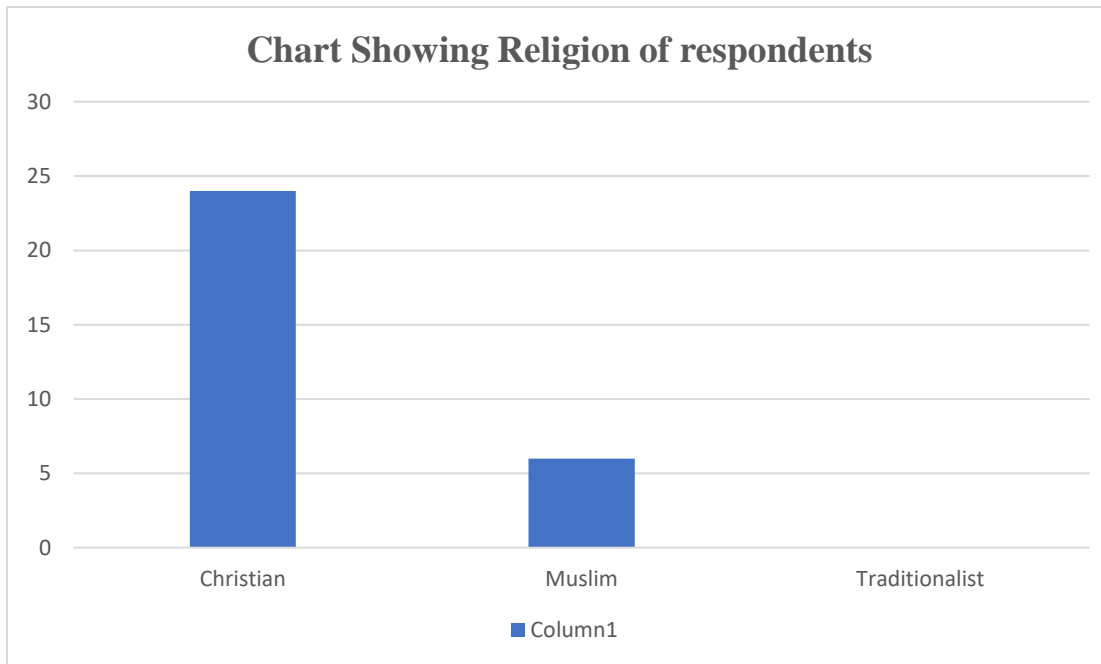
Figure 4.1: Occupation of respondents.



Source: Field study, 2024

Figure 4.1 shows the occupation of respondents. The majority 15 (50.0%) are Self-employed, 8(27.0%) unemployed, and 7(23.0%) work in the Government sector.

Figure 4.2: Religion of respondents.



Source: Field study, 2024

Figure 4.2 above, shows 24 of the respondents (80.0%) were Christians whilst, 6 respondents (20.0%) were Muslims. None of the respondents was a traditionalist or had different other religion which was unrecognized in the study.

Table 4.4: Gravidity of respondents.

Gravidity	Frequency	Percentage (%)
One	8	26.7
two	16	53.3
Three	4	13.3
Four and more	2	6.7
Total	30	100

Source: Field study, 2024

From Table 4.4 above, 2 (6.7%) were said more than four times, 4 (13.3%) had said three times, 16 (53.3%) had said two times, while 8 (26.7%) were said one time.

Table 4.5: Parity of respondents.

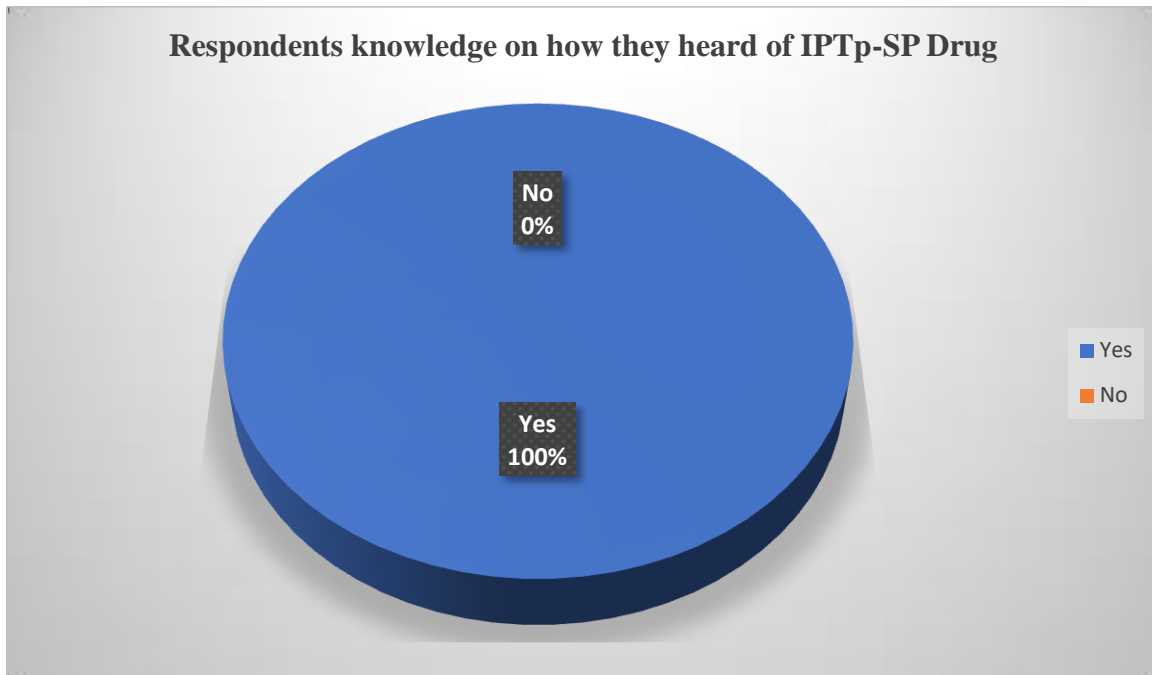
Parity	Frequency	Percentage (%)
One	20	66.7
two	6	20.0
Three	4	13.3
Four and more	0	0.0
Total	30	100

Source: Field study, 2024

From Table 4.5 above, 20 (66.7%) were had said one time, 6 (20.0%) were said two times, 4 (13.3%) were said three times, while none had more than four times.

4.3 Section B- Knowledge of Pregnant Women on IPTp-SP Utilization

Figure 4.3: Respondents knowledge on how they heard of IPTp-SP Drug



Source: Field study, 2024

From the Figure 4.3, all the respondents have heard of IPT-SP.

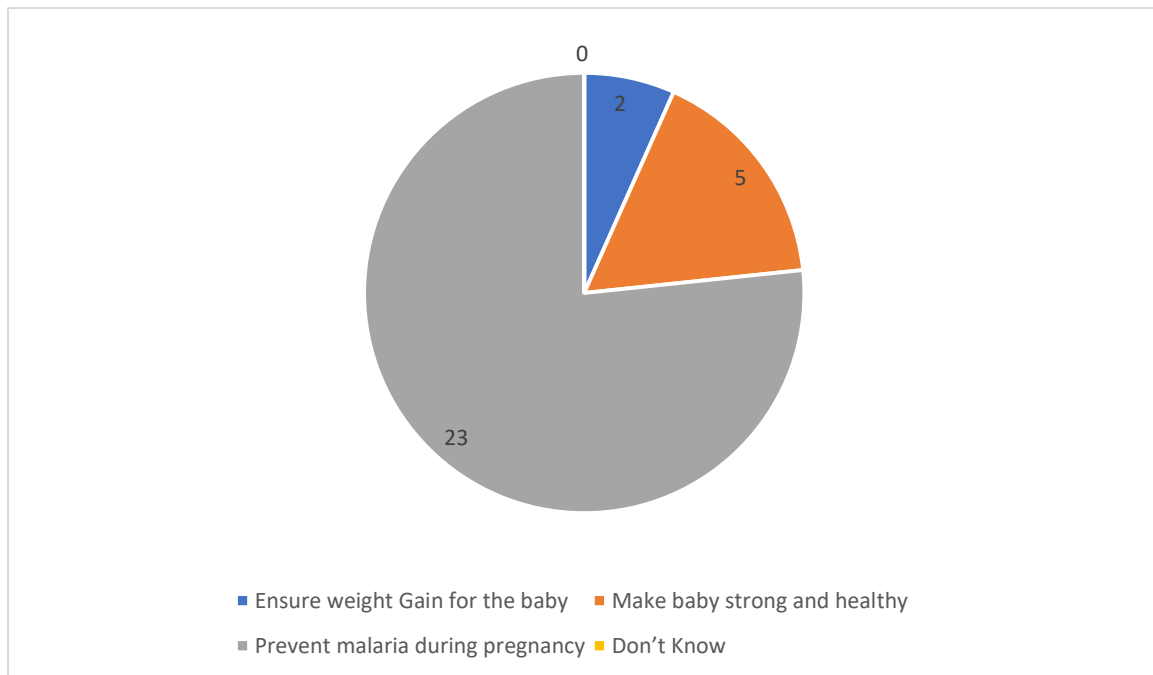
Table 4.6: Respondents source of information on IPT-SP.

How respondents got to heard about IPT-SP	Frequency	Percentage (%)
Health care providers at health centres	25	83.3
Traditional Birth Attendants	0	0.0
My husband	2	6.7
Radio & Television	0	0.0
Friends/relatives/neighbours	3	10.0
Others	0	0.0
Total	30	100

Source: Field study, 2024

From Table 4.6 above, indicates how pregnant women got to heard about IPT-SP, 25 (83.3%) of the pregnant women heard it health care providers at health centers, 2 (6.7%) heard it from husband, 3 (10.0%) had their information through Friends/relatives/neighbors.

Figure 4.4: Respondents knowledge on Why are IPTp-SP taken during pregnancy



Source: Field study, 2024

From the Figure 4.4 above, respondents were asked on why are IPTp-SP taken during pregnancy, 23 (76.7%) said IPTp-SP is used to prevent malaria during pregnancy, 5 (16.7%) respondents said make baby strong and healthy, while 2 (6.6%) ensure weight gain for the baby.

Table 4.7: Respondents knowledge on number of times should IPTp-SP should be taken during pregnancy.

Number of times should IPTp-SP should be taken during pregnancy	Frequency	Percentage (%)
Once	0	0.0
Twice	4	40.0
Thrice	26	10.0
Others	0	30.0
Total	30	100

Source: Field study, 2024

From Table 4.7 above, respondents were asked on number of times should IPTp-SP should be taken during pregnancy. Majority 26 (86.7%) said three times, 4 (13.3%) said five times, 0 (0.0%) said once and others.

Table 4.8: Respondents knowledge on stage of pregnancy should IPTp-SP be start taken

stage of pregnancy should IPTp-SP be start taken	Frequency	Percentage (%)
One month after conception	0	0.0
Before quickening	9	30.0
After quickening	21	70.0
others	0	0.0
Total	30	100

Source: Field study, 2024

From Table 4.8 above, respondents were asked on stage of pregnancy should IPTp-SP be start taken, 21 (70.0%) said at after quickening, 9 (30.0%) before quickening and 0 (0.0%) said others and one month after conception.

Table 4.9: Respondents knowledge on number of tablets of IPT should be partaken at once.

Number of tablets of IPT should be partaken at once	Frequency	Percentage (%)
One tablet	0	0.0
Two tablets	6	20.0
Three tablets	24	80.0
I don't know	0	0.0
Total	30	100

Source: Field study, 2024

From Table 4.9 above, respondents were asked on number of tablets of IPT should be partaken at once. 24(80.0%) said three tablets and 6 (20.0%) said two tablets.

Table 4.10: Respondents knowledge recommended schedule of IPTp-SP intake.

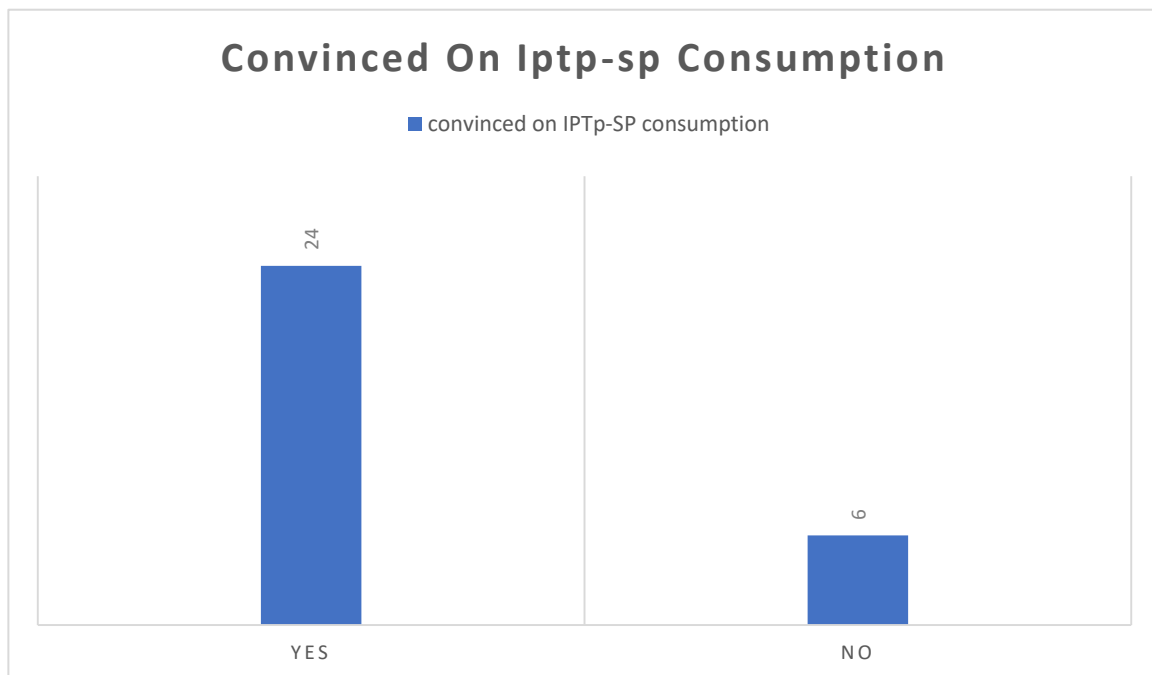
Recommended schedule of IPTp-SP intake	Frequency	Percentage (%)
Every two weeks	0	0.0
Monthly	27	90.0
Every Three Months	3	10.0
Others	0	0.0
Total	30	100

Source: Field study, 2024

From Table 4.10 above, respondents were asked on recommended schedule of IPTp-SP intake. 27 (90.0%) said Monthly and 3 (10.0%) said every three months.

4.4 Section C- Attitude of Pregnant Women On IPTP-SP Utilization

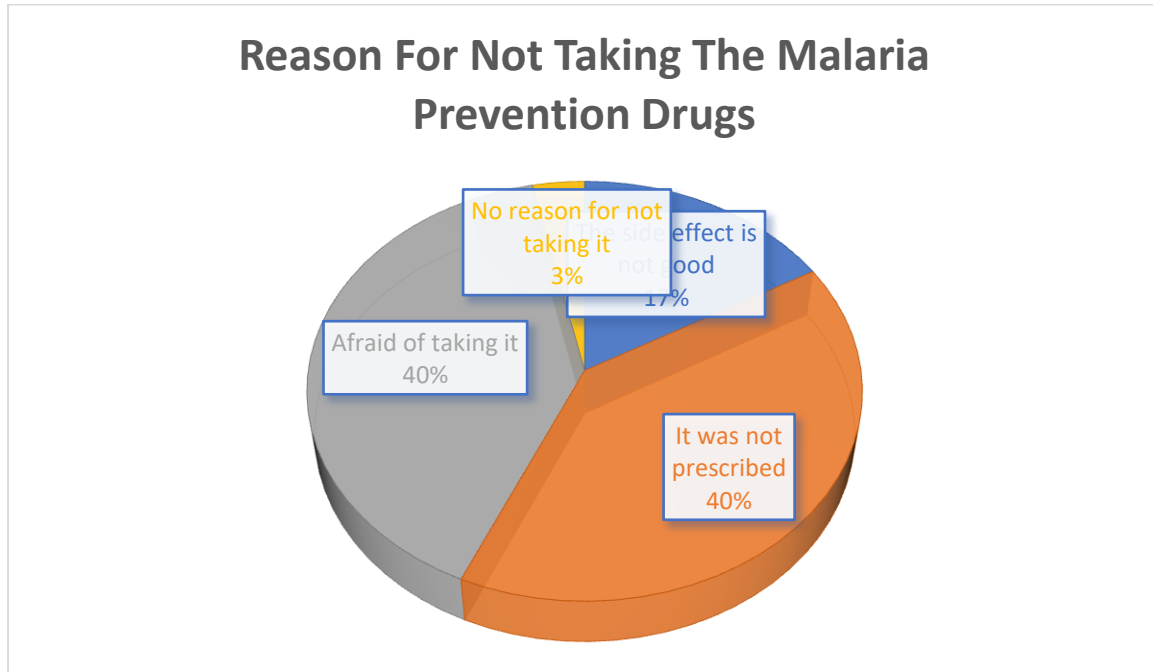
Figure 4.5: Respondents response on whether they were convinced on IPTp-SP consumption



Source: Field study, 2024

From the Figure 4.5 above, respondents were asked on whether they were convinced on IPTp-SP consumption, 24 (80.0%) said yes and 6 (20.0%) said no.

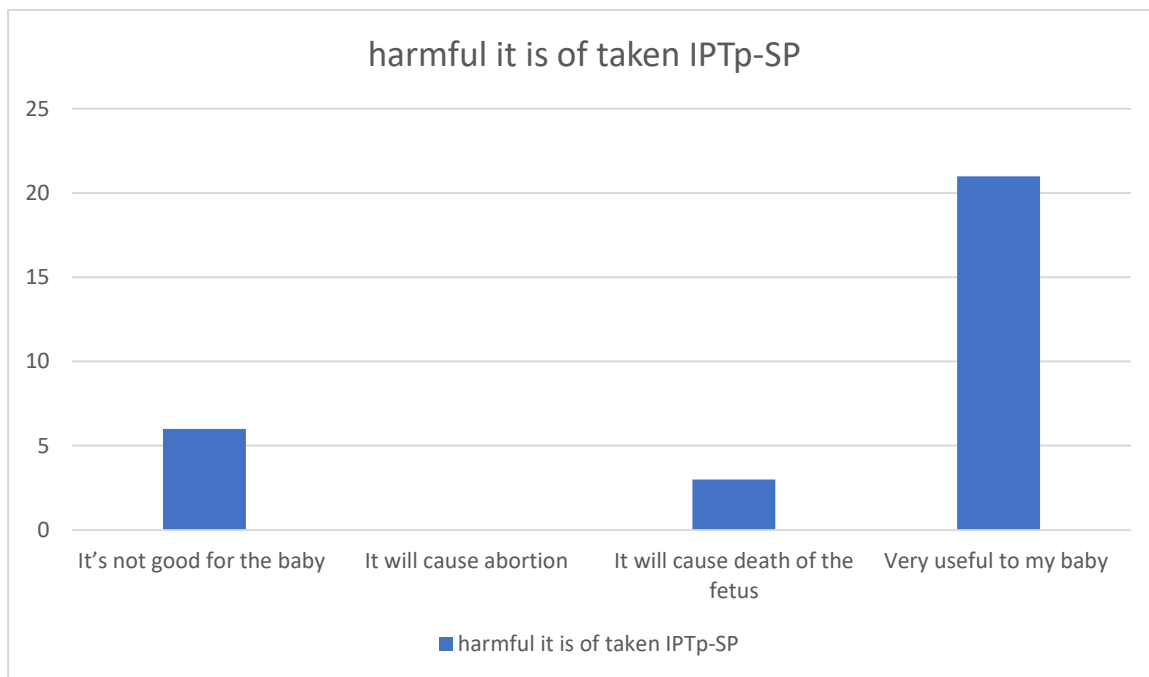
Figure 4.6: Respondents response on reason for not taking the malaria prevention drugs



Source: Field study, 2024

From the Figure 4.6 above, respondents were asked on reason for not taking the malaria prevention drugs, 12 (40.0%) said it was not prescribed and afraid of taking it, 5 (17.0%) said the side effect is not good and 1 (3.0%) said no reason for not taking it.

Figure 4.7: Respondents response on harmful it is of taken IPTp-SP



Source: Field study, 2024

From the Figure 4.7 above, respondents were asked on harmful it is of taken IPTp-SP, 21 (70.0%) said very useful to my baby, 6 (20.0%) said it's not good for the baby, and 3 (10.0%) said it will cause death of the fetus.

Table 4.11: Respondents response on Permission for of IPTp-SP utilization.

Permission for of IPTp-SP utilization	Frequency	Percentage (%)
My Husband	19	90.0
My parents	1	5.0
No I don't	0	0.0
Total	20	100

Source: Field study, 2024

From Table 4.11 above, respondents were asked on Permission for of IPTp-SP utilization, 27 (90.0%) said husband and 3 (10.0%) said parents.

4 Section C- Practice of Pregnant Women On IPTP-SP Utilization

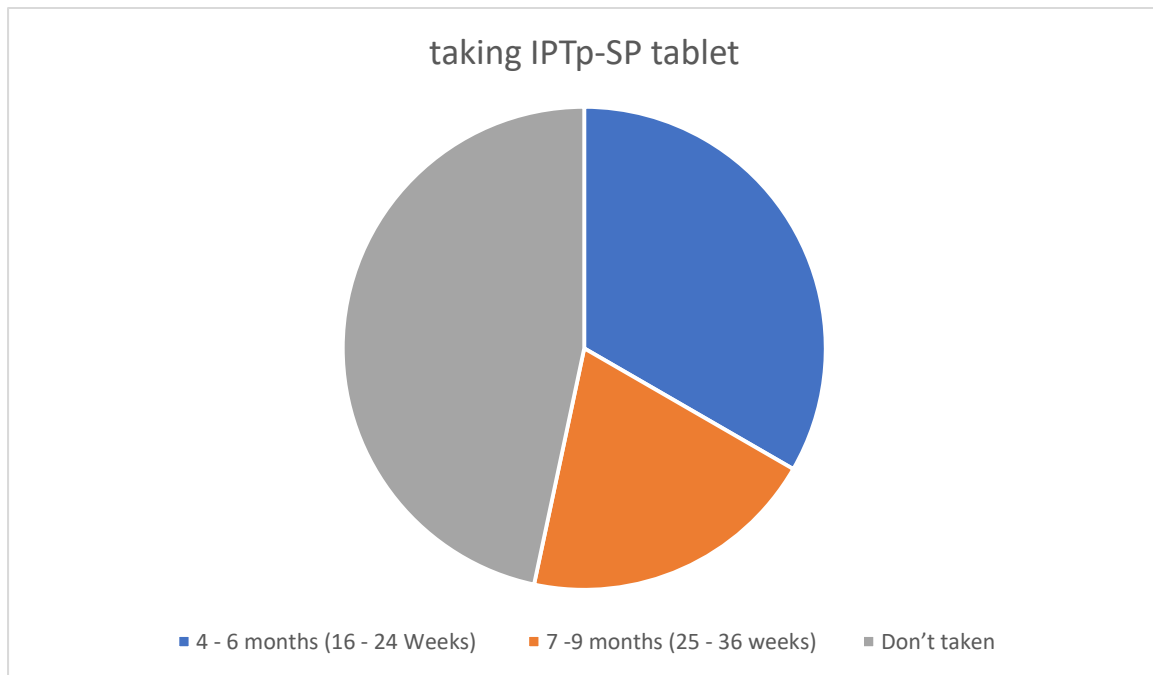
Table 4.12: Respondents response on visit to ANC.

Recommended schedule of IPTp-SP intake	Frequency	Percentage (%)
Yes	30	100.0
No	0	0.0
Total	30	100

Source: Field study, 2024

From Table 4.12 above, respondents were asked on visit to ANC, all the respondent said they visit the ANC.

Figure 4.8: Respondents response on when they started taking of IPTp-SP tablet.



From the Figure 4.8 above, respondents were asked on taking IPTp-SP tablet consumption, 14 (46.7%) said they don't take, 10 (33.3%) said 4 - 6 months (16 - 24 Weeks), and 6 (20.0%) said 7 -9 months (25 - 36 weeks).

Table 4.13: Respondents response on ways of obtaining IPTp-SP drugs.

Ways of obtaining IPTp-SP drugs	Frequency	Percentage (%)
Received free at the health facility	24	80.0
Bought drug at hospital pharmacy	0	0.0
Bought drug at commercial pharmacy	0	0.0
I don't take	6	20.0
Total	30	100

Source: Field study, 2024

From Table 4.13 above, respondents were asked on ways of obtaining IPTp-SP drugs, 24 (80.0%) said received free at the health facility, 6 (20.0%) said they don't take and none said they bought drug at hospital pharmacy or at commercial pharmacy.

Table 4.14: Respondents response on method of IPTp-SP tablet consumption (swallowing) take place

Ways of obtaining IPTp-SP drugs	Frequency	Percentage (%)
In the facility under observation by health care providers	14	46.7
In the facility without observation by healthcare Providers	10	33.3
At home	0	0.0
I don't take	6	20.0
Total	30	100

Source: Field study, 2024

From Table 4.14 above, respondents were asked on method of IPTp-SP tablet consumption (swallowing) take place, 14 (46.7%) said in the facility under observation by health care providers, 10 (33.3%) said in the facility without observation by healthcare Providers and 6 (20.0%) said they don't take it.

Table 4.15: Respondents response on reason of not swallowing IPTp-SP tablet under Observation by health workers

Ways of obtaining IPTp-SP drugs	Frequency	Percentage (%)
I was not required to do so	5	16.7
Lack of clean water	15	50.0
Lack of clean glasses/utensils	0	0.0
I was told to have my meal first	4	13.3
I don't take it	6	20.0
Total	30	100

Source: Field study, 2024

From Table 4.15 above, respondents were asked on reason of not swallowing IPTp-SP tablet under Observation by health workers, 15 (50.0%) said Lack of clean water, 6 (20.0%) said don't take it, 5 (16.7%) said they were not required to do so and 4(13.3%) said were told to have my meal first.

CHAPTER FIVE

DISCUSSION OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This is based on the data analyzed. After the interpretation of the data of the study, it was related to other research findings mentioned in the literature review. The discussion of the finding focuses on the objectives in relation to the literature review.

5.1 Discussion

5.1.1 Demographic Data

Findings from the study revealed that, the majority 16 (53.3%) of the respondents were between the ages of 25 to 36 years. This buttresses the fact that the respondents between the ages of 25 to 36 contributed much to this work. The study also revealed that, 20 (66.7%) of respondents were married while 10 (33.3%) of the respondents were single.

The majority 8 (36.7%) had attained a SHS, 10 (33.3%) Primary, 6 (20.0%) JHS and others. With occupation of respondents, the majority 15 (50.0%) are Self-employed, 8(27.0%) unemployed, 7(23.0%) work in the Government sector and none said others.

The majority 24 of the respondents (80.0%) were Christians whilst, 6 respondents (20.0%) were Muslims. None of the respondents was a traditionalist or had different other religion which was unrecognized in the study.

Findings from the study revealed that, respondents were asked on gravidity 2 (6.7%) were said more than four times, 4 (13.3%) had said three times, 16 (53.3%) had said two times, while 8 (26.7%) were said one time. This buttresses the fact that the respondents have knowledge on IPT-SP.

5.1.2 Pregnant Women Knowledge on IPTP-SP Utilization

The overall knowledge of the nurses in this study was satisfactory, as similar to the findings of Chukwurah, et al., (2016), titled Knowledge, attitude and practice on malaria prevention and sulfadoxine-pyrimethamine utilization among pregnant women in Badagry, Lagos State, Nigeria found that, majority of women, 355 (79%), had knowledge of SP.

The current study found that all the respondents have heard of IPT-SP. This is consistent with the findings by Akinleye, Falade, and Ajayi (2015), which revealed that majority [109 (52.2%)] of the respondents, said they have heard about IPTp.

The study reveals most of the pregnant women heard about IPT-SP through health care providers at health centers. This is in line with the study by Nganda, et al., (2014), although, there were no structured health education plans for IPT at the ANCs when they were visited, this did not greatly affect the health education talks that were given by the health workers as not less than 70% of the respondents received their knowledge about IPT from the staff of the ANC.

This study discovers majority 23 (76.7%) of the respondents knew IPTp-SP is used to prevent malaria during pregnancy followed by minority who indicated it makes babies strong and healthy as well as ensure weight gain. This is in line with the study conducted in Ghana by Antwi (2017), the pregnant woman's knowledge about the purpose of taking SP at the ANC and also a study by Chukwurah, et al., (2016), majority 380 (84.4%) who claimed to know what SP is used for said it was for treatment of malaria; 69 (15.2%) said it was for prevention of malaria while 0.3% said it is used for the treatment of typhoid fever.

The study reveals most of majority of the respondent 26 (86.7%) have taken IPTp-SP three times during pregnancy. This conforms to the NMCP promotes IPTp of malaria using the World Health Organization (WHO) recommended SP, for all pregnant women. This is taken

monthly starting from quickening or 16 weeks of pregnancy through to delivery. From the onset of implementation of IPTp in Ghana, the required number of SP doses was three to be received between 4 to 6 months of gestation as per the Sulphadoxine-Pyrimethamine should be given at the ANC clinic or at where there is supervision of a midwife/health worker through a directly observed treatment (DOT) method WHO recommendation (WHO, 2019).

The study also reveals most of majority of the respondent 24(80.0%) responded three tablets of IPT should be partaken at once. This contrast in a study by Chukwurah, et al., (2016), two tablets of SP were taken by 8% of pregnant women while 92% took three tablets through self-medication.

5.1.3 Pregnant Women Attitude on IPTP-SP Utilization

On the attitude of the respondents towards IPTp this study reveals good attitude since the majority 60.0% would like to take the drugs because it is very useful to to their babies

The current study found that, 24 (80.0%) of the respondents were convinced on IPTp-SP consumption while 6 (20.0%) were not. 12 (40.0%) of the respondent said it was not prescribed and afraid of taking it were the reason for not taking the malaria prevention drugs. This finding is consistent with the findings of a previous study conducted in Korogwe District, North-Eastern Tanzania that viewed IPTs-SP as harmful, suggesting that it caused miscarriages and side effect that included mouth sores, fatigue, fever, rashes and itchiness (Amoran, Ariba, & Iyaniwura, 2016). A study conducted by Anthonia, Joy, John, and Uchehi (2017), On the attitude of the respondents towards IPTp this study reveals good attitude since the majority 66.8% would like to take the drugs and about 73.4% of the respondents feels it has no side on the newborn baby this may be because of the belief that since the treatment is prescribed by medical personnel and in a health facility, it is not likely to harm their unborn baby.

The findings of the study revealed that, most of the respondents 21 (70.0%) said IPTp-SP is very useful to my baby. This is in line with the study by Mangeni (2013), has also reported the same observation as one of the attitudes of community members towards IPT services in Busia district. A later study has also indicated that a good number of women studied considered IPT as a good measure to prevent malaria during pregnancy, treat a sick foetus or treat unsuspecting mother.

The study also reveals most of majority of the respondent 27 (90.0%) sought permission from their husband for of IPTp-SP utilization. This is in line with the study by Mohammed, et al., (2022) research conducted on Knowledge, Attitude and Practice regarding Intermittent Preventive Treatment (IPTs) of Malaria among Pregnant Women Attending for Antenatal Care in Benadir Hospital at Benadir Region, Somalia, showed that the majority of the respondents 55 (91%) were taking permission from their husbands for the consumption IPTp-SP during their pregnancies, while the rest of respondents 1 (2%) were taking permission from their parent.

5.1.4 Pregnant Practice on IPTp-SP Utilization

On the practice of the respondents towards IPTp this study reveals good practice since the majority 80.0% received IPTp-SP free at the health facility and 14 (46.7%) responded on IPTp-SP tablet consumption (swallowing) take place in the facility under observation by health care providers.

This study revealed that all respondents had ANC visit, 14 (46.7%) of the respondents don't take the consumption of IPTp-SP tablet while 10 (33.3%) started 4-6months. This is in line with a study by Mohammed, et al., (2022), which revealed that 41 (68%) respondents were had ANC visit while 19 (31%) did not, 27 (45%) of them were attended Mother and child health center (MCH) for their ANC visit.

This study also revealed that, 24 (80.0%) received IPTp-SP free at the health facility. 14 (46.7%) responded on method of IPTp-SP tablet consumption (swallowing) take place in the facility under observation by health care providers, 10 (33.3%) said in the facility without observation by healthcare Providers and 6 (20.0%) said they don't take it. This is in contract with a study conducted by Anthonia, Joy, John, and Uchehi (2017) on knowledge, attitude and utilization of intermittent preventive treatment for malaria among pregnant women attending antenatal clinic in Usmanu Danfodiyo University Teaching Hospital(UDUTH) shows that majority of pregnant women 87.4% were prescribed of IPTp drugs while 57.0% of the respondents took their drugs at home, 13.2% took their drugs in the hospital without supervision of health worker and 29.8% respondents did not take it.

5.2 Conclusion

Most of the pregnant women in this study have heard of IPTp-SP and have average knowledge of IPTp-SP as most of them know that it is given to prevent malaria during pregnancy. Fairly practice since the majority 80.0% received IPTp-SP free at the health facility and 14 (46.7%) responded on IPTp-SP tablet consumption (swallowing) take place in the facility under observation by health care providers.

5.3 Recommendations

1. We therefore recommend education to be intensified by WHO for the pregnant women on the importance of IPTp-SP both on maternal health and foetal/newborn's health especially in malaria-endemic regions in Ghana.
2. Meanwhile, more qualitative studies are needed to fully understand the individual factors that influence the intake of IPTp-SP to enhance policy decisions for the prevention of malaria associated pregnancy. Based on the result of this study, we recommended public health nurses, midwives and policy makers of the hospital to help implement appropriate

intervention strategy to create awareness of malaria in pregnancy as to increase treatment-seeking behavior of SP/Fansidar.

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QUESTIONNAIRE

QUESTIONNAIRE FOR PREGNANT WOMEN ATTENDING ANC AT HOLY FAMILY HOSPITAL IN BEREKUM ON ASSESSMENT OF KNOWLEDGE, ATTITUDE AND PERCEPTION TOWARDS THE USE OF IPT IN PREVENTION OF MALARIA IN PREGNANCY

Dear respondent,

This research is being conducted to assess knowledge, attitude and perception of pregnant women in the use of IPT in prevention of malaria in pregnancy. The researcher is hopeful that the outcome of this study may provide you and other nurses the prerequisite knowledge, understanding and the right attitude and perception of pregnant women on IPT in prevention of malaria in pregnancy. To achieve this, your maximum cooperation and sincere responses are therefore needed. Please note that participation in this research is voluntary and that every participant has the right to withdraw at any time. Participation is also anonymous and confidentiality will be guaranteed at all times.

Please tick [√] where appropriate or write down the appropriate response to each item as the question/statement may indicate

Section A

Socio-Demographic Data

1. **Age** a. 15 – 24yrs [] b. 24 – 36yrs [] c. 35 – 44yrs []
2. **Marital Status** a. single [] b. Married [] c. Divorced [] **d. Others (specify)**
.....
3. **Education** a. Primary [] b. JHS [] c. SHS [] **d. Others**
(Specify).....
4. **Occupation** a. Government [] b. Self-employed [] c. Unemployed []
d. Others (Specify).....

5. **Religion** a. Christianity [] b. Islamic [] c. Traditionalist [] **d. Others (Specify**

6. **Gravidity** a. One [] b. two [] c. Three [] d. Four and more []
7. **Parity** a. One [] b. two [] c. Three [] d. Four and more []

Section B

Knowledge of pregnant women on IPTp-SP utilization

8. Have you heard of IPTp-SP Drug? Yes [] No []
9. If yes, where did you hear IPTp?
- a. Health care providers at health centers []
 - b. Traditional Birth Attendants []
 - c. My husband []
 - d. Radio & Television []
 - e. Friends/relatives/neighbors []
 - f. **Others (Specify)**.....
10. Why are IPTp-SP taken during pregnancy?
- a. Ensure weight gain for the baby []
 - b. Make baby strong and healthy []
 - c. Prevent malaria during pregnancy []
 - d. Don't know []
11. How many of times should IPTp-SP be taken during pregnancy?
- a. Once [] b. Twice [] c. Thrice [] d. Others (Specify)
-

12. What is the minimum times IPTp-SP should be taken?
- a. Once [] b. Twice [] c. Thrice [] d. Others (Specify)

13. At what stage of pregnancy should IPTp-SP should be started?
- a. One month after conception []
- b. Before quickening []
- c. After quickening []
- d. Others (Specify)
14. How many number of tablets of IPT should be partaken at once?
- a. One tablet [] b. Two tablets [] c. Three tablets [] d. I don't know []
15. What is recommended schedule of IPTp-SP intake?
- a. Every two weeks [] b. Monthly [] c. Every three months []
- d. Other (Specify)

Section C

Attitude of pregnant women on IPTp-SP utilization

16. Were you unwilling to take the IPTp-SP? a. Yes [] b. No []
17. If yes, what was your reason for not taking the malaria prevention drugs (IPTP)
- a. The side effect is []
- b. It was not prescribed []
- c. Afraid of taking it []
- d. No reason for not taking it []
18. How harmful is it to take IPTp-SP?
- a. It's not good for the baby []
- b. It will cause abortion []
- c. It will cause death of the fetus []
- d. It is not harmful to my baby []

19. In your household, who take the decision on your intake of IPTp-SP?

- a. My Husband [] b. My parents [] c. No I don't []

Section D

Practice of pregnant women on IPTp-SP utilization

20. Do you visit ANC? Yes [] No []

21. When did you start taking IPTp-SP tablet consumption?

a. 4 - 6 months (16 - 24 Weeks) []

b. 7 -9 months (25 - 36 weeks) []

c. Don't take []

22. What is the ways of obtaining IPTp-SP drugs?

a. Received free at the health facility []

b. Bought drug at hospital pharmacy []

c. Bought drug at commercial pharmacy []

d. I don't take []

23. Where does your method of IPTp-SP tablet consumption (swallowing) take place?

a. In the facility under observation by health care providers []

b. In the facility without observation by healthcare Providers []

c. At home []

d. I don't take []

24. What is your reason of not swallowing IPTp-SP tablet under Observation by health workers?

I was not required to do so []

Lack of clean water []

Lack of clean glasses/utensils []

I was told to have my meal first []

I don't take it []

HOLY FAMILY NURSING AND MIDWIFERY TRAINING COLLEGE BEREKUM



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P. O. Box 21,
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Ghana, W/Africa
Tel. 0352222124
Fax 0352222474

August 14, 2024

Date 29/8/2024

Our Ref.

Your Ref.

The Nursing Administrator
Holy Family Hospital
P.O. Box 21
Berekum
Bono Region

Dear Nursing Administrator

PERMISSION TO CONDUCT RESEARCH

I wish to introduce to you the under listed names of final year students of the College

12. Acheampomaah Margaret

13. Agyeiwaa Lawrencia

As part of the pre-requisite for the award of Diploma in Nursing, they are to conduct a research on the topic "Assessing the knowledge, attitude and practice of IPT in preventing malaria in Pregnant Women, a study at the Holy Family Hospital, Berekum (Anti- Natal Care)"

I would be grateful if you could assist them with any material or help they may need to accomplish this task.

Thank you

Yours sincerely

.....
Mr. Eric Obeng
Supervisor
For: Principal