

ORIGINAL ARTICLE

**KNOWLEDGE, ATTITUDE AND UPTAKE OF INTERMITTENT PREVENTIVE
TREATMENT OF MALARIA AMONG PREGNANT WOMEN ATTENDING ANTENATAL
CLINIC AT THE UNIVERSITY OF UYO TEACHING HOSPITAL, AKWA IBOM STATE,
NIGERIA**

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ABSTRACT

Background: In tropical and subtropical areas of the globe, malaria in pregnancy offers a great risk to pregnant women, their fetuses, and their newborns. Pregnant mothers have the propensity and at risk of mortality from a malaria attack. Pregnant women with malaria often face severe complications associated with malaria. This study assesses knowledge, attitude and IPTp uptake among expectant mothers at the University of Uyo Teaching Hospital in Uyo, Nigeria.

Methodology: The study was a cross-sectional study done among 327 participants with interviewer administered questionnaire for data collection. The data so collected was fed into SPSS version 24 software for analysis. Ethical approval was obtained from the University of Port Harcourt School of Public Health, permission was gotten for University of Uyo Teaching Hospital Obstetrics and Gynecology Department.

Results: A total of 327 respondents participated in the study. The majority of respondents, 237 (79%), have knowledge of what IPTp is. On availability, 52% claimed that the IPTp drug is always available in the health facility, but when out of stock, pregnant women demonstrated a good attitude to visit other locations to be given the SP. The majority of respondents (49.0%) have the age of their pregnancy between 7-9 months. While most started ANC within that period, more than 4 months affected 185 (61.7%) and so affected the normal absorption of IPTp at the health facility. 228 (76%) have collaborated with the uptake of IPTp in the institution since the ANC. 35.7% of responses said that IPTp was taken in the 2nd and 3rd trimesters. A total of 32 (10.7%) respondents indicated that they had challenges of one sort or another in the intake of IPTp. While the majority of them identified miscarriage and low birth weight (31.3% and 28.3%) respectively) as serious concerns. The majority of respondents (99%) claimed that they were not observed by healthcare personnel while taking IPTp. The attitude of health care personnel and the unavailability of clean water were the top reasons respondents claimed not to take IPTp utilizing the DOT approach.

Conclusion: The majority of respondents have knowledge of (IPTp) but do not understand the significance of early visits to antenatal clinics, early booking at ANC, or the importance of taking IPTp medication and completing the proper dose. The non-availability of water in the clinic was a great challenge in explaining why IPTp is not being taken as Directly Observed Therapy, hence, there is a need for health facilities to give clean water and cups to ANC clinics, as this gesture will promote accurate intake of SP in the clinic. IPTp uptake can be maximized if pregnant women receive health education and ANC early.

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INTRODUCTION

The obstetric, social, and medical challenges associated with malaria during pregnancy require multidisciplinary and multidimensional intervention. Pregnant women are the greatest adult risk group for malaria, and 80% of deaths related to malaria in Africa occur in pregnant women and children under 5 years of age.¹ Malaria in pregnancy is a significant public health problem with substantial risk for the pregnant woman and her newborn child, and it is present in the tropical and subtropical regions of the world. It is related to maternal mortality, morbidity, and severe neonatal effects.² The effects of malaria in pregnancy can be reduced through the use of insecticides, antimalarial drugs, and other preventive measures. Vaccination is also a promising strategy to reduce the prevalence of malaria in pregnant women. Education is a key component in reducing the incidence of malaria in pregnant women.³ Malaria is a life-threatening parasitic infection spread by the bite of female *Anopheles* mosquitoes.^{1,3} It is one of the most severe communicable infections, especially affecting pregnant women, killing more than 1 million people annually according to WHO, Malaria and

Pregnancy, 2021. It was projected that over 6 million Nigerian women would become pregnant each year, and malaria is more widespread and worrisome during pregnancy with detrimental consequences.⁴

Malaria is responsible for around 11% of all maternal deaths and 70.5% of morbidity among pregnant women in Nigeria.⁵ The symptoms and consequences of malaria in pregnancy vary dependent upon malaria transmission intensity in a given geographical region, and the individual's degree of acquired immunity^{5,6} Pregnant women infected with malaria typically have more severe symptoms and consequences, with greater consequences for both the mother and her unborn child.⁶ These include an increased risk of miscarriage, intrauterine death, premature delivery, low-birth-weight neonates, and neonatal mortality. Additionally, pregnant women with malaria are vulnerable to developing severe complications such as severe anemia, hypoglycemia, acute renal failure, prostration, and even maternal death.^{1,6} In Nigeria, malaria transmission is an ongoing issue, particularly affecting expectant women who are significantly more

vulnerable compared to the general population. *Plasmodium falciparum*, the predominant malaria parasite species in the country, is responsible for approximately 97% of uncomplicated cases. Moreover, this species poses a grave threat as it is also the primary cause of severe malaria, often leading to fatal outcomes.⁷ Newborns are particularly vulnerable to the harmful effects of malaria, which can lead to an increase in both morbidity and mortality for expectant mothers.⁸ Pregnant women face a higher risk of contracting malaria compared to other individuals.⁹ In regions with high transmission rates like Nigeria, it is common for pregnant women to experience asymptomatic malaria throughout their pregnancy. Research conducted in Nigeria¹⁰ has shown that there is a lack of knowledge and understanding regarding intermittent preventive treatment in pregnancy (IPTp) among pregnant women. Additionally, healthcare providers also have limited experience with directly observed therapy (DOT) for IPTp. Despite the implementation of revised IPTp strategies in Nigeria since 2001, the adoption and utilization of IPTp among expectant mothers remain low¹¹. To enhance the uptake of IPTp, it is crucial to educate healthcare personnel, pregnant women, and the wider

community about its benefits.¹² Furthermore, ensuring that SP is readily available in antenatal care facilities would enable pregnant women to easily access it during their routine ANC visits.¹³ Implementing Directly Observed Treatment (DOT) for administering SP would be ideal as it guarantees that pregnant women consume the complete prescribed dosage.¹⁴ By implementing these measures, we can effectively promote the widespread use of IPTp; If a pregnant woman tests positive for malaria using a rapid diagnostic test (RDT)^{14,16} she should be treated according to the national case management guidelines. In cases where the test result is negative, the woman should still receive preventive treatment in the form of intermittent preventive treatment in pregnancy with sulfadoxine-pyrimethamine (IPTp-SP)¹⁷⁻²⁰

First Dose: The concept of administering intermittent preventive treatment during pregnancy has been approved by the World Health Organization (WHO)^{3,21} This approach involves providing a single dose of three tablets containing a combination of sulphadoxine-pyrimethamine, which is conveniently integrated into routine antenatal care services.²² It is important to note that subsequent doses, if required, should be administered at least one month

apart and can be continued until delivery without any safety concerns. During the first trimester, a combination of quinine and clindamycin is recommended for a 7-day treatment. However, pregnant women in any trimester should be treated with intravenous or intramuscular Artesunate for a minimum of 24 hours, at 0, 12 and 24 hours or until they are able to switch to oral medication.²³ Once the patient has received at least 24 hours of parenteral treatment and can tolerate oral therapy, the full course of treatment should be completed with a 3-days of ACT should be commenced.^{1,24} Artemisinin-based combination therapy (ACT) is considered the preferred treatment for malaria during pregnancy, and it can be safely used in all trimesters. In cases where ACT is not accessible, an alternative option is to administer intramuscular artemether. In the absence of both ACT and Artemether, parenteral quinine should be promptly initiated until Artesunate becomes available. It is important to seek obstetric advice when using quinine due to the potential risk of recurrent/ rebound hypoglycemia linked with the administration of quinine.²⁵ It is highly recommended for expectant mothers to regularly attend antenatal clinics, where they can receive essential services such as supervised administration of SP

(sulfadoxine-pyrimethamine) by healthcare professionals.²⁶⁻²⁸ This method, known as directly observed treatment, ensures that pregnant women receive the correct dosage and adhere to their prescribed medication schedule. Additionally, it is crucial for these women to prioritize their appointments with physicians or midwives, as they play a vital role in monitoring their overall health and providing necessary²⁹

By conducting targeted educational campaigns and training programs, healthcare providers can be better equipped to inform pregnant women about the importance of IPTp and its benefits. Additionally, ensuring that SP is readily available at antenatal care clinics would ensure that pregnant women have convenient and timely access to this preventive treatment throughout their ANC period.³⁰ To further optimize its effectiveness, it is recommended.

STEP: If a pregnant woman has already attended the antenatal clinic during her first trimester or before feeling the baby's movements, she should be advised to return for her next scheduled ANC appointment. During this visit, it is important to provide her with counseling regarding the advantages of IPT and LLIN administration. Additionally, it is crucial to assess her medical history for any allergies to

medications containing sulfur and record this information on both her ANC card and the health facility registry.

If the woman is in her second trimester or has experienced quickening, it is important to inquire about any recent treatment with SP within the last month. If she has received such treatment, it is advisable to schedule her for a follow-up during her next ANC visit. However, if she has not received a dose of SP in the past month, it is necessary to proceed and give.^{31,32}

This study aims to provide valuable insights into the current uptake of IPTp and shed light on factors such as knowledge, attitude, and utilization of IPT during pregnancy among clients. By examining these aspects, the study intends to identify areas for improvement and facilitate the implementation of preventive measures that promote the use of IPTp in Nigeria. Ultimately, the findings from this research will serve as a crucial resource to initiate effective strategies and interventions that encourage the widespread adoption of IPTp for improved maternal health outcomes.

MATERIALS AND METHODS

Study Area

The University of Uyo Teaching Hospital (UUTH) is a renowned tertiary hospital situated in the outskirts of Uyo city, which

serves as the capital of Akwa Ibom state in Nigeria's South-South geo-political zone. Spanning across 43 hectares of land, this impressive 1200-bed facility stands as a vital pillar in providing top-notch healthcare services to the state's population of approximately 6.0 million, as per the 2006 population census figure. In 1997, the esteemed Federal Medical Centre was honored with the prestigious designation by the Federal Government of Nigeria, solidifying its reputation as a leading healthcare institution. A decade later, in 2007, it further enhanced its status by being recognized as a Teaching Hospital. Beyond its role as an educational facility, this remarkable institution diligently caters to the healthcare needs of Uyo's residents and those residing in nearby cities and villages. Furthermore, it serves as a vital referral center for primary and secondary facilities in the state. According to the latest data from the National Population Commission census findings of 2021, it is estimated that there will be a population of 6,024,767 in the near future. This significant number includes pregnant women who form a crucial segment of this total population. To cater to their healthcare needs, the department of Obstetrics and Gynaecology operates four scheduled units where they provide services

such as antenatal care (ANC). On average, these units attend to approximately 45-70 clients/day in each of the four scheduled units of the department of Obstetrics and Gynaecology, amounting to about 325-400 client/ week.

Apart from English, the primary languages spoken in this region include Ibibio,

Study Design

This study utilized a descriptive cross-sectional design

Study Population

The study population are pregnant women who are currently receiving care at the Antenatal clinic (ANC) located within the

Sample size determination

The sample size for this study was selected using (Kadam & Bhalerao 2010) formular.

$$n = Z^2 Pq/d^2$$

Where:

n = the minimum sample size necessary

P = prevalence of value from previous study 25.9% (Edidiong S, 2018)

q= percentage of failure (1-P)

Z = Standard normal deviate and probability at 95% = 1.96

d = degree margin of error at = 0.05 (5%)

Calculated sample size = 295

Taking a none response rate of 10%

Annang, Ekid, Oron, and Obolo. These languages reflect the rich cultural diversity of the area and are widely used by the local communities for daily communication and cultural expression.

premises of the University of Uyo Teaching Hospital.

Inclusion Criteria All pregnant women registered for antenatal care

Exclusion criteria

Severely unwell ANC clients and pregnant women who decline consent was also excluded from the study

≈327

Sampling method

Systematic sampling technique was used to ensure that all participants had an equal chance of being included. The study focused on the daily average antenatal care attendance at the University of Uyo Teaching Hospital, which encompassed not only patients from the hospital itself but also referrals from peripheral centers across the state. The recorded attendance figure stood at 63 individuals per day. During the data collection process, we utilized three diligent data collection assistants who were able to administer a maximum of 7 questionnaires

per day. To ensure accurate representation, we set a target of collecting 21 samples each day from a total daily attendance of 65 individuals. In order to achieve this, we established a sampling interval of 3 ($65 \div 21 = 3.0$) for each day of the data collection period. Typically, the team responsible for collecting data prefers to wait until there are a minimum of three pregnant women present at the antenatal care clinic. To ensure fairness in the selection process, they employ a simple random sampling technique. This involves assigning unique identification numbers to each attendee, writing them on separate pieces of paper, folding them, and placing them into a small bag. Finally, one number is chosen blindly from the bag, ensuring an unbiased selection. To ensure a diverse and representative sample, a random selection process was employed for choosing the initial respondent. Subsequently, every third attendee was approached until a total of 21 respondents were interviewed each day, given that they met the necessary criteria. This systematic approach was followed consistently throughout the data collection period until the desired number of participants was reached and the required sample size was attained.

Method of data collection

Three research assistants were trained for data collection. The questionnaires were designed with five components. The first section aimed to gather socio-demographic information from the respondents, while sections 2, 3, 4, and 5 delved into their knowledge, attitude, uptake of IPTp, and factors influencing its uptake and compliance rate. The study evaluated the level of uptake of IPTp, categorizing it as either good or poor. A scoring system was employed, with a score of 1 indicating good knowledge and 0 representing poor knowledge. Similarly, respondents' attitudes were assessed as either positive or negative, with a score of 1 denoting a positive attitude and 0 indicating a negative attitude. Additionally, compliance with the uptake of IPTp was measured, scoring 1 for good compliance and 0 for poor compliance. Over a span of 2 months, the data was gathered during antenatal clinic days.

Validity and Reliability

The study collected data through an interviewer-administered questionnaire. Pre-test involved 32 pregnant women from a private health institution, representing 10% of the total sample size was done. Any questions that were found to be unclear or confusing were revised to enhance clarity and facilitate easy responses. By

eliminating any potential ambiguities through the pre-test, the researcher ensured that the data collection tool would consistently yield reliable results even when administered multiple times.

Data analysis

Statistical Package for Social Sciences (SPSS) version 24.0 was used. The variables were presented in frequency and percentages. Chi-square tests was used to examine the potential relationship between independent and dependent variables. Statistical significance was determined using a p-value of 0.05 (5%) at a 95% confidence interval. The significance of each variable was assessed, and only those with P-values less than or equal to 0.05 were considered statistically significant.

Ethical considerations

Ethical approval from the Ethics Review Committee of the University Of Port Harcourt School Of Public Health. Permissions was obtained from the hospital management and the head/in-charge of the department. Confidentiality was assured as respondents were not asked to disclose their names in the questionnaire. Participants were given the freedom to withdraw from the study at any point without facing any negative consequences. Informed consent gotten by signing consent forms. Throughout the study, great importance was placed on respecting the cultural values, norms, and beliefs of the participants.

RESULTS

A comprehensive total of 327 questionnaires were distributed and successfully completed by the participants. Response rate was 100%.

Table 1: Socio-demographic characteristics of the respondents

Variables	Frequency(%) n= 327	χ^2	p-value
Age(year)		1.53	0.818
15-19	8 (3.5)		
20-24	53 (16.2)		
25-29	82 (25.1)		
30-34	94 (28.8)		
35-39	63 (19.5)		
40-44	21 (6.4)		
45-49	6 (1.8)		

Mean age	36.7±2SD		
Marital Status		1.982	0.602
Singled	6 (1.8)		
Married	318 (97.3)		
Divorced	0 (0.0)		
Separated	2 (0.6)		
Widowed	1 (0.3)		
Ethnic Group		1.81	0.803
Ibibio	146 (44.7)		
Annang	91 (27.8)		
Oron	60 (18.3)		
Others	30 (9.2)		
Religion		1.93	0.600
Catholic	137 (41.9)		
Pentecostal	161 (49.2)		
Islam	11 (3.4)		
Others	18 (5.5)		

¥Statistical significant at 0.05

Table 1 depicts the demographic features of the respondents. The mean age was $36.7 \pm 2SD$. Majority of the respondents were between the age of 30-34 years with 28.80% . On Marital status, majority of the respondents were married with 318 (97.30%). The proportion of participants who are Ibibio by tribe is bigger than that of

the Annang 146 (44.7%) and 91 (27.8%) respectively, 60 (18.35%) for oron and others takes the remaining 9.17%. Majority of the respondents are of Pentecostal religion 161 (49.2%), Catholic 137 (41.9), Islam 11 (3.4%), and others 18 (5.5%).

Table 2: Educational status of the respondents

Variable	Frequency (%)	χ^2	p-value
Education		1.89	0.844
Non-formal	0 (0.0)		
Primary	8 (2.5)		
Secondary	37 (11.3)		
Tertiary	282 (86.2)		

¥Statistical significant at 0.05

The study found that the majority of the participants, specifically 282 individuals (86.2%), had completed tertiary education. 37 respondents (11.3%) had a secondary

level of education, while only 8 participants (2.5%) had primary education. None of the respondents had non-formal education.

Table 3: Occupational status of the respondents

Variable	Frequency (%)	χ^2	p-value
Occupation		1.45	0.622
Farmer	51 (15.6)		
Trader	98 (29.9)		
Civil Servants	46 (14.1)		
Students	34 (10.4)		
Health Workers	28 (8.6)		
Others	70 (21.4)		

Table 3 illustrates the occupational status of the respondents. 98 (29.9%) traders, 51 (15.6%) were farmers, 46 (14.1%) were public workers, 34 (10.4%) students, 28 (8.6%) health professionals and 70 (21.4%) is for other forms of jobs.

Table 4: Knowledge of pregnant women on IPTp

Variable	Frequency (%) N 300	χ^2	p-value
What IPTp is		1.931	0.818
Drug to prevent malaria in pregn	237 (79)		

Drug to reduce any sickness	36 (13)		
Others	27 (9)		
Source of Information		1.812	0.721
Health facility	136 (45)		
Social media	86 (28.6)		
Market	19 (6.4)		
Church	22 (7.4)		
School	24 (8)		
Others	13 (4.3)		
Drug used for IPTp		1.612	0.534
SP	171 (57)		
ACT	75 (25)		
I don't know	54 (18)		
When to take IPTp		1.908	0.801
Ist and 2 nd Trimester	50 (16.6)		
2 nd and 3 rd Trimester	107 (35.7)		
Ist and 3 rd Trimester	45 (15)		
I don't know	98 (32.7)		

¥Statistical significant at 0.05

From the above on knowledge of IPTp, most of the respondents 237 (79%) know what IPTp is, while, 27 (9%) do not have the knowledge of IPTp. In the overall, respondents had a good knowledge of IPTp. About those who knew what IPTp is, most about them, 136 (45%) reported that they learnt of IPTp from the health facility, while 86 (28.6%) heard it through social media.

Majority of the respondents had the knowledge of the medicines used for IPTp, 171 (57%), while 54 (18.0%) did not know the medication use for IPTp. Majority of the respondents 107 (35.7%) identified that IPTp is generally used during the 2nd and 3rd trimesters, while 98 (32.7%) do not know when to take the drug.

Table 5: Attitude of pregnant women on IPTp uptake

Variable	Frequency (%) N 300	χ^2	p-value
Ever referred to other centre when IPTp was out of stock		1.538	0.465
Yes	87 (29)		
No	156 (52)		
I don't know	57 (19)		
Your reaction when referred		1.172	0.875
Go home	189 (63)		
Visit the referred place	111 (37)		

Majority of the respondents 156(52%) responded that IPTp is always available at the institution. Of whom 189 (63%) said they generally go home if IPTp is out of stock, presumably out of discouragement

and lack of transportation, while, 111 (37%) , indicated that they actually visit the advised shop. In the overall, respondents had a positive attitude toward the uptake of IPTp.

Table 6: Compliance rate in the Uptake of IPTp

Variable	Frequency (%) N 300	χ^2	p-value
Taken IPTp since started ANC		1.623	0.421
Yes	228 (76)		
No	72 (24)		
When 1st dose received		1.908	0.233
1st Trimester	41 (13.7)		
2 nd Trimester	106 (35)		

3 rd Trimester	153 (51.3)		
Observed by Health worker to take IPTp		1.023	0.453
Yes	3 (1)		
No	297 (99)		

Pregnant mother who had taken IPTp at the ANC were 228 (76%) whereas 72 (24%) have not taken since they began ANC. Of those who had taken IPTp at ANC, those who got the first dose of IPTp at 2nd trimester is below average 106(35%), while 153 (51.3%) received in 3rd trimester.

The pregnant mothers being watched by the health care provider while using IPTp was 3 (1%) while 99% were not observed, possibly as a consequence of DOTs has not been practised when taking IPTp. In the overall, respondents had a good compliance uptake

Table 7: ANC Attendance and complications of IPTp on pregnant women

Variable	Frequency (%)	χ^2	p-value
Age of pregnancy		1.612	0.334
1-3 months	35 (11.6)		
4-6 months	105 (35)		
7-9 months	146 (49)		
Others	14 (4.4)		
Duration of ANC attendance		1.663	0.234
≤ 4 months	115 (38.3)		
≥ 4 months	185 (61.7)		
Complication on taking IPTp		1.612	0.334
Yes	32 (10.7)		
No	250 (83.3)		
I don't know	18 (6)		
Does it include the list below	N 32	1.898	0.145
LBW	9 (28.3)		
Miscariage	10 (31.3)		
Fetal deformity	7 (21.7)		
Maternal anaemia	2 (6.2)		
Others	4 (12.5)		
If no, your reasons	N 250	1.763	0.654
Attitude of workers	97 (38.8)		
Effect of drug	3 (1.2)		
Drug is expensive	4 (1.6)		
No water in clinic	128 (51.2)		
Out of stock	1 (0.4)		
No IPTp at ANC	2 (0.8)		
Fear to my baby	1 (0.4)		

Empty stomach	1 (0.4)		
Others	13 (5.2)		

Most respondents 146 (49%) have their age of pregnancy at between 7-9 months whereas 105 (35%) and 35 (11.6%) have their ages of pregnancy at between 4-6 months and 1-3 months respectively. Majority of the respondents began ANC more than four months ago, that is, around the 2nd trimester 185 (61.7%) while 115 (38.3%) started ANC at less than 4 months of pregnancy. More than half of the respondents 128(51.2%) claimed unavailability of clean water as the reason for having not taken IPTp during ANC. This was closely followed by the attitude of healthcare providers 97 (38.8%). A total of thirty two (10.7%) respondents mentioned that they have had issues related with the taking of IPTp. Majority of respondents reported low birth weight and miscarriage 9(28.3%) and 10(31.3%) respectively as a notable complications.

DISCUSSION

Majority of expectant women attending the antenatal clinic were familiar with IPTp and obtained information about it from healthcare professionals at primary healthcare centers (PHCs) and secondary health facilities in the state. This aligns with the research conducted by Illiyasu et al,

where a significant number of participants demonstrated a good understanding and knowledge of IPTp. However, it is important to note that these findings contradict the results of Onoka et al's study, which revealed that only a small fraction (256 out of 1307 individuals) possessed knowledge about IPTp.

Significant number of respondents demonstrated a good understanding of the appropriate timing for the first dose of IPTp. This finding aligns with a previous study conducted¹⁶ where 61.5% of participants stated that the first dose could be taken anytime from the second trimester until delivery, with a one-month interval between doses. During the early stages of pregnancy, many women fail to receive the recommended first dosage of IPTp, which is typically administered during the second trimester. This finding contrasts with a study conducted in northern Nigeria, where 63% of pregnant women registered for ANC during their second trimester. Some expectant mothers initiated ANC within their first trimester. These variations highlight the importance of timely and comprehensive prenatal care for all pregnant women. Many pregnant women are aware of

the risks associated with malaria during pregnancy, which motivates them to seek early antenatal care (ANC). Ensuring access to sufficient supplies of SP at healthcare facilities is essential for promoting the utilization and uptake of IPTp among pregnant women. In cases where the hospital ran out of IPTp medicine, it was encouraging to observe that respondents displayed a positive attitude by willingly seeking alternative healthcare facilities as advised. This highlights the importance of providing continuous and reliable access to IPTp medication to support healthy pregnancies. Out of all the participants, 32.5% (68 respondents) were advised to visit the peripheral center, but they chose to go back home instead. They had been cautioned against taking any strong drugs during pregnancy, which led them to doubt the effectiveness of other places in obtaining the correct medicine. The study revealed a significant increase in the compliance rate of taking IPTp, particularly among respondents who complied during the 2nd trimester. However, it was observed that the majority of pregnant women tend to take IPTp only during the 3rd trimester. The lack of awareness regarding the importance of IPTp uptake among pregnant women often leads to a hindrance in administering the

recommended three doses before delivery. This issue was highlighted in a study conducted²³ which found a correlation between delayed attendance at antenatal clinics and incomplete IPTp dosage among expectant mothers. These findings emphasize the need for improved education and awareness campaigns to ensure proper IPTp adherence during pregnancy. The researcher observed that a significant proportion of the participants, specifically 45%, initiated their antenatal care (ANC) visits during the third trimester of their pregnancy. Additionally, the study revealed that only 23.7% of the participants received intermittent preventive treatment in pregnancy (IPTp). Many participants reported no adverse effects or difficulties associated with utilizing IPTp. This finding contradicts a study conducted in Ibadan, southwest Nigeria. Many expectant mothers experienced gastrointestinal symptoms like vomiting and abdominal discomfort..

CONCLUSION

It is widely known that women have a higher vulnerability to malaria compared to the general population. During pregnancy, it becomes even more crucial to prioritize healthy behaviors and develop effective parenting skills. Malaria can pose a significant threat to pregnant women, even in the absence of noticeable symptoms. The continuous destruction of red blood cells by the parasites can result in severe anemia, which poses a grave risk to both the mother and her unborn child. The presence of parasites in the placenta can lead to detrimental effects on fetal development, such as miscarriage, stillbirth, and low birth weight. It is worth noting that while IPTp is consistently accessible at health clinics, expectant mothers often display a positive attitude by actively seeking out the referred center for treatment.

LIMITATION: The study focused on one health facility. The findings therefore have limited generalization. A more elaborate study capturing more locations possibly in all senatorial districts may be needed.

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