

INVESTIGATIONS ON THE AWARENESS AND PERCEPTION OF PREGNANT WOMEN TOWARDS MALARIA AND HIV/AIDS IN ORU EAST AND OGUTA LOCAL GOVERNMENT AREAS OF IMO STATE, NIGERIA

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Abstract

The study was carried out to investigate the awareness and perception of pregnant women towards malaria and HIV/AIDS in Oru East and Oguta Local Government Areas of Imo State. Participants for the study were drawn from the two General Hospitals in the area. The study included 237 pregnant women attending antenatal clinic at the different Hospitals. Data collection involved Questionnaires Administration. Results showed that 49.36% strongly agreed and 35.02% agreed that the best way to prevent malaria is avoiding mosquito bites, 51.05% strongly agreed while 36.70% agreed that sleeping under a mosquito net during the night is one way to prevent malaria, 46.41% strongly agreed and 28.27% agreed that one might be at a greater

Introduction

Two of the greatest medical challenges facing Sub-Sahara Africa today are human immunodeficiency virus (HIV) infection and malaria and yet the interaction between these two infections has been little studied (Kwenti, 2018; Nwoke, 2004). With the over 55% of the HIV infected adults being women of reproductive age, the likelihood of co-infection of HIV and malaria in pregnant women is a theoretical possibility (Obase, 2023) and have become a public health

risk of getting malaria if one works or sleeps overnight in the garden/forest, 59.51% strongly agreed while 24.05% agreed that one should visit the Health Centre to test for malaria as soon as he/she suspects malaria symptoms. Respondents who agreed that HIV/AIDS was curable was 16.45% while 83.96% of the respondents said that HIV/AIDS was not curable. Also, 53.84% of those who said that HIV/AIDS was curable said that it was curable spiritually. 17.94% said through traditional healers, while 25.64% said it was curable through orthodox medicine. The study recommends the need to strengthen public health education and promotion to generate positive health behavior among pregnant women in Oru East and Oguta LGAs and environs.

Keywords: Perception, Pregnant Women, Malaria, HIV/AIDS, Oru East, Oguta.

problem (Brabin, 1991). Thus, the effects of HIV on maternal health is expected to superimpose on that of malaria with its attendant ill-health including maternal anaemia and death, abortion, growth restriction, preterm birth, low birth weight, still birth and death in infancy (Newman *et al.*, 2013). Evidence for an interaction between malaria and HIV/AIDS is conflicting with some studies finding no association except for placental malaria (Obase, *et al.*, 2023) while others found concomitant malaria and HIV infection to be associated with increased HIV/Aids viral load, increased vertical transmissions of HIV/Aids from mother to child and increased postnatal mortality (Kwenti, 2018)).

Several studies have reported that malaria is a major public health problem affecting 300-500 million people annually. It is also a major cause of maternal and infant morbidity and mortality in Sub Sahara Africa (Ijumba, *et al.*, 2002). Much work has been done to show the relationship between malaria and HIV in pregnancy (Idemyor, 2007). Some studies among pregnant women in Sub-Saharan Africa have provided evidence of an important public health problem arising from the interaction of HIV/AIDS and malaria (Obase, *et al.*, 2023). A study in Ibadan, southwestern Nigeria, revealed that HIV positive pregnant women had higher malaria parasite levels than those not infected with HIV (Obase, *et al.*, 2023). This result was confirmed by another study in Abakaliki, South-Eastern Nigeria (Ezeoke *et al.*, 2018). In addition, data from Malawi suggested that infants exposed to both placental malaria and maternal HIV

infection have a 3-8-fold increased risk for post neonatal death higher than infants born to mothers with either infection alone (Ezeoke *et al.*, 2018).

This study therefore explored the awareness and perception of pregnant women as they relate to malaria and HIV/Aids in Oru East and Oguta Local Government Areas of Imo State.

Materials and Methods

Study Area

Oru East and Oguta Local Government Areas are located in Imo State, which is one of the states in South Eastern Nigeria. Imo State is bordered by Abia State to the East, Rivers State to the South, Anambra State to the West, and Ebonyi State to the north. Oru East Local Government is situated in the western part of Imo State. It is easily accessible through major roads and transportation routes. The primary means of transportation in the area include road networks, motorcycles, and buses. The Local Government is also well connected to neighboring towns and cities, providing access to various amenities and facilities. The nearest major town to Oru East and Oguta Local Government Areas is Orlu. Owerri, the Imo State capital is approximately 40 kilometers away from the two LGAs and serves as an important hub for transportation, commerce, and government services. Overall, the two LGAs are easily accessible and benefit from their strategic locations within Imo State, enabling residents and visitors to access nearby areas and resources.

The entire study area has a temperature range of 21°C-36°C with a very high relative humidity of about 78% during the wet season.

Ethical approval for the study was obtained from the Ethics Committee of the Post Graduate Board of the Department of Animal and Environmental Biology, Imo State University, Owerri. Also, Informed consents were obtained from the participants.

Study Population

Participants for the study were drawn from 2 General Hospitals located in Awo Mmama, Oru East and Oguta LGAs of Imo State. The study included 237 pregnant women attending antenatal clinics at the different general Hospitals.

Data Collection

Personal and focal group discussions were held to explain more facts and to strengthen the responses of the respondents. their answers were recorded directly into individual questionnaires.

Data obtained were expressed as percentages in MS spread sheet and analyzed using the Z test.

Administration.

Questionnaires were administered according to the method described by Oguh *et al.* (2020).

They were administered to only the people whose blood was taken for malaria and HIV/Aids test and filled with the aid of research assistants. The research assistants administered the questionnaires to the respondents' one at a time. The questionnaire was prepared in English language but translated and communicated in local dialects where necessary. At the end of the exercise, two hundred and thirty-seven questionnaires (237) were shared and retrieved from the study subjects.

Results and discussion

Table 1 reveals the respondent's positive attitudes to statements regarding malaria. Specifically, the respondents have positive attitudes to the following statements: 49.36% strongly agreed and 35.02% agreed that the best way to prevent malaria is avoiding mosquito bites, 51.05% strongly agreed and 36.70% agreed that sleeping under a mosquito net during the night is one way to prevent malaria, 46.41% strongly agreed and 28.27% agreed that one might be at a greater risk of getting malaria if one works or sleeps overnight in the garden/forest, 59.51% strongly agreed and 24.05% agreed that one should visit the health Centre to test for malaria as soon as he/she suspects malaria symptoms. Whereas, 58.64% strongly agreed and 25.73% agreed that one must take treatment regularly to prevent malaria parasites from affecting unborn baby. 33.75% strongly agreed while 28.27% agreed that when one feels feverish one must go straight without delay to meet a health officer.

Respondents have the following negative attitude to positive statements: 24.05% strongly disagreed while 42.61% disagreed that malaria is a serious and life threatening condition, 29.11% strongly disagreed while 33.75% disagreed that it's dangerous when malarial medication is not taken completely whereas, 52.32% strongly disagreed and 24.05% disagreed that modern medication is the only reliable treatment for malaria.

Table 1: Respondents attitude to positive statements regarding malaria (N 237)

Positive statements	Strongly agree (%)	Agree (%)	Disagree (%)	Strongly Disagree (%)
1. Malaria is a serious and life- threatening disease	31(13.08)	48(20.25)	101(42.61)	57(24.05)
2. The best way to prevent oneself getting malaria is to prevent mosquito bites	117(49.36)	83(35.02)	21(8.86)	16(6.75)
3. Anyone can get malaria	123(51.89)	79(33.33)	16(6.75)	9(3.79)
4. Sleeping under a mosquito net during the night is one way to prevent oneself from malaria	121(51.05)	87(36.70)	18(7.59)	11(4.64)
5. One might be at a greater risk of getting malaria if one work and sleep overnight in the garden/forest	110(46.41)	67(28.27)	39(16.45)	21(8.86)
6. It is dangerous when malaria medicine is not taking completely	41(17.29)	47(19.83)	80(33.75)	69(29.11)
7. One should go to the health centre/clinic to have ones blood tested as soon as one suspects that he/she has malaria	142(59.51)	57(24.05)	26(8.86)	12(5.06)
8. One should seek for doctor's advice or	51(21.51)	128(54.00)	21(8.86)	37(15.61)

treatment when one has malaria				
9. To prevent malaria parasite from affecting unborn baby one must take his/her treatment regularly	139(58.64)	61(25.73)	21(8.86)	16(6.75)
10. Whether one has symptom of malaria or not, one must continue to take his/her prescribed medicine from the hospital	19(8.01)	27(11.39)	122(51.47)	69(29.11)
11. When one feels feverish, one must go straight without delay to meet the doctor	80(33.75)	67(28.27)	21(8.86)	19(8.01)
12. Modern medicine is the only reliable treatment for malaria	21(8.86)	35(14.76)	57(24.05)	124(52.32)

Table 2 revealed that the respondents showed general positive attitude to negative statements on malaria. Specifically, the respondents have positive attitudes to the following statements: 65.82% strongly disagreed and 25.73% disagreed that malaria can be transmitted from one person to another, 37.97% strongly disagreed and 29.11% disagreed that only children and pregnant women are at risk of getting malaria, 55.69% strongly disagreed and 33.33% disagreed that one can recover spontaneously from malaria without proper treatment, 36.28% strongly disagreed and 24.05% disagreed that traditional birth attendants have better drugs/herbs that will quickly subside malaria symptoms. Whereas 32.91% strongly disagreed and 33.33% disagreed that apart from mosquito bites other insects bite can cause malaria, 48.94% strongly disagreed and 37.55% disagreed that eating food that is not well cooked or drinking dirty water can cause malaria. On the other hand, respondents had the following negative attitude to the following: 40.92% strongly agreed and 24.05% agreed that they can treat themselves if they get malaria, 49.36% strongly agreed

and 36.70% agreed that they can buy anti-malaria drugs from the drug shop to treat themselves, 46.41% strongly agreed and 39.24% agreed that one should take herbal medicine if one is not responding to malaria treatment, 34.59% strongly agreed and 25.73% agreed that avoiding oily/fried foods can prevent one from having malaria symptom, 43.88% strongly agreed and 22.4% agreed that neem leaves (*Azadiracta indica* A. Juss) also known locally as *Dogonyaro* is another good option for malaria treatment, whereas, 15.61% strongly agreed and 8.86% agreed that staying under the sun for so long can as well cause malaria.

Table 2: Respondents attitude to negative statements regarding malaria (N 237)

Negative statements	Strongly Disagree (%)	Disagree (%)	Agree (%)	Strongly Agree (%)
1. Malaria can be transmitted from one person to another like common cold	156(65.82)	61(25.73)	11(4.64)	9(3.79)
2. One can treat oneself if he/she gets malaria	47(19.83)	41(17.29)	57(24.05)	97(40.92)
3. Only children and pregnant women are at risk of malaria	90(37.97)	69(29.11)	41(17.29)	37(15.61)
4. One can recover spontaneously from malaria without treatment	132(55.69)	79(33.33)	15(6.32)	11(4.64)
5. If someone has got malaria, people should avoid having close contact with him/her	130(54.85)	89(36.70)	11(4.64)	7(2.95)
6. One can buy anti-malaria drugs from the drug shop to treat oneself when he/she has malaria	16(6.75)	17(7.17)	87(36.70)	1117(49.36)

7. When one is not responding positively to malaria treatment from the hospital, one should use herbal medicine	15(6.32)	19(8.01)	93(39.24)	110(46.41)
8. Traditional birth attendants have drugs/herbs that will quickly subside malaria symptoms	86(36.28)	57(24.05)	51(21.51)	43(34.59)
9. Avoiding so much intake of oily/fried foods can prevent one from having frequent malaria	41(17.29)	34(14.34)	80(33.75)	82(34.59)
10. Dogonyaro (herbal medicine) is another good treatment option, for malaria	29(12.23)	43(18.14)	61(25.73)	104(43.88)
11. Staying under the sun for so long can as well cause malaria	104(43.88)	75(31.64)	21(8.86)	37(15.61)
12. Apart from mosquito bites, other tiny insects that stay in the dustbin/house can cause malaria	78(32.91)	79(33.33)	43(18.14)	37(15.61)
13. Eating food that is not well cooked or drinking unclean water can cause malaria	116(48.94)	89(37.55)	21(8.86)	11(4.64)

Table 3 shows Respondents Perception on Malaria. Respondent's perception on seriousness of malaria shows that 10.97% of the respondents agreed that malaria

is not as serious as portrayed while 89.02 disagreed. Malaria if not treated can result to death, 78.48% of the respondents agreed while 21.51% disagreed. Perception on causes of malaria shows that only 66.24% had the correct perception that malaria is caused when someone was beaten by an infected *anopheles* mosquito, 91.13% of the respondents disagreed that Bathing with hot water can cause malaria while 8.86% of the respondents agreed, 66.24% of the respondents were of the perception that prolonged standing in the sun can cause malaria while 33.75% disagreed, 82.70% of the respondents were of the perception that eating too much palm oil can cause malaria while 17.29% disagreed, 85.4% of the perception that tiredness could cause the disease and 66.9% of respondents of the were of the perception that rainfall could cause malaria.

Perception on preventive practices towards malaria shows that 51.05% of the respondents agreed that Indoor residual spray of insecticide can be used to prevent malaria while 48.94% disagreed. Also 65.82% of the respondent's believed that removal of stagnant water from the surroundings can prevent malaria, 91.13% of the respondents believed that Insecticide-treated nets can be used to prevent transmission of malaria while 8.86% disagreed, 74.26% of the respondents believed that Skin applied chemical repellents can be used to prevent malaria while 25.73 disagreed, 78.48% of the respondents agreed that Repellant coils can be used to prevent malaria while 21.51% disagreed. Furthermore, 72.57% of the respondents agreed that proper clothing that covers all the body can be used to prevent malaria while 27.42% of the respondents disagreed.

Table 3: Perception of Respondents on Malaria.

Variables	Agree		Disagree	
	Frequency	(%)	Frequency	(%)
Perception on seriousness of malaria				
Malaria is not as serious as portrayed	26	10.97	211	89.02
Malaria if not treated can result to death	186	78.48	51	21.51
Perception on causes of malaria				

Malaria only occurs when someone is beaten by infected anopheles mosquito	157	66.24	80	33.75
Bathing with hot water can cause malaria	21	8.86	216	91.13
Eating too much palm oil can cause malaria	41	17.29	196	82.7
Long-standing in the sun can cause malaria	157	66.24	80	33.75
Perception on preventive practices towards malaria				
Indoor residual spray of insecticide can be used to prevent malaria	121	51.05	116	48.94
Removal of stagnant water from the surroundings can prevent malaria	156	65.82	79	33.33
Insecticide-treated net can be used to prevent transmission of malaria	216	91.13	21	8.86
Skin applied chemical repellents can be used to prevent malaria	61	25.73	176	74.26
Repellant coils can be used to prevent malaria	51	21.51	186	78.48
Proper clothing that covers all the body can be used to prevent malaria	172	72.57	65	27.42

($P < 0.05$, $= 0.000$, $df = 4$)

Table 4 shows Distributions of Respondents' Perception of HIV/AIDS. Respondents who agreed that AIDS was curable was 16.45% while 83.96% of respondents said no that AIDS was not curable. Also, 53.84% of those who said that AIDS was curable said that it was curable spiritually, 17.94% through traditional healers, while 25.64% said it was curable through orthodox medicine. Respondents who agreed that HIV infection leads to untimely death was 94.09% while 5.90% of the respondents said no.

What category of people in the society do you think are mostly affected: 74.26% of the respondents agreed while 25.73% of the respondents disagreed. Respondents who disagreed that HIV/AIDS is associated with people of low economic status was 74.26% while 25.73% disagreed. Respondents' view of

HIV/AIDS disease have it that 100% said it is a deadly disease, 72.15% said HIV/AIDS is good since the fear of it reduces promiscuity, 100.0% said HIV/AIDS is dangerous and should be avoided while 100% said HIV/AIDS is an epidemic.

Table 4: Distributions of Respondents' Perception of HIV/AIDS (N=237)

Perception of HIV/AIDS	Frequency	(%)
Is AIDS curable		
Yes	39	16.45
No	199	83.96
If yes, how		
Spiritual (through church & mosque)	21	53.84
Traditional leaders	7	17.94
Western medicine	10	25.64
Is AIDS real?		
Yes	237	100
No	0	0
Can HIV infection lead to untimely death?		
Yes	223	94.09
No	14	5.9
What category of people in the society do you think are mostly affected?		
Youths	121	51.05
Married people	23	9.7
Commercial sex workers	61	25.73
Everybody	32	13.5
HIV/AIDS is associated with people of low economic status		
Agree	61	25.73
Disagree	176	74.26
What is your view of HIV/AIDS disease?		
It is a Deadly disease	237	100
HIV is good as fear of it reduces promiscuity	171	72.15
HIV is dangerous and should be avoided.	237	100
It is an epidemic that is everywhere	237	100

($P < 0.05$, $\chi^2 = 0.000$, $df = 4$)

The Pregnant women's negative perception meant that knowledge did not necessarily transmit to positive perception. This called for rethinking strategies for achieving positive perception. Many also indicated that HIV/AIDS is real; an indication that the awareness had taken root and had gone beyond the stage of denial. The fact that the respondents saw HIV/AIDS as real was also an indication that they would take the strategies towards the containment of the epidemic very seriously. However, majority of them did not see themselves at risk of contracting HIV/AIDS which implied that they still saw people living with HIV/AIDS as far from them. It was also an indication that the awareness did not translate to change in perception as noted by Egbo and Chukwu (2017) and Fawole *et al.* (2018).

Far higher respondents perceived HIV/AIDS as incurable than curable. This may significantly impact on their risk perception and safer sex practices. The Pregnant women's negative perception of HIV/AIDS meant that knowledge did not necessarily translate to positive perception. This calls for rethinking strategies for achieving positive perception.

Conclusion

Although the respondents had good perceptions of HIV/AIDS, about 16.45% erroneously perceived HIV/AIDS as curable and this may significantly impact on their risk perception and safe sex practices; hence the need to strengthen public health education and promotion to generate positive health behavior. Based on this study, it is therefore concluded that awareness and perception is relatively high, although some are of the belief that HIV/Aids is curable. Medication and management should focus on the women as they attend Primary Health Care services and further, public enlightenment should rely on community information and prevention techniques should be converged to fill the gap in knowledge.

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