

## Awareness And Use Of Insecticide Treated Net Among Pregnant Women Attending Antenatal Clinic At Federal Medical Centre And General Hospital Owerri. Imo State

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**ABSTRACT:** Malaria remains a public health problem, causing significant maternal and child morbidity and mortality annually in sub-Saharan Africa. World Health Organization has recommended the use of insecticide treated nets (ITN) as vital tool in combating malaria but the public awareness of this approach vary from place to place. The study aims at assessing the Current knowledge and use of insecticide treated net among pregnant women attending ante-natal at Federal Medical Centre and General Hospital Owerri. A descriptive cross-sectional study of randomly selected 344 pregnant women for the study. A structured questionnaire was used to the extract information from the respondents. The result shows that the modal age and Education was 27 years and Tertiary respectively. Of the 344 respondents, only 89% with 0<sup>2</sup> of 223 and p-value of 3.81 at 0.05 level of significance were aware of ITN. 58.9% claimed to know about ITN through Health services while 31.2% and 9.7% knew through Mess Media / Radio / TV and friends / neighbors respectively. The modes of acquisition varied significantly from Government supply (54.6%) to purchase from health facility and friends was insignificantly different. Many reasons were adduced why people do not use ITN and this range from being expensive, causes heat, contains dangerous chemical to not preventing malaria. It is recommended that government should intensify effort in creating awareness about the benefits of ITN, through seminars, workshops and billboards.

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### INTRODUCTION

Malaria is the major cause of maternal and child morbidity and mortality annually especially in sub-Saharan Africa. (WHO 1990, 2003). Pregnant women are frequently exposed to malaria resulting from the bite of female Anopheles mosquito which is the vector of malaria (Terkuile & Newman 2004, Ansell & Hamilton, 2004). Some adverse effects associated with malaria in pregnant women include amongst others spontaneous abortion, low birth weight, stillbirth and anemia (Adeyemi, Adekunle & Akinota 2007). Malaria control with the use of insecticide treated net has been recommended as an important component of ante-natal clinic. This is because the use of ITNs in some research carried out shows that when compared with a situation when no net was used, there was increase in mean birth weight; reduced miscarriage, still births and placental parasitaemia (Becker – Dreps, Biddiddle, Pettrifor, Musuamba Imble, Meshrick & Belits 2009; Ter Luil, Terlouco Howard, Hawky, Shi, Kolezak, Lal, Valule & Nalilen 2003).

World health organization has been at the forefront of sponsoring the distribution of insecticide treated nets in malaria endemic areas as one of ways of combating malaria and achieving Millennium Development Goals by 2015 (WHO, 2005).

Nigeria and many African countries have made significant effort in subsidizing the provision of ITNS to target population including pregnant women but the success of malaria control is weighed down by problems of delivery, distribution, usage, and even acceptance of this method (Burka & Agongo 1997). The awareness and acceptance of ITN vary from community to community where it is adopted in malaria control. Hence the need to ascertain the level of awareness and consequently the use of insecticide treated net among susceptible population of pregnant women attending ante-natal clinic at Federal Medical Centre and General Hospital Owerri.

### METHODOLOGY

The Federal Medical Centre is located in Owerri Municipal while General Hospital is situated in Owerri West. The inhabitants of Owerri Municipal and Owerri West are predominantly civil servants, traders and Artisans. Owerri climate is slightly dry and within the rainforest zone. It has an average annual temperature of 25<sup>0</sup>C and maximum day time temperature of about 32<sup>0</sup>C. Owerri falls within 7.5<sup>0</sup>N longitude and 7.5<sup>0</sup>S latitude. It has two seasons namely rainy and dry seasons. Mosquito breeding peaks in wet months April – September but perennial

in road-side drainage systems, sewage tanks and stagnant water bodies & some ornamental plants.

The study group (Pregnant women) was all resident in Owerri town for at least 6 months and was hospital-based. The random selection was based on one in every five samples of pregnant women and recruitment was carried out within three days. A structured questionnaire was used to extract information from the respondents. This was done after the objective of the study was explained to the participants. Before the participants were given the questionnaire, verbal consent was obtained, following which questionnaires were filled and returned promptly. Some trained Health personnel assisted respondents who could not read or write in completing the questionnaires. Percentage and chi-square was used to analyze the data collected at 5% level of significance and 95% confidence limit.

## RESULTS

**TABLE 1: SOCIO-DEMOGRAPHIC CHARACTERISTICS OF RESPONDENTS.**

| VARIABLES<br>AGES (YEARS) | NO EXAMINED | PERCENTAGE | MODAL AGE / EDUCATION |
|---------------------------|-------------|------------|-----------------------|
| ≤ 20                      | 26          | 7.5%       | 27 years              |
| 21 – 25                   | 92          | 26.7%      |                       |
| 26 – 30                   | 157         | 45.6%      |                       |
| 31 – 35                   | 39          | 11.3%      |                       |
| 36 – 40                   | 21          | 6.1%       |                       |
| ≥ 41                      | 09          | 2.6%       |                       |
| EDUCATIONAL LEVEL         |             |            |                       |
| Primary                   | 16          | 4.6%       | Tertiary              |
| Secondary                 | 52          | 15.1%      |                       |
| Tertiary                  | 275         | 79.9%      |                       |
| None                      | 01          | 0.2%       |                       |

**TABLE 2: AWARENESS AND USE OF ITN**

| VARIABLE             | RESPONSE      |               | X <sup>2</sup> | DF | SIG LEVEL | P-VALUE |
|----------------------|---------------|---------------|----------------|----|-----------|---------|
|                      | YES           | NO            |                |    |           |         |
| Are you aware of ITN | 307<br>(89.2) | 37<br>(10.7%) | 223            | 1  | 0.05      | 3.81    |
| Own an ITN           | 203<br>(59.0) | 141<br>(40.9) |                |    |           |         |
| NO IDEA              | 21            | 6.1%          |                |    |           |         |

**FREQUENCY OF THE USE OF ITN**

| PERIOD       | PREGNANCY | PERCENTAGE |
|--------------|-----------|------------|
| Everyday     | 76        | 37.4%      |
| Occasionally | 104       | 51.2%      |
| Not at all   | 25        | 11.3%      |

Table 1 shows that the modal age and education as 27years and tertiary education respectively. Of the eligible group 307 (89%) who were aware of ITN, only 203 (59.0%) of them have or own one. There was not statistical relationship ( $P \geq 0.05$ ) between knowledge and ownership of the ITN. The mode of acquisition shows that majority got free supply from Governments while (24.6%) paid for it, through purchase from the open market or pharmacy. Many reasons were given for not having ITN, many claimed that it obstructs ventilation, (16.3%) or contains dangerous chemicals (19.1%) while (6.3%) do not believe that ITN could prevent malaria and (28.3%) claimed that it was expensive for the common man. Frequency of use of ITN showed that only 76 (37.4%) use their ITN on daily basis ,104 (51.2%) used it occasionally and 23(11.3%) did not use their ITN at all, this might be due to the fact that they were too tired, carefree or forgot to do so.

**TABLE 3: SOURCE OF INFORMATION**

| VARIABLE                        | RESPONSE  |            |
|---------------------------------|-----------|------------|
|                                 | Frequency | Percentage |
| Mass Media / Television / Radio | 96        | 31.2%      |
| Health Services                 | 181       | 58.9%      |
| Friends, neighbors / Relation   | 30        | 9.7%       |

**MEANS OF ACQUISITION OF ITN**

| VARIABLE                                    | FREQUENCY | %     |
|---|-----------|-------|
| Through Government free / subsidized supply | 101       | 54.6% |
| Purchase from Health facility               | 50        | 24.6% |
| From friends / neighbours / relations       | 40        | 20.6% |

**REASONS FOR NOT HAVING AN ITN:**

|                              |    |       |
|------------------------------|----|-------|
| Not available                | 42 | 29.7% |
| It is expensive              | 40 | 28.3% |
| Causes heat                  | 23 | 16.3% |
| Cano prevent malaria         | 09 | 6.3%  |
| Contains dangerous chemicals | 27 | 19.1% |

**DISCUSSION**

The study shows high level of awareness with high level of usage among pregnant women attending ANC at FMC and General Hospital.

The study carried out by D'Alessandra Largerock, Bennett, Francis, Cham, Greenwood (1996) and D'Alesandro (2001) have shown growing awareness and knowledge of the importance of the use of ITN in preventing malaria.

Anosike, Nwoke, Chikere, Ukaga, Ogbusu, Asor et al (2004) also shows low awareness and usage and this has been attributed to attitude of the populace.

Adeyemi et al (2007) in a similar study found low awareness and low prevalence in the use of ITN among pregnant women in Southern Nigeria. Thus, knowledge or awareness of ITN does not direct by translate to possession of ITN among the respondents. The reason, given for the low patronage of ITN despite knowing about it, as follows non-belief in its efficacy, not comfortable to be used especially during heat, non-availability of the net and the high cost of the net (Binka et al 1997, Anosike et al 2004).

Previous reports have looked at this complaint and have vigorously advocated for an aggressive health education campaign to heighten awareness and correct misconception about malaria control efficacy of the net. (Ter et al 2003: Binka et al 1997).

Some of the complainants adduced may be correct, for instance many of the ITN are hijacked or

politicized and are prevented from reaching the target population and many reappear at the open market at exorbitant prize, which is above the reach of the general population. More so many of the ITNs sold in the open market are substandard and the efficacy cannot be granteened, thus the issue of using ITN in controlling malaria becomes vague to many. It is advised that Government should intensify effort in monitoring the distributions of ITN; also non governmental organization may also be used in ITN distribution to forestall hijacking of the product and preventing it from reaching the general public. Those who do not believe in malaria preventing effectiveness of the ITN are probably those who are exposed to infective mosquito bites outside bedtime which is common in endemic environments. This can be resolved by encouraging the use of a combination of ITN and other insect control approaches such as indoor residual spraying and screening of windows and other inlet to the house. Net should be redesigned to ease mounting and cross ventilation to make sleeping under the net bearable especially during hot weather.

**CONCLUSION**

Malaria is one of the diseases under surveillance by world Health Organization, tremendously efforts have been made at controlling it through various agencies and strategies yet the vision of achieving a malaria free society looks gloomy became of our attitude and implementation of polices

hence all hands must be on deck in moving and modifying our attitude in embracing new innovation on making our society malaria free.

### RECOMMENDATION

In view of the above, the following recommendations are made:

Operational researches may be required to investigate this section of the population that shows allergic reaction to the net chemicals. The need for expanded health education campaign on the use of the net in all endemic communities is seriously advocated because it is believed that the use of ITN increases with health promotional campaigns. Health authorities at the Local level should be compelled to incorporate ITN promotional talks in antenatal clinics, immunization programmes and infant welfare health clinics.

The modification of ITNs to LLINs (Long Lasting Insecticidal Net) will prolong anti-vector efficacy, which has been recommended by WHO as a vector control invention. But in all the success of ITNs and LLINs to a large extent can be achieved through educational campaign and net distribution to the most pregnant women and children who are the most susceptible. Government should as a matter of urgency provide free of ITN, & affordable nets for the achievement of the objectives of World Health Organization Global Malaria Initiative and United Nations Millennium Development Goals (WHO 2005; Adeyemi et al 2007).

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