

ENVIRONMENTAL SURVEILLANCE ON THE USE OF INSECTICIDE TREATED NETS AMONG THE POPULACE IN ENUGU METROPOLIS

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Abstract

The vector borne transmitted diseases (malaria) has remained a threat to human health, causing great maternal and child mortality yearly in Africa. Insecticide treated nets has been recommended by WHO and UNICEF as vital tool in preventing and combating malaria, although the use and awareness of this approach vary from one community to the other. This study was conducted in order to evaluate the use and awareness of Insect Treated Nets among the dwellers in Enugu metropolis. In parklane hospital 500 patients were randomly selected for the study. A questionnaire was used to obtain information from the respondents (outpatient ward department). From the result, it indicated that respondent in the age range of 26-30years were the most sampled. Out of the 500 respondents, only 69.2% were aware of Insect Treated Nets, 4.2% claimed to know about Insect Treated Net through health centres while 4.6% and 91.2% know through mass media/television/radio and friends/neighbors respectively. The reasons behind people not using Insecticide Treated Nets include; the nets were said to be expensive, contains dangerous chemical, not available, causes heat and do not prevent malaria. In Nigeria, more especially in rural areas there is urgent need to intensify effort in creating awareness on the benefits surrounding the use of insecticide treated nets.

Keywords: Environmental Surveillance, Insecticide, Treated nets

Introduction

The use of insecticide treated nets had been advocated for the prevention of the vector borne transmitted diseases (malaria) by the World Health Organization and UNICEF for more than a decade now through the roll back malaria program. Malaria control with the use of insecticide treated nets (ITNs) has been recommended as an important component of anti-natal clinic. This is because the use of ITNs in some researches carried out show 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 (1 and 2). Insecticide treated mosquito nets (ITN) are a more recent addition to the accepted tool for malaria. ITN were intensively studied in the 1990s and a Cochrane review of 22 high-quality randomized controlled studies on ITN (3). Malaria is a serious health care problem in tropical and subtropical regions of the world with far reaching medical, socio-economic consequences for the countries in which it is found. Each year approximately 300million malaria episodes and 2.5million deaths are reported worldwide with 80% of them occurring in Sub-Saharan Africa. In endemic areas, clinical episodes and mortality are more frequent and severe among pregnant women than non-pregnant (4). In unstable malaria transmission areas, pregnant women are prone to severe malaria (7 and 4). Pregnant women are frequently exposed to malaria resulting from the bite

of female anopheles mosquito which is the vector of malaria (7). Some adverse effects associated with malaria in pregnant women include amongst others are spontaneous abortion, low birth weight, still birth and anemia (8). The highest parasite densities were observed in primigravidae and secondigravidae with a progressive fall in density as parity increased (5 and 6). The increase in malaria prevalence and density was at its peak early in the second trimester and decreased over the second half of pregnancy but there was no increase in malaria occurrence at parturition and with age.

The World Health Organization has been at the fore front 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 (8 and 7).

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 the method (7 and 4). Today the use and awareness of ITN vary from one environment to the other.

Materials And Methods

Enugu is a populous metropolis found in the Eastern region of Nigeria. The inhabitants are mostly civil servants, traders, artisans and farmers. It has an area of about 3500 square kilometers. It has slightly dry climate and is within the rain forest zone. Enugu falls within 9.6⁰E Longitude and 7.4⁰N Latitude. It has two seasons, rainy and dry seasons. Mosquito breeding has its peak in wet months, between April and September. Mosquito breeds in wet dirty environs, drainage system, bushes, stagnant water bodies and even on ornamental plants. The study group were all resident in Enugu metropolis. The random selected participant were tutored on the objective of the study, and verbal consent obtained before given the questionnaires.

The questionnaires were filled and returned immediately at the spot. Though some skilled personnel assisted participants who were unable to read or write in filing the questionnaires. The percentage of age range, educational status, reasons for not having ITN and frequency of the use of ITN were analysed graphically.

Results

Figs, 1 and 2 indicate that the age range between 26-30years (secondary educational status) were the correspondent most examined. Out of the eligible groups 250 (70%) were aware of ITNs, only 300 (68.4%) of them own ITN (Table 1). Reasons that were given by the correspondent for not having ITN include; many were of the view of its un-availability 110 (40%), while others were of the view of its dangerous chemical content 90 (28%), while some complained of its expensiveness 50 (15%), the others complained of prevention of ventilation and causative of heat 49 (14.8%) and also its inability to prevent malaria 30 (9.1%). The frequency in the use of ITNs indicate that only 125 (37.7%) out of 331 (100%) of the samples population use their ITN every day, 179 (54.1%) use it intermittently and while 27 (8.2%) do not use ITN (Fig 3 and 4). This might be attributed to non-availability of ITNs or its low awareness campaign.

Table I. Awareness and use of ITNs

Variable	Frequency	%
Respondents aware of ITNs	250	70
Respondents not aware of ITNs	102	30.8
Respondents that own ITNs	300	60
Respondents that do not have ITNs	121	36.6

Table II. Source of Information

Source of awareness of ITN	Frequency	%
Friends/relation/neighbors	302	91.2
Mass media/television / radio	15	4.6
Health centres	14	4.2

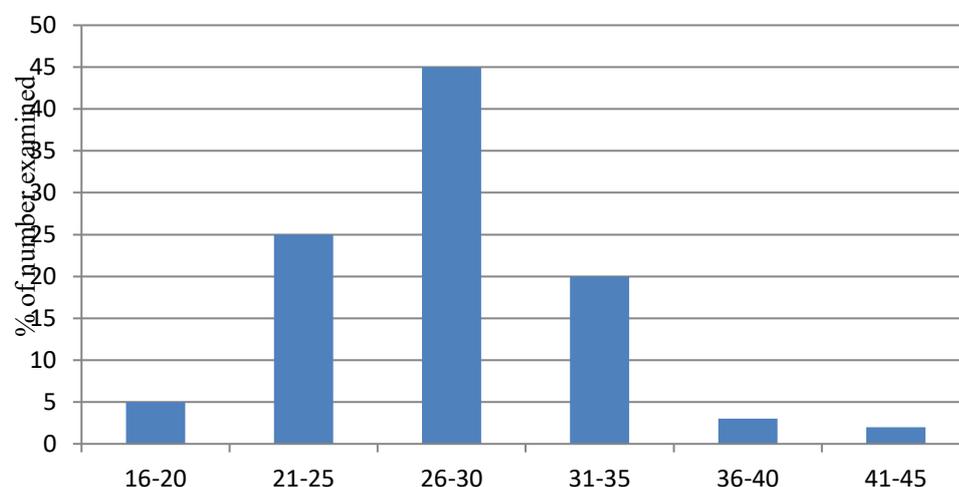


Fig I. Age Variability of the Correspondent

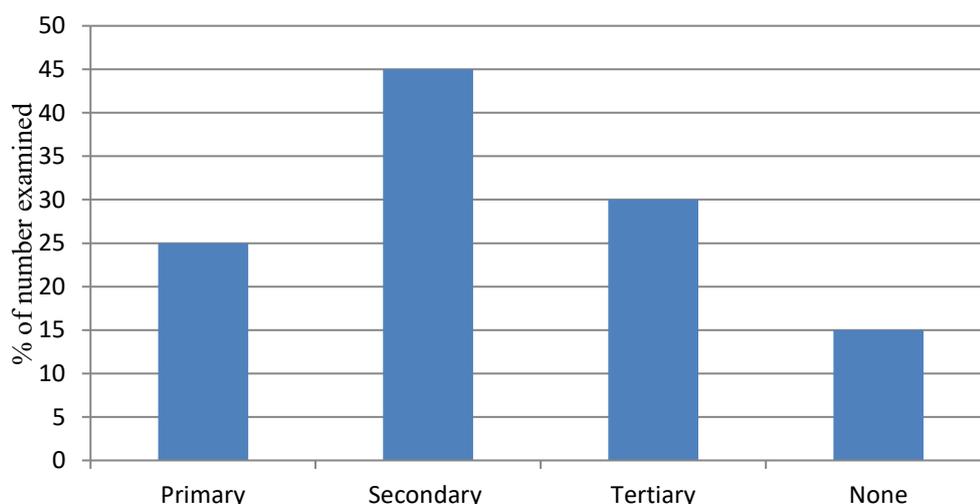


Fig 2 Educational Level

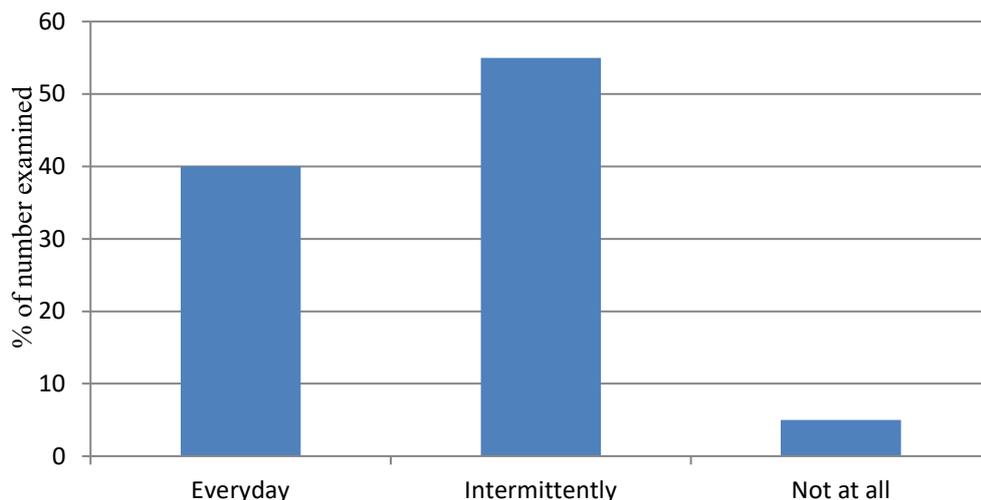


Fig 3 Frequency of the use of ITNs

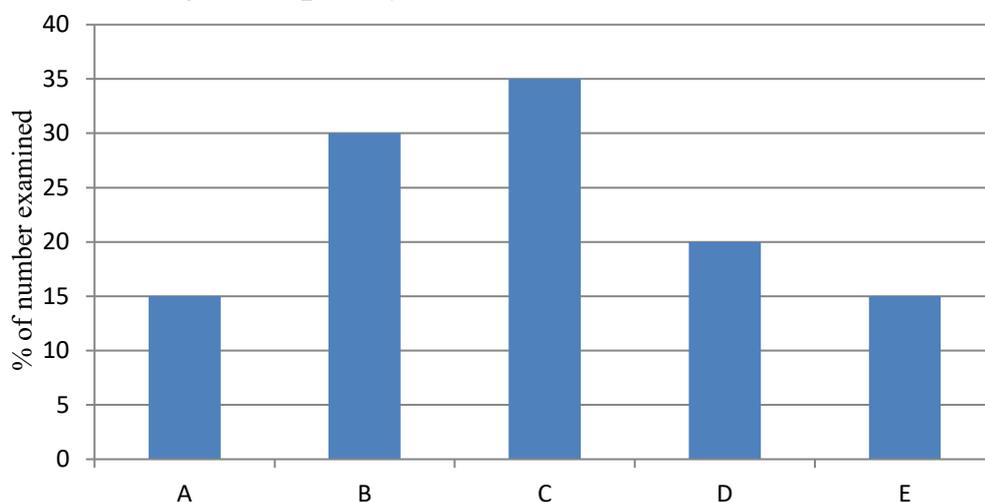


Fig 4 Reasons for not having ITN

Key: A = It is expensive, B = Contains dangerous chemical, C = Not available, D = causes heat and E = cannot prevent malaria.

Discussion And Conclusion

Most of the research conducted so far show good usage of ITNs among the populace in Enugu Metropolis. This research has also showed increasing awareness and knowledge of the importance of the use of ITNs in stopping and control of malaria attack on human (4). In contrary, Adeyemi et al. (8) found low awareness and use of ITNs among the populace in Southern Nigeria. The reasons for low patronage in the use of ITN includes; some individuals do not believe that it can prevent mosquito attack, some believe that it causes excessive heat, while some were of the opinion that ITN is scarce and costly (8). Previous reports had looked at the complaint and had vigorously advocated for an aggressive health education campaign to heighten its usefulness awareness among the populace so as to correct the misconceptions about malaria control efficacy by the use of insecticide treated nets (2 and 8). Government should make stronger effort in monitoring of ITNs distribution to enable them get to the targeted population. Great efforts have been made by World Health Organization in

controlling malaria through various agencies and groups. Although the dream of attaining a malaria free society seems difficult due to lousiness activities in execution of policies. Hence, there is a need for the society to modify their attitudes in holding unto new advances on making our world a whole malaria free.

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