RESEARCH PROJECT REPORT

STUDY TITLE

"Awareness of insecticide treated bed nets among mothers and use among children that attend maternal child health (MCH) clinic in Butere District Hospital, Kenya."

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"This project is submitted in partial fulfilment of the requirements for the award of Postgraduate Diploma in Research Methodology, The University of Nairobi Institute of Tropical and Infectious Diseases (UNITID)".

August 2007

DECLARATION

"I hereby declare that this submission is my own work and to the best of my knowledge it contains no material previously published or written by another person, nor material which to a substantial extent has been accepted for the award of any degree or diploma at UNITID or any other educational institution, except where due acknowledgement is made in this project. Any contribution made by others, with whom I have worked at UNITID or elsewhere, is explicitly acknowledged in this report.

I also declare that the intellectual content of this project is the product of my own work, even though I may have received assistance from others in style, presentation and linguistic expression."

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ACKNOWLEDGEMENTS

I thank mothers and children whose participation and cooperation contributed greatly to the success of this project. I thank the Medical officer of health, Butere District Hospital for the cooperation that was necessary for me to undertake this research in the institution. Thanks to the MCH clinic nurses: Christine Odhiambo, Prisca Wayoyi, Lydiah Kangu and Margaret Ingato for their enabling and tireless support and cooperation particularly in control and guidance of participants for the exit interview. I appreciate the relentless commitment of my supervisor: Professor Joyce Olenja of the University of Nairobi, department of community health for her guidance that gave proper direction from project development, during field research to completion. I thank UNITID management for the appropriate administrative decisions and actions that made completion of this project timely.

This study was supported by partial scholarship funds from DBL and myself. I was the sole investigator in the study.

Orembe J .J

ABSTRACT

INTRODUCTION: Malaria kills 3000 children each day in Sub-Saharan Africa[31]. Promotion of ITNs is not only an important aspect in control of malaria among the general public but more so among children aged five years and below. The immediate concern of any successful ITNs promotion efforts is increased use and access to the relevant ITNs information. Maternal child health clinics are the ideal places to meet and sensitize all the mothers with children under five years on the use of insecticide-treated nets in the prevention of malaria.

OBJECTIVE: The study was to determine the proportion of mothers aware of ITNs and use among children under five years who attend Butere District Hospital maternal child health (MCH) clinic. The findings will enable the hospital management to take evidence based administrative measures to increase use and access to ITNs information by children aged five years and below and mothers who attend MCH clinic respectively.

METHOD: This was a Cross-sectional descriptive study involving use of partially closed-ended structured interviewer administered questionnaires. 143 study participants were drawn for exit interviews from the population of mothers bringing their children to Butere District Hospital MCH clinic for either child health clinic or treatment. Data collected was analyzed in Stata for proportions of awareness and use of ITNs and participant characteristics.

RESULTS: 93.48% of participants interviewed at the MCH clinic were aware of ITNs and the participants affirmed 71.01% of their children used ITNs. Of the 28.99% children that did not use ITNs, over half (52.50%) did not due to lack of money (Ksh.50 per net) and (32.50%) due to lack of information on ITNs. 7.50%, 5%, and 2.5% was due to failure to carry ITNs during travel upcountry, inability to deploy ITNs due to lack of space in the house and no reason at all respectively.

CONCLUSIONS: Awareness of ITNs among mothers and use among under five attending MCH clinic at Butere District Hospital though fairly high, can be increased much more if sustained ITNs education and support in form of ITNs are given at the clinic.

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ACRONYMS

ANC	Antenatal clinic
AOR	Adjusted odds ratio
APMs	Adolescent peer mobilisers
CRHWs	Community reproductive health workers
DBL	Institute for Health Research and Development
DDT	Dichloro-Diphenyl-Trichloroethane
DSVs	Drug-shop vendors
FP	Family planning
IPT	Intermittent preventive treatment
IMCI	Integrated management of child illnesses
ITNs	Insecticide treated bed nets
KDHS	Kenya demographic health survey
MCH	Maternal child health
PMI	President's malaria Initiative
RBM	Roll back malaria
TBAs	Traditional birth attendants
WHO	World Health organization
WTP	Willingness to purchase

DEFINITIONS

Awareness	Refers to mothers' affirmed awareness of ITNs
Child	Refers to children aged five years and below presented to the MCH clinic on the material day of interview.
ITNs	For purposes of this research, Refers to bed nets sourced from health institutions.
Mothers	Includes all biological mothers, female care givers and relatives that bring children aged five years and below to MCH clinic.
Non-response	Include all those that were part of the sample population but failed to show up for interview.
Sick	Refers to children that attended clinic for treatment purposes
Use	Refers to mothers' affirmed use of ITNs by their children aged five years and below.

CHAPTER 1

INTRODUCTION

Background

Malaria kills 3000 children each day in Sub-Saharan Africa[31]. Promotion of ITNs is not only an important aspect in control of malaria among the general public but more so among children aged five years and below. A lot of activities to increase awareness of ITNs among mothers and use among under five have been undertaken by various stakeholders. It is imperative to establish the impact of these efforts for evidence-based decisions pertaining awareness and use of ITNs. Maternal child health clinics are the ideal places to meet and sensitize all the mothers with children under five years on the use of insecticide-treated bed nets in the prevention of malaria. Thus the immediate concern of this study is to establish awareness of ITNs among mothers and use among children aged five years and below at MCH clinic.

Research question

What is the level of awareness of insecticide treated bed nets among mothers and use among children that attend maternal child health (MCH) clinic in Butere District Hospital.

Aim

The aim of the project is to improve the health of children aged five years and below through creation of awareness and increased use of ITNs among mothers and children under five years respectively who attend MCH clinic in Butere District Hospital.

Main objective

The objective of the study was to determine the level of Awareness of insecticide treated bed nets among mothers and use among children that attend maternal child health (MCH) clinic in Butere District Hospital.

Specific objectives

Determine the number of mothers who attend MCH clinic are aware of ITNs.

Determine the number of children aged five years and below who attend MCH clinic and use ITNs.

CHAPTER 2

LITERATURE REVIEW

Despite the fact that maternal child health clinics (MCH) are well placed in promoting the use of insecticide-treated bed nets to the mothers who bring their under five year children, elsewhere, very little has been done to this effect. MCH clinics need to be more aggressive in motivating mothers to use insecticide-treated nets. In a study conducted in Nyamira District, Kenya, 71% of the participants had not received any information on the use of insecticide-treated nets while at the MCH clinics. Only 50% of the clinics had bed nets/ITNs posters mounted on their premises. Out of those clinics with posters, only in 50% of them had bed net posters seen. Very few mothers (36.2%) had seen the bed net/ITNs posters. None of the healthcare providers used bed net/ITNs posters to educate the mothers. None of the insecticide-treated net leaflets were issued[1]. In a study to determine maternal use of insecticide treated nets in the prevention of malaria among children under five years, there was very low usage of mosquito nets (33.8%) with the proportion of under five using bed nets and insecticide treated nets being 33.3% and 23.8% respectively. The possibility of a mother having an insecticide treated net was significantly related with the level of education of the mother ($p = 0.003$), occupation ($p = 0.001$) and knowledge ($p = 0.000$). Among the reasons given by mothers regarding non-usage of insecticide treated nets included lack of money, being expensive, ignorance and carelessness. This leads to low use of ITNs among children under five years of age hence need for campaigns to sensitize the mothers on most risk groups from malaria so as to create awareness of who needed more protection through use of ITNs[2]. Complications with treatment of malaria have been shown to be significantly higher in children aged below five years. Cross-

sectional studies have shown that the success of malaria control programmes is dependent on positively influencing knowledge, awareness and preventive behaviour of the programme beneficiaries. A study in Nigeria showed that 80.5% of participants were aware of the use of untreated bed nets in preventing malaria while 38 (20.0%) and 4 (2.1%) were aware of ITNs and used ITNs respectively. Although awareness of ITNs has been shown to increase with increasing maternal education, elsewhere awareness of the parents about ITNs and their use has been shown to be poor hence need for intensified provision of ITNs and Health education on appropriate ITN use has been recommended[3]. This has been shown to be true of programmes involving use of Insecticide Treated Nets (ITN) as an intervention. Rational mosquito protection on skin and textiles reduces the risk of malaria and other arthropod-transmitted diseases[4]. Detailed and clear communication of emergency treatment alerts help to reduce the rate of severe malaria cases among travelers[5]. Malaria control programmes using traditional birth attendants (TBAs), Drug-shop vendors (DSVs), community reproductive health workers (CRHWs) and adolescent peer mobilisers (APMS) has been shown to be successful if well implemented in malaria intervention among pregnant women compared to intermittent preventive treatment (IPT) at health units. In countries where IPT policy is implemented, poor access and low compliance to this intervention has been widely reported[6]. In a survey to assess malaria knowledge, attitudes, and practices in communities experiencing epidemic malaria to begin exploring broad strategies for controlling the disease in central Java, Indonesia, Thirty-six percent (357 households) owned at least one bed net, 92% of these had been purchased by the owners. However, only 36% of households with bed nets affirmed their use as a means of preventing malaria[7]. Despite high awareness on the benefits of ITN, low usage has been shown to be due to High cost,

perceptions that the chemicals used to treat them have dangerous effects on pregnancy and the fetus, low utilization of antenatal care, husbands lack of interest in malaria prevention, perceptions that adolescent girls and primigravidae are at low risk of getting malaria[8]. Research work has shown that ITNs retreatment rates can be negatively influenced by the lack of information, cash and availability of insecticides. Effective actions for malaria control mandate rational public policies; market forces, which often drive sales and use of drugs and other interventions, are unlikely to guarantee their use. Experience in the Solomon Islands showed that use of insecticide-treated bed nets (ITNs), and health education were all associated with disease reduction. Use of nets permit a reduction in DDT spraying, but cannot replace it without an increased malaria incidence. Baseline data and reliable monitoring of key outcome indicators are needed to measure whether the ambitious goals for the control of malaria and other diseases has occurred. Such systems are being used for evidence-based decision making in Tanzania and several other countries[9]. In a research carried out in western Kenya, ITNs were used by 82.4% of women during pregnancy, and almost all mothers (98.5%) who slept under an ITN shared the nets with their newborns after delivery. Women who thought malaria in pregnancy caused foetal problems were more likely to have used an ITN (adjusted odds ratio [AOR] 1.6, 95% confidence interval [CI] 1.0-2.4), and to have visited ANC more than once (AOR 2.4, 95% CI 1.2-4.7) compared to women who thought malaria in pregnancy was either not a problem or caused problems for the mother only. In this area of Kenya, health messages stressing that foetal complication of malaria in pregnancy may occur in the absence of maternal illness may improve the demand for IPT[10]. It has been shown that malaria prevention and undernutrition could be related. The cross-sectional nature of the study limits the interpretation of causality, but the data provide

further observational support that the presence of undernutrition, in particular chronic undernutrition, places children at higher, not lower risk of malaria-related morbidity[11]. The temporary effect of ITNs on the genetic structure of An. arabiensis population suggests that, to optimize the success of any control programme of this species based on ITNs, the control area should be very large and the programme should be implemented for a long period of time[12]. Malaria incidence and prevalence declined significantly in Vietnam, possibly due to the malaria control efforts, but coinciding with rapid socioeconomic changes[13]. In under 36months, Prevention of severe anemia should start early in infancy and include a combination of micronutrient supplementation, malaria control, and possibly interventions against diarrheal illness[14]. . The higher the stated willingness to purchase ITNs (WTP), the more likely the divergence between stated and actual WTP. The attitude of the community leaders to the ITNs in the biding game (BG) ($p<0.05$), the time respondents had to think about their WTP ($p<0.05$) and the external information they received about the ITNs in the binary with follow-up (BWFU) ($p<0.05$) all led to divergences in WTP. The conclusion is that there are genuine causes of divergences between stated and actual WTP across the three question formats, and that the lesser the criterion validity score, the more the level of divergence in WTP. Studies that compare stated and actual WTP for ITNs should explicitly determine the causes of divergences in order to assess the role of bias in the divergences[15]. A study conducted in Nigeria shows that the levels of WTP identified suggest that user fees exceeding 50 Naira (1$=120Naira) per net re-treatment may discourage demand for the service. This is an important challenge for ITN programmes[16]. ITNs have been shown to be highly effective in reducing childhood mortality and morbidity from malaria. Roll Back Malaria (RBM) programme is currently advocating widespread access to ITNs, but universal deployment will require major financial, technical,

and operational inputs[17]. Issues of commodity supply and service costs to clients will be the greatest impediments to reaching RBM targets[18]. The impact of ITNs on the transmission intensity seems not only to affect the overall malaria morbidity, but may even facilitate restoration of susceptibility to antimalarial drugs. The proportion of households with ITNs (coverage), the proportion of individuals properly deploying ITNs each night (adherence), and the proportion of nets properly treated with insecticide (treatment) are the three key determinants of effectiveness of large-scale ITN programs. Coverage effects and economic analysis support the proposition that ITNs may be viewed as a public good, worthy of public support. Research should continue to improve the intervention tools (the net, the insecticide, and methods for durable treatment and re-treatment) and their deployment[19]. Research in Ndirande, Malawi Showed that malaria is perceived tobe a common illness in school children. While younger children seem to have higher access to ITNs, there seems to be no statistically significant gender differences in accessibility[20]. In addition to treatment and case management in Ghana, a vector control programme that includes insecticide resistance management by alternation of various classes of insecticides for house spraying, supply of ITNs, screening of houses and environmental management where appropriate, i.e. integrated vector management[21]. According to the Kenya Demographic Health Survey (KDHS 2003), only 5 percent of children under five and 4 percent of pregnant women slept under an insecticide-treated bed net (ITN) the night before the survey[30]. According to Butere/Mumias District Health Annual Report (DHAR, 2006), during the 1st and 2nd quarters July to December 2006/2007, a total of 7286 ITNs were distributed to children under five years.There was no report of the number of children that slept under ITNs. Malaria was ranked 1st causing 24.2% of deaths in the district[32].

CHAPTER 3

METHOD

Design

This was a Cross-sectional descriptive study.

Setting

The study was conducted at Butere District Hospital MCH, FP, IMCI and ANC integrated clinic unit. The services at the unit are offered on first come first served. Every one coming for any of the services is issued with a numbered card and joins a waiting line. The staffs at the unit give health talk every morning to all those present. Baseline information is collected from every visiting child by one of the nurses. The child's mother is then appropriately directed for IMCI/MCH services or both.

Sample size estimation

Version 3.05.07 formula for estimating a population proportion with specified absolute precision as shown below was used. ITNs use among under five attending MCH clinic was estimated at 90%.

$n = [Z^2_{1-\alpha/2} * p * (1-p) * DEFF] / d^2$

Where $Z_{\alpha = 1.96}$ p=90% d=0.05

The sample size from the formula was 138.

Population

Between July 10 and July 25 a total of 138 attendees bringing children aged five years and below to Butere District Hospital for child health clinic and or treatment were interviewed.

This included all the days except on weekends when children are attended to at the outpatient wing.

Exclusion Criteria

All those attending FP and ANC clinic during the study.

Sampling process

From records at the hospital, the total number of children that attended MCH clinic for six months from January to June 2007 was 10510.Thus 138 participants were sampled from 876 who were expected to attend clinic during the study period. Every day, the first mother to be interviewed was randomly picked from among the first 6 on the waiting line then every 6^{th} for the rest. Cards serialised in red were issued to all the mothers with children on the waiting line at the unit every morning and those that came later in the day. Using systematic random sampling frame as explained, a list of the sampled numbers was given to the nurse at the information collection point. After information collection, those with cards with numbers on the list were directed to the interviewer from where they moved to either the IMCI or MCH for appropriate service.

Data collected

Data collected on the mothers included; maternal age, marital status, level of education, employment status, maternal residence, awareness of bed nets, awareness of ITNs, and source of information on ITNs.

Data collected on the children included; usage of ITNs, source of ITN, reasons for non-usage of ITNs, child clinic visits, child health status.

List of variables

Age, marital status, level of education, employment status, maternal residence, awareness of bed nets, awareness of ITNs, source of information on ITNs, usage of ITNs, source of ITN, reasons for non-usage of ITNs, child clinic visits, child health status.

Independent variables

These included; age, marital status, level of education, employment status, and maternal residence.

Dependent variables

These included; awareness of bed nets, awareness of ITNs, source of information on ITNs, usage of ITNs, source of ITN, reasons for non-usage of ITNs, child clinic visits, child health status.

Data collection procedure

The interviewer greeted and welcomed the participant to a seat in Kiswahili. He asked the participant the language she would comfortably communicate. He read to her the study information statement in appropriate language, allowed her to ask questions if any and sought for her informed consent to participate in the study. Then the interviewer engaged the participant in one to one question answer conversation. The interviewer listened and recorded the response appropriately in the questionnaire.

Data collection instruments

The study involved use of partially closed-ended structured interviewer administered questionnaires. The questionnaire was altered slightly in framing of questions so as to be responsive to the objectives of the study. This was done on the first day. Two more exploratory questions were added.

Procedure used to control data quality

The interviewer was thoroughly trained and ensured In-person administration of questionnaire not proxy by confirming with the nurse who directed the participants. The questionnaire was pre-tested on the first day. Some questions were asked more than once if from the response, the interviewer felt the question might have been misunderstood. Interviewer checked the questionnaire for any

missing answers, and sought for answers before he released the participant. Child health clinic cards and validation questions were used to validate some responses. Partially closed-ended questions were used to elucidate any other responses not premeditated.

Data analysis

Data was entered in Excel for cleaning. Cleaned data was entered in Stata version 9.2 for further cleaning and data processing that included, transformation from string to numeric, labelling of variables, attaching values to labels/coding and variable transformation. Tabulation and cross tabulation, univariate and Multivariate analysis involving categorical outcome variables and independent categorical and continuous social demographic characteristics were performed.

Ethical consideration

The study was reviewed and approved by Kenyatta National Hosipital Ethics and Review Committee (KNH-ERC) and all participants signed an informed consent before being interviewed.

Limitations

It was not possible to exclude those attending the clinic for the purpose of treatment of their sick children because of the clinic-integrated nature. Since they were all under five, I felt it was appropriate to include them for the purpose of this study.

CHAPTER 4

Results

Attendance of the clinic by mothers who brought there under five between July 10 and July 25 was 840 against the target 833. The response rate was fairly high at 96.5% with a total of 138 participants out of the sampled 143(Fig 1).

Fig 1: Participant flow chart

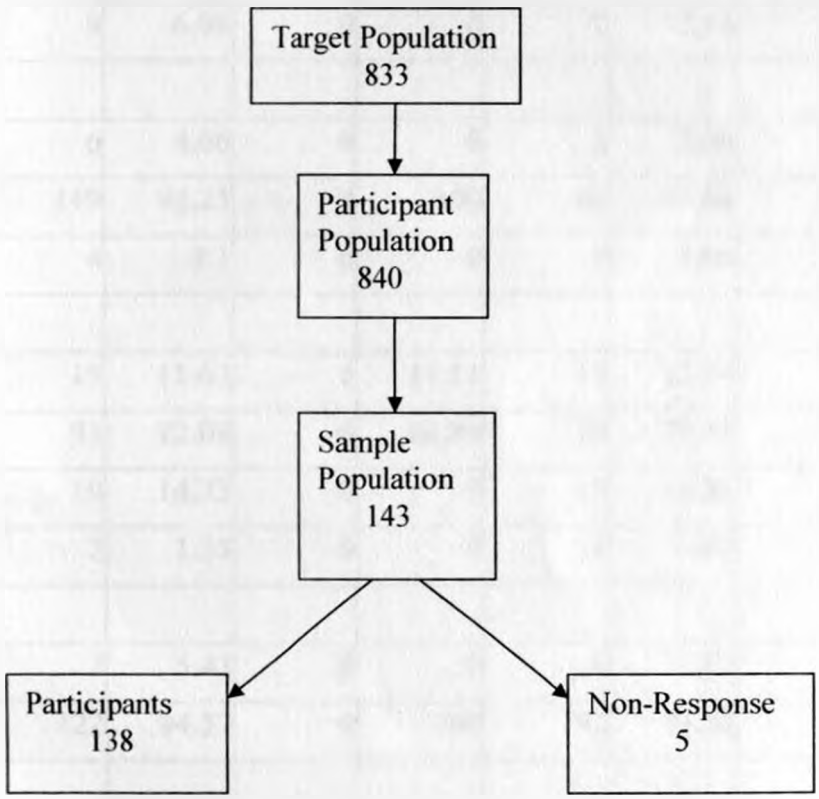


Table 1: Social demographic characteristics of the mothers by awareness and use of ITNs.

Characteristics	ITNs awareness(n= 138)				ITNs Use (n= 138)			
	Yes (n=129)		No (n=9)		Yes (n=98)		No (n=40)	
Mean age in Years	25		21		25		23	
Age group	**Number**	**%**	**Number**	**%**	**Number**	**%**	**Number**	**%**
<18	4	3.1	1	11.11	4	4.08	1	2.5
18-35	116	89.92	8	88.89	87	88.78	37	92.5
>35	9	6.98	0	0	7	7.14	2	5
Marital status								
Single	6	4.66	0	0	3	3.06	3	7.5
Married	119	92.25	9	100	92	93.88	36	90
Divorced	4	3.1	0	0	3	3.06	1	2.5
Level of education								
None	15	11.63	1	11.11	12	12.24	4	10
Primary	93	72.09	8	88.89	70	71.43	31	77.5
Secondary	19	14.73	0	0	15	15.31	4	10
Tertiary	2	1.55	0	0	1	1.02	1	2.5
Residence								
Urban	7	5.43	0	0	6	6.12	1	2.5
Rural	122	94.57	9	100	92	93.88	39	97.5
Employment status								
Employed	3	2.33	0	0	2	2.04	1	2.5
Not employed	126	97.67	9	100	96	97.96	39	97.5

Table 1 Provides selected social demographic characteristics for the 138 participants in this analysis .The mothers who were aware and those not aware of ITNs were similar with respect to these characteristics. The mothers who affirmed children usage of ITNs were also similar in these characteristics.

Table 2: Participants characteristics

	Number	%
age		
<18	5	3.62
18-35	124	89.86
>35	9	6.52
Marital status		
Single	6	4.34
Married	128	92.75
Divorced	4	2.9
Level of education		
None	16	11.56
Primary	101	73.19
Secondary	19	13.77
Tertiary	2	1.45
Residence		
Urban	7	5.07
Rural	131	94.93
Employment status		
Employed	3	2.17
Not employed	135	97.83

Most of the mothers were youthful aged between 18-35 years and married. The majority had primary school level of education. Most of them lived in the rural and 97.83% were not in formal employment (table 2).

All of the participants were aware of bed nets and 71.01% (c.i 0.63-0.79) of all participants affirmed ITNs usage by their under five attending the clinic. 93.48% (c.i 0.89-0.97) were aware of ITNs and 75.97% of this affirmed use of ITNs by their children (Table 3&4).

90.5% of the 19 participants who were aware of the ITNs but their children did not use ITNs said lack of money was the main reason for non-usage. 57.27% of the mothers brought sick children for treatment. 96.2% of the 79 mothers who brought children for treatment at IMCI were aware of ITNS and 73.42% of them affirmed use of ITNs by their under five at home. MCH clinic was the source of information on ITNs for 80.43% of the participants who were aware of ITNs. 75.68% of these affirmed use of ITNs by their under five. Lack of money and information on ITNs contributed to 53.8% and 33.3% non-usage respectively. 93.13% of the participants who lived in the rural were aware of ITNs while 70.23% of them affirmed use of ITNs for their under five.

Those not employed were 135 and 93.3% of these were aware of ITNs while 71.11% of them affirmed use of ITNs by their under five.

Children of 113 participants had visited the clinic before, while those of 25 were visiting the clinic for the first time. 100% of participant who brought their children to the clinic for the first time were aware of ITNs and 68% of them affirmed use of ITNs by their under five. 92.04% of the participants whose children were revisiting the clinic were aware of ITNs and 71.68% of them affirmed use of ITNs by their under five. 89.8% of participants who had ITNs

got them from MCH clinic and 98.86% of them affirmed use of ITNs by their under five.

Table 3 Awareness of insecticide treated bed nets among mothers of children aged five years and below that attend Butere District Hospital MCH clinic.

Awareness of ITNS	Freq.	Percent	Cum.
not aware	9	6.52	6.52
Aware	129	93.48	100
Total	138	100	

Table 4 Use of insecticide treated bed nets by children aged five years and below that attend Butere District Hospital MCH clinic.

Use of ITNS	Freq.	Percent	Cum.
non user	40	28.99	28.99
User	98	71.01	100
Total	138	100	

Fig 2

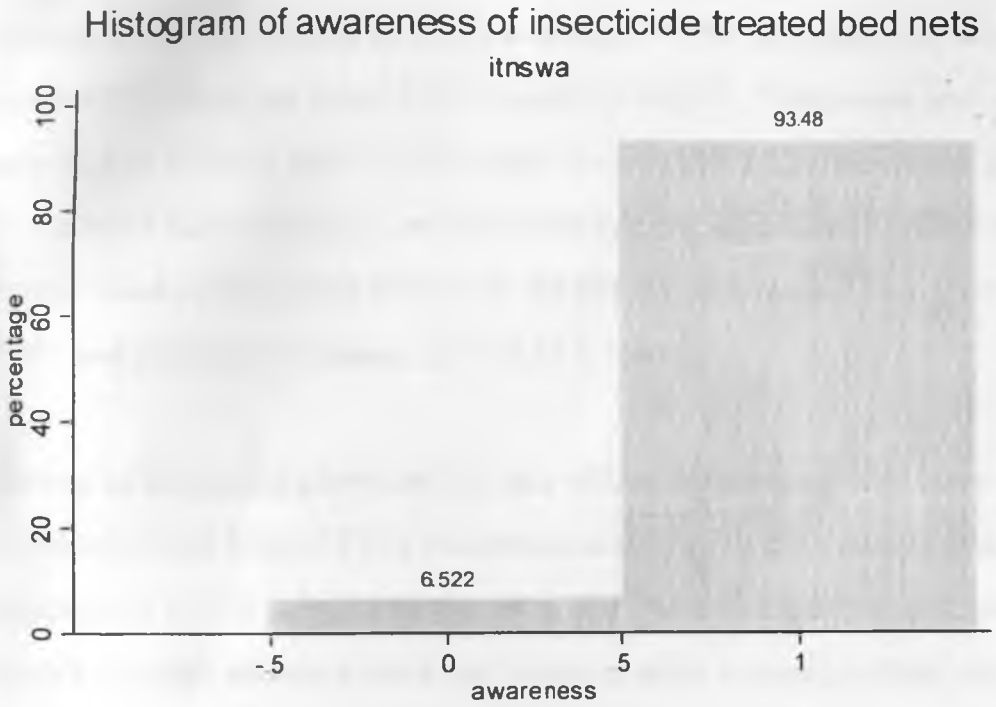
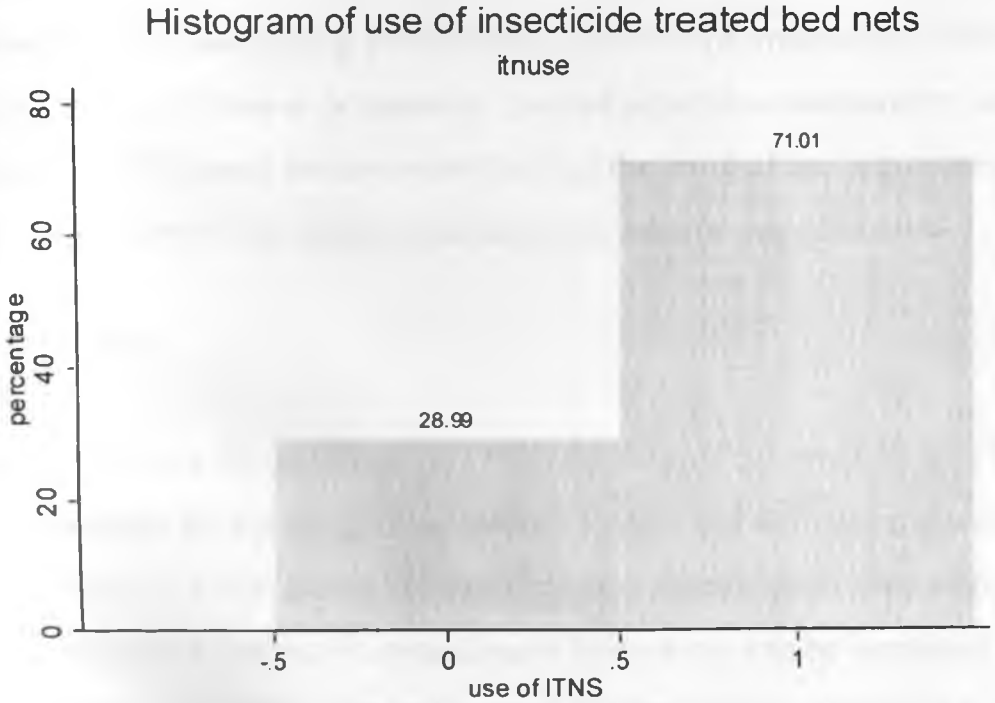

Histogram of awareness of insecticide treated bed nets
itnswa
93.48
6.522
percentage
0
20
40
60
80
100
-.5
0
.5
1
awareness

Fig 3


Histogram of use of insecticide treated bed nets
itnuse
71.01
28.99
percentage
0
20
40
60
80
-.5
0
.5
1
use of ITNS

Discussion

Awareness of ITNs among mothers and use of ITNs by under five who attend Butere MCH clinic are related as expected (P=0.00). Awareness and use are fairly high at 93.48% and 71.01% respectively (Fig 2&3). However, awareness and use of ITNs as found out at this clinic are not significantly related to the mothers level of education (P=0.673, 0.680), employment status (p = 0.816, 0.645) and maternal residence (P = 0.617, 0.673).

This can be explained partly by the past efforts by partners who have collaborated and funded ITNs awareness and sensitization campaigns, malaria programmes which subsidized the price of ITNs and expanded distribution network through mobile clinics and immunization campaigns that reach the rural. Promotion of ITNs at the clinic through use of posters, issue of leaflets, and ITNs education by clinic service providers has also contributed to wide awareness and use among the mothers of under five irrespective of their level of education, residence or occupation. Lack of significant relationship with regard to use of ITNs could be due to the fact that the level of use was overestimated in the calculation of the sample size leading to smaller sample size.

Conclusion

Lack of money for purchase of ITNs and lack of information on ITNs are the main reasons for not using ITNs among children under five that attend the clinic. Awareness of ITNs among mothers and use among under five attending MCH clinic at Butere District Hospital though fairly high, can be increased much more if sustained ITNs education and support in form of ITNs are given at the clinic.

Recommendation

The results suggest that the low economic status and lack of information on ITNs among some of the MCH clinic attenders is one single obstacle to use of ITNs among under five years. Further survey should be conducted at the clinic to establish the affordable ITNs price for those who do not use ITNs due to lack of money. There is need to support sustained malaria control education at the MCH clinic.

The high percentage of mothers who affirmed use of ITNs by their under five among those bringing children for treatment at the IMCI need to be investigated to establish the prevalence of malaria among this group so that the necessary actions to improve the intervention tools (the net, insecticide, durable treatment, retreatment and proper deployment at night).

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Appendices

QUESTIONNAIRE

QUESTION		ITEM
1. What is your name?		Name (code number)
2. Where do you reside?		Urban
		Rural
3. How old are you?		Year
4. What is your marital status?		Single
		Married
		Divorced
5. What is your highest level of education?		Primary
		Secondary
		Tertiary
6. Are you employed?		Yes
		No
7. Do you know bed nets?		Yes
		No
8.What type of nets do you know of?		Insecticide treated
		Other ---------- ---------- ----------
9. How did you know this?		This MCH clinic
		Seminars
		Peers
		School
		Barazas
		Maendeleo ya wanawake forum
		Women groups
		Radio
		ITNs campaign forums
		Others ---------- ---------- ----------

10. Does your child use ITNs?		1.Yes
		2. No
11. If no, why don't you use?		Lack of money
		Being expensive
		Ignorance
		Not available
		Lack of information
		Husbands lack of interest in malaria prevention
		Other --- --- --- --- --------
12. If yes, where did you get your net?		MCH clinic
		Shop
		Other --- --- ---
13. Has your child attended this clinic before?		1.Yes
		2.No
14.How is your child?		1.well
		0.Sick
15. Would you recommend ITNs use to anybody else?		1. Yes
		2. No

CONSENT FORM/INFORMATION STATEMENT

STUDY ON AWARENESS OF ITNS AMONG MOTHERS AND USE AMONG UNDER FIVE THAT ATTEND BUTERE DISTRICT HOSPITAL MATERNAL CHILD HEALTH (MCH) CLINIC.

Investigators' statement

Good morning/afternoon sir/madam.

May I take some of your time to explain about a study I am conducting in this hospital? The aim of this study is to improve the health of children aged five years and below by enhancing promotion of ITNs at Butere District Hospital maternal child health clinic. It is a research project aimed at fulfilling Postgraduate Diploma in Biomedical Research Methodology of University of Nairobi Institute of Tropical and Infectious Diseases (UNITID).

You are asked to participate in this study by answering some questions I have about yourself. The purpose of this consent form is to give you the information you will need to help you decide whether to be in the study. Please listen to it carefully as it is being read to you. You may ask questions before you answer any question, the risks, the benefits, and your rights as a volunteer, or anything about the research or in this form that is not clear. When all your questions have been answered, you can decide if you want to be in this study or not. You are free to withdraw with or without reason if you change your mind any time. I will give you a copy of this form for your records.

All information collected during this research will be held in strictest confidence and no identifying information of any kind will be released to any other person or agency without your specific consent. I will not publish or discuss in public anything that could identify you unless with your written consent. Only the investigator will have access to information that be used to identify you however once the study is complete all records that can be used to identify you will be removed.

Signature of investigator----------Date----------

Participant's statement:

The study described above has been explained to me. I voluntarily consent to participate in this activity. I have had an opportunity to ask questions.

Signature/Right thumbprint of subject----------Date----------

Contact persons for any queries regarding this study

Prof. K.M. Bhatt
Chairman, ERC-KNH
Department of Internal Medicine
University of Nairobi
Tel.2726300

Prof. J. Olenja
Department of Community Health
University of Nairobi
Tel. 2726300 Ext. 43650
Mobile:0722955230.

Investigator
Dr. Jared J Orembe
Mobile:0722943088

Copies to: 1. Subject 2. Investigator's file

DATA COLLECTION MONITORING SCHEDULE

DATE	TARGET POP.	OBSERVED POP	SAMPLE SIZE	NON-RESPONDENT	NUMBER INTERVIEWED	NURSE ON DUTY	JOB TITLE	CELL-PHONE	SIGNATURE
10/7/2007	73	57	10	1	9	LYDIAH KANGU	KECHN	723155350	
13/7/07	73	92	16	1	15				
16/7/07	73	83	13	0	13				
11/7/2007	73	69	12	1	11	PRISCA WAYOYI	KECHN	723566117	
12/7/2007	73	89	15	0	15				
20/7/07	73	62	11	0	11				
23/7/07	73	60	10	0	10				
24/7/07	73	87	15	0	15				
17/7/07	73	83	14	2	12	CHRISTINE ODHIAMBO	KRCHN	720498215	
25/7/07	30	30	5	0	5				
18/7/07	73	70	12	0	12	MARGARET INGATO	KECHN	720253478	
19/7/07	73	58	10	0	10				
TOTAL	**833**	**840**	**143**	**5**	**138**	CHRISTINE ODHIAMBO	KRCHN	720498215	

Fine Copy

KENYATTA NATIONAL HOSPITAL
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P.O. Box 20723, Nairobi.
Tel: 726300-9
Fax: 725272
Telegrams: MEDSUP", Nairobi.
Email: KNHplan@Ken.Healthnet.org

Ref: KNH-ERC/ 01/ 4427

18th June 2007

Jared Ouma Orembe
UNITID

Dear Jared

Research Proposal: "The Prevalence of Knowledge and use of Insecticide Treated bed nets among mothers that attend Maternal Child Health(MCH) clinic in Butere District Hospital, Kenya " (P114/5/2007)

This is to inform you that the Kenyatta National Hospital Ethics and Research Committee has reviewed and **approved** your above cited research proposal for the period 18th June 2007 – 17th June 2008.

You will be required to request for a renewal of the approval if you intend to continue with the study beyond the deadline given. Clearance for export of biological specimen must also be obtained from KNH-ERC for each batch.

On behalf of the Committee, I wish you fruitful research and look forward to receiving a summary of the research findings upon completion of the study.

This information will form part of database that will be consulted in future when processing related research study so as to minimize chances of study duplication.

Yours sincerely

Prof. A.N. Guantai
SECRETARY, KNH-ERC

c.c. The Deputy Director CS, KNH
Prof. K.M. Bhatt, Chairperson, KNH-ERC
Prof. J. Olenja, Dept. of Comm. Health, UON

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The Director
UNITID
College of Health Sciences
University of Nairobi

6th July 2007

The Medical Officer of Health.
Butere District Hospital.
BUTERE

9/07/07
Approved
DR. AMDANY31

MEDICAL OFFICER OF HEAL
BUTERE-MUMIAS DISTRICT
P.O BOX 40 BUTERE

Dear Sir,

RE: JARED JUMA OREMBE No. W61/P/7428/06

The above named is a Postgraduate student in University of Nairobi Institute for Tropical and Infectious Diseases. He is to conduct a study to determine the prevalence of knowledge of insecticide treated bed nets and use among mothers that attend Butere District hospital maternal child health (MCH) clinic. The study involves use of Interviewer administered questionnaire. It is a research project aimed at fulfilling Postgraduate Diploma in Biomedical Research Methodology at the University of Nairobi Institute of Tropical and Infectious Diseases (UNITID).

This project will provide useful information about use of ITNs as an intervention in control of malaria among children aged five years and below. Attached is a copy of the proposal and the approval from the Kenyatta National Hospital Ethical Research Committee.

We kindly request you to accord him the necessary assistance to enable him carry out his Research Project at the Butere District Hospital.

PROF. B. B. A. ESTAMBALE
DIRECTOR, UNITID

Copy

Jared J. Orembe
P.O. Box 281
BUTERE – KENYA
Mobile: 0722943088

Date: 25th July 2007

Medical Officer of Health
Butere District
P.O. Box 40
BUTERE – KENYA.

Dear Sir

RE: APPRECIATION

Kindly accept my heartfelt gratitude and thanks to your esteemed office and maternal child health (MCH) clinic staff of Butere District Hospital for the enabling and relentless support and co-operation that I received during the exercise of data collection for my research project.

I hope that the final **assessed** report of the findings which I shall forward to you later shall be useful for the hospital and MCH clinic.

Thank you.

Yours faithfully

Dr. Orembe J. J.
PGD-RM STUDENT – UNITID.

CC MCH CLINIC