



UNIVERSITI PUTRA MALAYSIA

**MALARIA PREVALANCE AND SOCIO-ACCEPTABILITY OF
INSECTICIDE-TREATED BED NETS FOR MALARIA PREVENTION IN
MAZABUKA, ZAMBIA**

JANE BANDA

FPSK(m) 2013 3

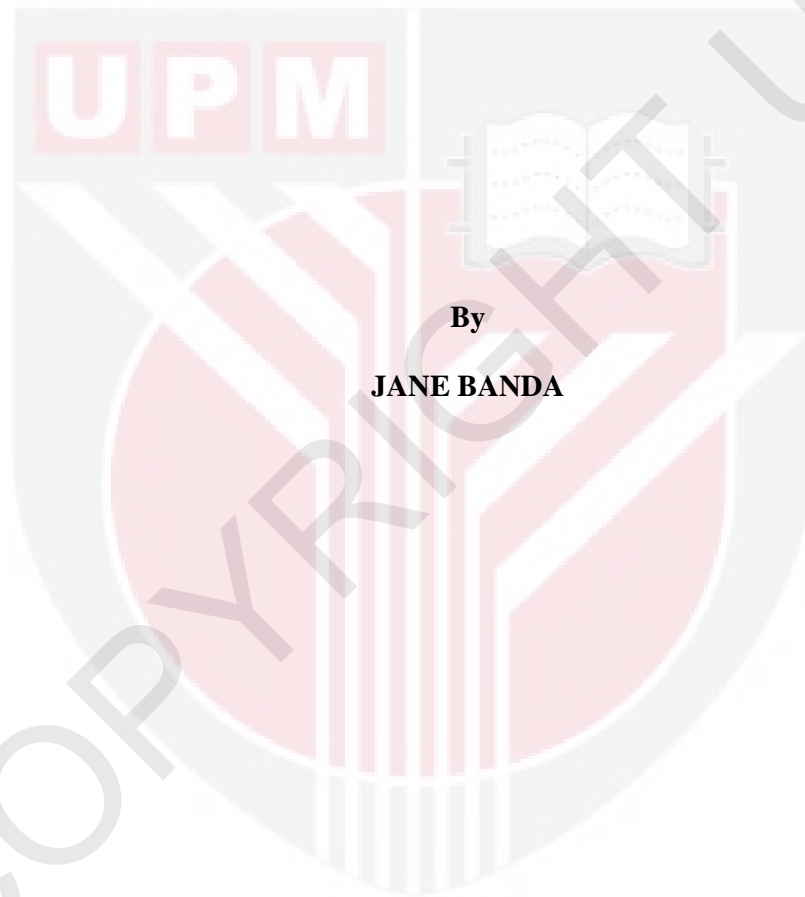
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**MASTER OF SCIENCE
UNIVERSITI PUTRA MALAYSIA**

January 2013

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MAZABUKA, ZAMBIA**



By
JANE BANDA

**Thesis submitted to the School of Graduate Studies, Universiti Putra Malaysia,
in Fulfilment of the Requirements for the Degree of Master of Science**

January 2013

Abstract of thesis presented to the Senate of Universiti Putra Malaysia in fulfilment of the requirement for the degree of Master of Science

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Chairman : Malina binti Osman, PhD

Faculty : Faculty of Medicine and Health Sciences

Malaria is an immerse public health challenge in the world today. Although preventable, it still causes significant morbidity and mortality, accounting for over 300 to 500 million clinical episodes and annual deaths of more than 1 million people, mostly African children under 5 years old. Zambia is a high malaria transmission area recording around 4 million cases and about 6,400 deaths annually, with a case-fatality rate of about 40/1,000 among Hospital admissions. This is so despite intensive scale-up of proven effective interventions to mitigate the disease. One sure way of preventing malaria is minimising human-vector contact of which insecticide-treated bed nets (ITNs) are a proven and effective tool. Bed nets are considered the most important means of achieving the 6th malaria related Millennium Development Goal (MDG6). This research sought to determine the social-acceptability of ITNs in

Mazabuka, Zambia by assessing knowledge, attitudes and practices regarding malaria and ITNs. The association between the socio-demographic characteristics and KAPs were investigated. It was also in the interest of this research that the malaria prevalence in the studied area was ascertained. Pre-tested semi-structured questionnaires were administered to 177 household heads to determine their KAPs of malaria and ITNs. Three focus group discussions were conducted to triangulate the study findings including independent researcher observations. Furthermore, available data for malaria diagnosis for 2008 to 2011 were accessed at Cheeba Rural Health Centre. The mean scores (SD) of respondents' knowledge, attitude and practice were 68.08% (26.64), 71.8% (34.59) and 36.92% (32.2) respectively. High levels of knowledge of malaria and ITNs including tertiary education as well as challenges faced were found to be predictors of consistent bed net use [OR 2.957, (95% CI = 1.436-6.091, p value = 0.003)]; [OR 18.519, (95% CI = 1.704-200.000, p value = 0.012)] and [OR 18.329, (95% CI = 2.537-12.226, p value = 0.0001)] respectively. Moreover, knowledge of malaria and ITNs was shown to be significantly associated with high income [OR 8.193 (95% CI = 1.003-66.953, p value = 0.021)]. Despite the high knowledge levels, only less than half of the respondents were consistent net users and the number of nets found hanging was even lower (37.9%). This is also in agreement with the low mean practice score (36.92%).

The conclusion drawn from this study therefore is that ITNs were socially accepted by the studied community. However in as much as net ownership rates were very high among households, utilisation lags behind, hence negating the expected protective benefits of ITNs. Hence, improvement in consistency of ITN utilisation is eminent if maximum benefits are to be realised.

Abstrak tesis yang dikemukakan Senat Universiti Putra Malaysia sebagai memenuhi keperluan untuk ijazah Master Sains

**PREVALENS MALARIA DAN PENERIMAAN SOSIAL TERHADAP
KELAMBU BERUBAT SEBAGAI PENCEGAHAN MALARIA DI
MAZABUKA, ZAMBIA**

Oleh

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Malaria merupakan cabaran kesihatan awam yang utama pada hari ini. Walaupun pencegahan sediaada dilakukan, namun ia kekal mengakibatkan kematian dan morbiditi yang signifikan. Setiap tahun, malaria dikesan di kalangan 300-500 juta kes di seluruh dunia. Ia juga mengakibatkan kematian lebih dari 1 juta individu yang kebanyakannya merupakan kanak-kanak berusia kurang 5 tahun di benua Afrika. Zambia merekodkan sejumlah 4 juta kes setahun dengan 6,400 kematian serta kadar fataliti kes akibat malaria lebih kurang 40 per 1,000 sekaligus menjadikan negara berkenaan sebagai rantau yang mempunyai kadar transmisi malaria yang tinggi. Indeks berkenaan didokumentasikan meskipun usaha mencegah dan mengawal malaria melalui kaedah yang terbukti berkesan telah dilakukan. Salah satu kaedah mencegah malaria ialah mengurangkan kontak langsung antara manusia dan nyamuk iaitu melalui penggunaan kelambu berubat (ITNs-insecticide treated bed nets) yang telah terbukti berkesan. Kelambu sebelum ini telah dikenalpasti merupakan kaedah terbukti untuk mencapai matlamat Pembangunan Alaf 6. Penyelidikan ini bertujuan

menentukan penerimaan sosial terhadap ITNs di Mazabuka Zambia melalui pengukuran tahap pengetahuan, sikap dan amalan (KAP) terhadap malaria dan penggunaan ITNs. Hubungan antara KAP berkenaan dengan ciri-ciri sosio-demografi juga diselidik. Prevalen malaria di kawasan kajian juga dikenalpasti. Kaedah penyelidikan adalah dengan menggunakan soal-selidik yang telah di pra-uji serta divalidasikan melalui kaedah piawai di kalangan 177 responden. Tiga perbincangan dalam kumpulan (FGD) dilaksanakan untuk mengenalpasti ciri-ciri lain yang perlu dimasukkan dalam soal-selidik termasuk cerapan bebas (independen) penyelidik. Data-data mengenai pengesahan diagnosis malaria dia diperolehi dari Pusat Kesihatan Cheeba. Skor mean (SD) terhadap KAP menunjukkan bahawa terdapat 68.08% (26.64), 71.8% (34.59) dan 36.92% (32.2). Tahap pengetahuan malaria yang tinggi pengetahuan malaria dan ITNs termasuk pendidikan tertiar serta cabaran yang dihadapi telah ditemui untuk menjadi peramal yang konsisten bagi penggunaan kelambu [OR 2.957 (95% CI = 1.436-6.091, nilai $p = 0.003$); [OR 18.519,(95% CI = 1.704-200.000, nilai $p = 0.012$)] dan [OR 18.329 (95% CI = 2.537-12.226, nilai $p = 0.0001$)]. Data dari kajian ini juga menunjukkan KAP dan ITNs adalah signifikan di kalangan kelompok berpendapatan tinggi. Walaubagaimana pun, hanya terdapat 37.9% (ataupun kurang) sahaja dikalangan responden menggunakan kelambu secara berterusan. Ini adalah bertepatan dengan peratusan rendah mean skor (36.92%). Oleh itu fokus untuk meningkatkan penggunaan ITN secara konsisten perlu diberi keutamaan. Oleh itu kesimpulan yang diperolehi dari kajian ini ITN merupakan kaedah yang diterima pakai masyarakat dikalangan populasi individu yang dikaji. Bagaimanapun melihat kepada kadar pemilikan kelambu yang tinggi dikalangan isi rumah penggunaanya agak jauh ketinggalan menyebabkan kesan negatif terhadap faedah sebenar yang diharapkan dari ITNs. Oleh itu,

penambahbaikan melalui penggunaan ITN secara konsisten merupakan satu keutamaan yang perlu didahulukan sekiranya manfaat maksima ITNs hendak dicapai.



DEDICATION

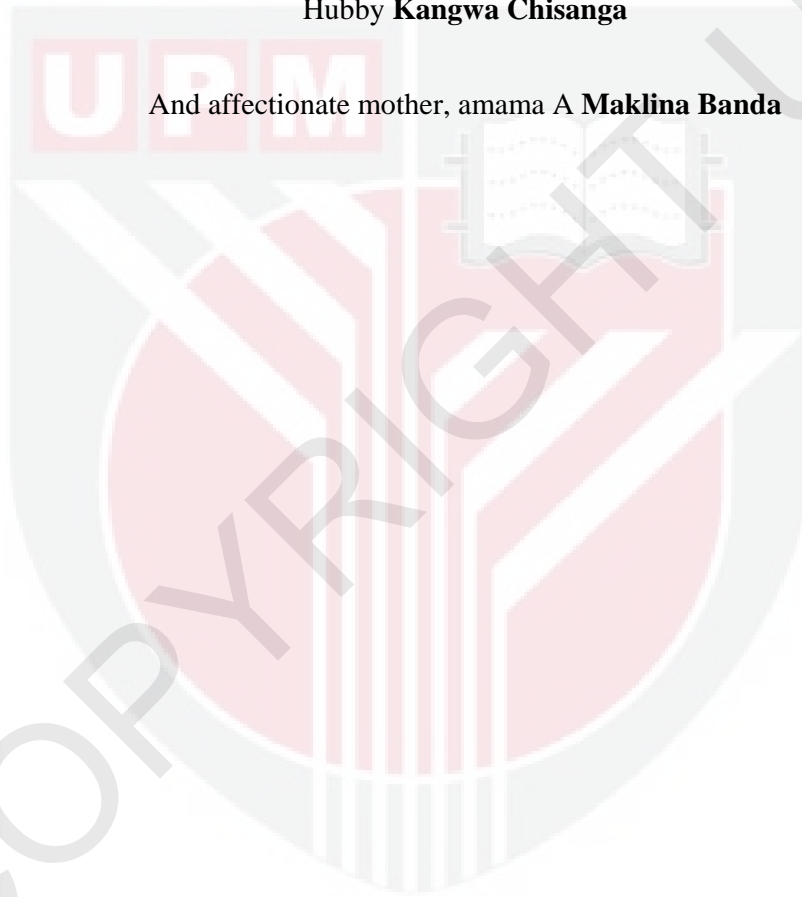
Dedicated to

Palo Zoe Chisanga and Lubuto Ziv Chisanga.

(Hey sweets, you are my biggest fans).

Hubby **Kangwa Chisanga**

And affectionate mother, amama A **Maklina Banda**



ACKNOWLEDGEMENTS

Firstly and fore mostly, I give glory to Jehovah God on Highest, for His mercies endureth forever and ever Amen! I acknowledge GREAT I AM that it pleased you that this journey comes to an end this way. My supervisor; Assoc. Prof. Dr. Malina Osman, words cannot express my gratitude for her tireless support, guidance, expertise, availability, time and encouragement to forge on through and through my entire research journey. Incalculable gratitude is also conveyed to my Co-supervisor Dr. Rukman Awang Hamat for his time and unwavering support. I am grateful. My acknowledgements would never suffice if do not say thanks to my two lovely children **Palo** and **Lubuto** for the encouragement given to me and their sacrifice to live without mother in our home by the grace of God during my period of study. Thanks Little sweethearts, this is for you and because of you. To my husband Bonaventure, thank you for giving me reason to step forward and cross the finishing line. My wonderful brothers and sisters; you are awesome. To Gideon Dimbani for all his sacrifice and support, thanks a million. It would definitely not be wise for me to forget the Cheeba community particularly Headman Soda for welcoming the study to be conducted in his village and more so his support. My dear Salha, I could never thank you enough. To a huge extent, I am indebted to the Ministry of Health Zambia for according me opportunity to further my studies and also allowing me to conduct research in Zambia. Mazabuka District Health Office and Cheeba clinic staff, thank you. Last but not least, I would like to thank the Ministry of Higher Education Malaysia for the Scholarship that enabled me to pursue this study and has supported me for the past two years. I will always appreciate.

I certify that a Thesis Examination Committee has met on 7 January 2013 to conduct the final examination of Banda Jane on her thesis entitled "Malaria prevalence and socio-acceptability of insecticide-treated bed nets for malaria prevention in Mazabuka, Zambia" in accordance with the Universities and University Colleges Act 1971 and the Constitution of the Universiti Putra Malaysia [P.U.(A) 106] 15 March 1998. The Committee recommends that the student be awarded the Master of Science.

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DECLARATION

I declare that the thesis is my original work except for quotations and citations which have been duly acknowledged. I also declare that it has not been previously, and is not concurrently, submitted for any other degree at Univeristi Putra Malaysia or at any other Institution.

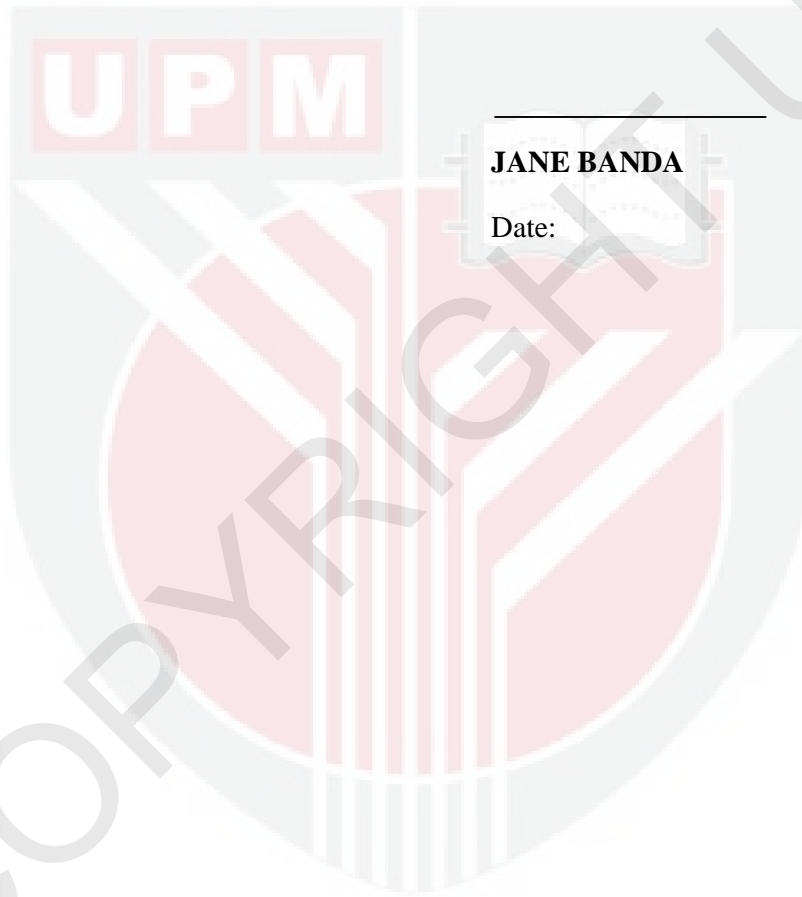


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