LETTER-TO-THE-EDITOR

Acquisition of Bed-nets, Sleeping-habits, and Control of Malaria in the Gambia: Sociocultural Dimension

Sir,

Randomized controlled trials in African settings with different intensities of malaria-transmission have shown that insecticide-treated nets are efficacious in reducing postneonatal mortality from all causes (1,2). The Gambian National Impregnated Bed-net Programme achieved an 83% net-treatment rate, and overall mortality of children aged less than five years fell by 25% a decade ago (1). However, severe malaria still remains a leading cause of mortality and morbidity among young Gambian children (3,4). Much has been reported on the coverage of insecticide-treated nets under trial situation, but the proportion of households that are properly deploying insecticide-treated nets in real life is not currently known.

We interviewed 69 parents and caregivers of children with cerebral malaria presenting to the paediatric ward of Bansang Hospital in the Gambia, during June-December 2001, using structured questionnaires. Caregivers who consented to the interview were asked about ownership of mosquito bed-net, its use, and household sleeping-habits. Questions were specifically asked about where children and adults usually slept in the first six hours (20.00 hours to 02.00 hours) of the night.

Data from these structured interviews were coded, entered, and verified with double-entry by two data-entry clerks into ENTER using the Epi Info software (version 6.04) (Centers for Disease Control and Prevention/World Health Organization, 2000). Data were analyzed using the Stata software (version 8) (Stata Corporation, Texas, USA).

All the caregivers understood the usefulness of bed-nets, and 94% of them had at least a net hanging in their rooms and were prepared to use insecticide-impregnated bed- and window-nets. Fifty-three (76.8%) caregivers and their family members usually slept outdoor for most of the night (20.00-02.00 hours). The remaining 16 (23.2%) caregivers slept indoor.

When the relationship between sleeping-habits and malaria-related knowledge, attitude, and practice (KAP) was examined, it was observed that those who slept outdoor (frontage) in the first six hours of the night were more likely to fail to use bed- and window-impregnated nets and were more likely to be ignorant of the cause of illness (Table) but there was no significant difference in starting treatment at home. Although there was no significant association between sleeping-habits and income of caregivers, those who slept outside were less likely to have windows on their wall compared to those who slept indoor. This became insignificant when the educational status of caregivers was controlled for (Table).

Although the National Impregnated Bed-Net Programme achieved high rates of net-treatment and coverage a decade ago, the continued use of this important malaria-control measure faces some economic and sociocultural challenges. Human behaviour, such as sleeping-habits, outdoor activities after dusk, and type of housing, are of great significance as determinants of transmission of malaria and its control and should be considered in every community health programme.

Sleeping-habit as a proxy for poor socioeconomic status has not been explored before in this region. This study was conducted during the rainy season when rates of mosquito bites were high and when the zone was relatively cold. It was, therefore, unlikely that outdoor-sleepers did so because of hot climatic condition. It rather reflected a poor or unbearable situation inside their round huts. The public-health importance of the choice of this proxy measure is in the vector-control programme. The bed-net ownership campaign is meaningless if the first six hours of the night are spent outdoor.
Supplemental childhood feeding with RUTF

There are no cheap 'magic bullet' solutions for the problems highlighted above. An in-depth review of education of both health-service users and public-sector providers is, thus, urgently needed.

REFERENCES


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