

KNOWLEDGE ON PREVENTION OF MOSQUITO GROWTH AMONG ADULTS

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ABSTRACT

Mosquito borne diseases create an important cause of morbidity and mortality, especially in India. Assessment on prevention of mosquito growth among adults is imperative for planning community-based interventions. Therefore, the study was carried out to assess the knowledge on prevention of mosquito growth among adults in Kamakshinagar, Nellore. A community based cross sectional study was conducted among 50 adults selected by convenience sampling method in a rural area in Nellore. Data were collected using pretested structured questionnaire after taking written informed consent. Data was analyzed using SPSS version 17. Chi-square was used to find an association and $P < 0.05$ was considered significant. Results show that among 50 adults, 8 (16%) had 'A' grade, 21 (42%) had 'B+' grade, and 18 (36%) had 'B' grade, and 3(6%) had "C" grade. The study findings concluded that majority of the adults had "B+" (71-80%) grade knowledge. Still mosquito breeding was occurring more in rural areas, which stresses pioneering mass media techniques to express health messages to the community for prevention of mosquito growth among adults.

KEY WORDS : Mosquito, Prevention of Mosquito growth, Malaria

INTRODUCTION

Mosquito borne ailments of public health significance are complex, and their incidence depends on the interaction of various biological, ecological, socioeconomic factors. Malaria constitutes an important disease with annual occurrence of 300-500 million cases and 1.1-2.7 million deaths globally (Boratne *et al.*, 2010). An estimated 96 million dengue infections were reported globally in 2010. Asia bears 70% (47-94 million infections) of this case load whereas India only contributed 34% (24-44 million infections) of the global total (Bhatt *et al.*, 2013).

Other mosquito borne diseases like chikungunya, lymphatic filariasis, and Japanese encephalitis are also vital causes of morbidity and mortality. Looking at the seriousness of the situation, World Health Organization declared "vector borne diseases" as the theme for the year 2014 on World Health Day to

focus the importance of measures for prevention and community-based action. Primary prevention of transmission of mosquito borne diseases is critical to decrease the burden of diseases, especially in control of dengue, as it is the only available plan.

Knowledge and practices of community about prevention of mosquito borne diseases are an insignificant aspect to assess the necessity of community-based interventions. In the same context, elimination of the breeding sites from the human habitat is the most effective way to manage mosquito borne diseases, hence social and behavioral interventions at household level are thought to be the most feasible measures for these diseases (Gubler, 1990 and Leontsini, 1993). The use of personal protective measures (PPMs) such as mats, bednets, screening, repellents, liquid vaporizers, mosquito coils, etc., have been advocated as an active tool in control of mosquito borne diseases (Boratne, 2010). Keeping in view the

same, this study was planned with the objective to assess the knowledge on prevention of mosquito growth among adults.

Ethical clearance was obtained from institutional Ethics Committee. A community-based cross-sectional study was conducted in a rural area, Kamakshinagar, Nellore. The convenience sampling was used. Sample size was calculated on the basis of results of a previous study where awareness among study subjects about mosquito borne diseases was 69% (Snehlata, 2003). Taking 10% allowable error with 95% confidence interval, sample size came out to be 174. However, the study sample included a total of 50 adults from the rural area, selected through convenience sampling method. Data collection was done by survey method. The questionnaire consisted of items on socio-economic and demographic profile of study subjects, knowledge about mosquito borne diseases and their preventive practices. Direct observation of the house and surroundings for the presence of potential mosquito breeding sites and control measures was done. Data regarding the use of personal protective measures like bednets, coils, liquid vaporizers, etc., was also assessed. Data analysis was done using Statistical package for the social sciences software (SPSS Inc Version 17.0, 2008. Chicago, USA). Chi-square test was used for finding an association between level of knowledge and selected socio demographic variables $P < 0.05$ was considered significant.

RESULTS

The results show that, 25(50%) were males and 25(50%) were females. In relation to age, 31(62%) subjects were between 30-35 years, 16(32%) were between 36-40 years, 2(4%) were between 41-45 years and 1(2%) was between 46-50 years, 5(10%) were illiterates, 27(54%) were studied primary education, 10(20%) studied secondary education, and 8(16%) studied under graduation. 34 (68%) have open drainage system and 16(32%) have closed drainage system. Regarding family income 8(16%) earnedRs.<5000/-, 30(60%) earned Rs.5001-7000/-, 4(8%) earned Rs.7001-9000/- and 8(16%) earnedRs. above 9001/-.

Table 1 Assessed the knowledge on prevention of mosquito growth among 50 adults, 8 (16%) had 'A' grade, 21 (42%) had 'B+' grade, and 18 (36%) had 'B' grade, and 3 (6%) had 'C' grade.

Table 2 shows the results of mean and standard

Table 1. Frequency and Percentage Distribution of Knowledge on Prevention of Mosquito Growth Among Adults.

(N=50)

Level of knowledge	Frequency (F)	Percentage (%)
A	08	16
B+	21	42
B	18	36
C	3	6
Total	50	100

deviation of 50 adults regarding the knowledge on prevention of mosquito growth. The mean is 15.86 and standard deviation is 1.5

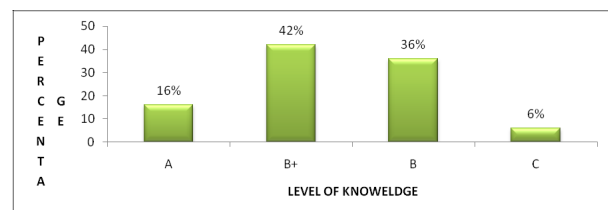


Fig. 1. Percentage distribution of adults based on knowledge.

DISCUSSION

The present study shows that the knowledge on prevention of mosquito growth was significantly associated with education status of the subjects. This is consistent with findings of a study carried out by Sharma *et al.*, where higher educational status was associated with the correct knowledge of spread of malaria by mosquitoes (Sharma *et al.*, 2007) knowledge on prevention of mosquito growth did not significantly differ by gender.

Table 2. Mean and Standard Deviation to Assess the Knowledge on Prevention of Mosquito Growth Among Adults in Kamakshi Nagar, Nellore.

Criteria	Mean	Standard Deviation
Adults	15.86	1.5

The higher prevalence of malaria in UP may be a reason for more awareness of its symptoms among study subjects. Most common source of information about prevention of mosquito growth was television as shown by other studies also from Karachi and Kuala Kangsar District (Itrat *et al.*, 2008). Mass media was an important means of carrying health

messages to the public even among the rural population, thus research and development of educational strategies designed to improve behavior and practices of effective control measures should be encouraged. There is a need to utilize these important methods of mass communication to raise the awareness about prevention of mosquito growth.

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