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Malarial Perspective of the Kalita Community of Dhemaji and Dibrugarh District, Assam

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Abstract
Background: *Malaria is one of the major public health problems in the Northeast India. Ignorance, low awareness and not prioritizing health are some of the issues in early identification and prompt treatment of diseases. Studies focusing on knowledge, attitude and practices showed that direct interaction with community plays an important role in the occurrence of malaria problem.*
Aims and Objective: *To assess the knowledge, attitude and awareness of malaria among the Kalita community.*
Study Design: *A community based descriptive cross sectional study method was used to assess knowledge, attitude of the community towards malaria.*
Setting: *The study was carried out in two districts i.e. Dibrugarh and Dhemaji of Assam.*
Materials and Methods: *The study includes 92 individuals, using scheduled questionnaire in two selected districts in Assam. The head of the family from each household was interviewed by using structured questionnaire.*
Statistical Analysis: *Data entered into computer software using Microsoft excel, Epi Info, programme for statistical analysis.*
Results and Conclusion: *In the studied population, 53% are males and 47% are females. 83% reported that mosquito is the mode of transmission. About 3/4th were aware of the mosquito breeding sites and 49% said that mosquitoes bite during evening. 46% reported that drinking river/dirty water cause malaria while only 20% disclosed that not using mosquito nets can be one of the causing factors. 69% knew about the signs and symptoms which included fever and headache respectively. There is no clear information about the cause, mode of transmission and signs and symptoms of malaria. Therefore, community awareness should be emphasized with health education programs for prevention and control of the disease.*
Key Words: *Malaria, Knowledge, Attitude, Dhemaji, Dibrugarh.*

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I. Introduction

Malaria is the most widespread and serious parasitic disease in the world. Although it is a preventable and treatable disease, it poses as a major public health problem in India. As per the WHO estimates 207 million cases of malaria occurred globally in 2012 (uncertain range 135-287 million) and 6,27,000 deaths (uncertain range 4,73,000- 7,89,000); about 80 per cent of these cases were found in African countries and 13 per cent in South East Asia Region (SEAR) countries [1]. Malaria is one of the major disease burdens among population of North-East India. Although malaria distribution is mostly determined by the climatic and environmental factors which affect mosquito and malaria parasite reproduction and proliferation at a given time, malaria is also influenced by various factors. Poor socio-economic conditions, knowledge and perception about malaria and antimalarial policies have contributed to widespread malaria throughout the region[2]. Knowledge is the important component in health seeking behaviour. Ignorance, low awareness and not prioritizing health are some of the issues in early identification and prompt treatment of diseases. Studies focusing on knowledge, attitude and practices (KAP) showed that direct interaction with community plays an important role in circumventing malaria problem[3,4].

This study was undertaken to assess the knowledge, attitude, behaviour and practices about malaria, symptoms of malaria, its transmission etc, among the Kalita community of Dibrugarh and Dhemaji District, Assam to understand the issues often overlooked in malaria control efforts. The study can be an important step towards developing strategies, aimed at controlling malaria.

II. Materials and Methods

The study was carried out in two districts i.e. Dibrugarh and Dhemaji of Assam. Dibrugarh stretch along the Brahmaputra that hold network of tributaries and wetlands through east to west as well as a large tract of tropical rain forests. Dhemaji, comes to the north of Dibrugarh, is one of the most remote districts of India, situated in the foothills of the lower Himalayas. The study was a community based cross-sectional study. A structured questionnaire was used for interview. The questionnaire was administered to 92 randomly selected individuals who belong to the Kalita community. The head of the family, from each household was interviewed per household. In their absence, a responsible adult above 18 years, chosen by the family was interviewed. Data collected was subsequently entered in to computer software using Microsoft excel, Epi Info, for statistical analysis.

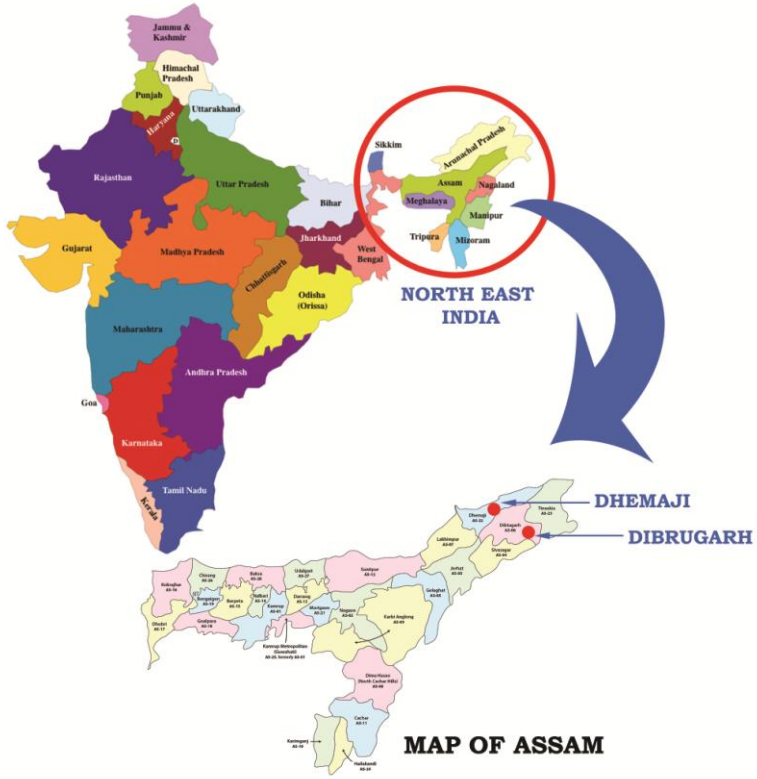

Fig: 1 Map of India showing North East India encircling Dhemaji and Dibrugarh district

III. Results

A total of 92 individuals participated in the study of Kalita community of Dhemaji and Dibrugarh district, Assam. Of these, 49 were males while 43 were females with age ranging from 18 to 60+ years (Fig 2.A)

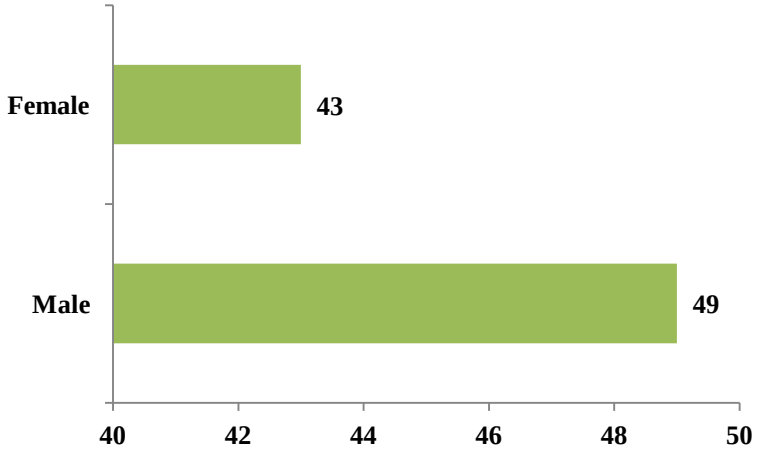

Fig2.A: Sex population of the Kalita Community

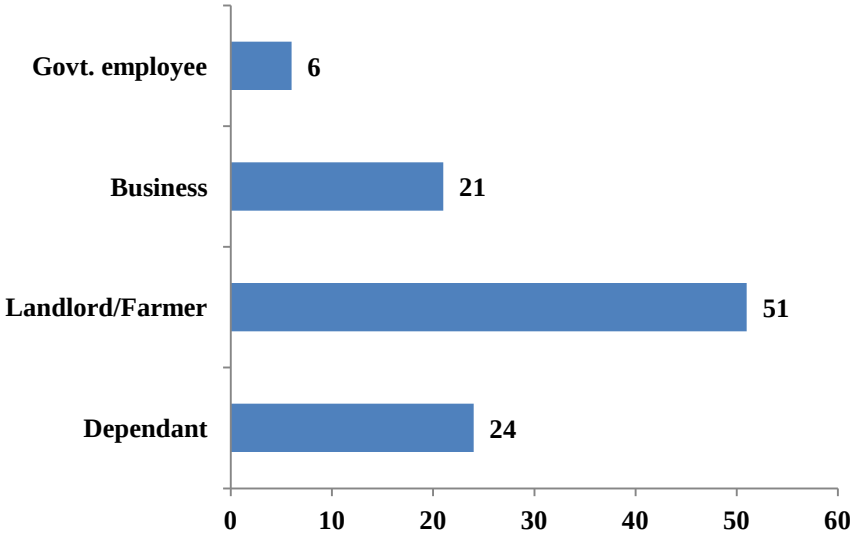

Fig2.B: Occupational status of the Kalita Community

Fig2.B shows the socio-demographic characteristics of the study participants. 51 were farmers (55.43%) followed by the dependant 24(26%).

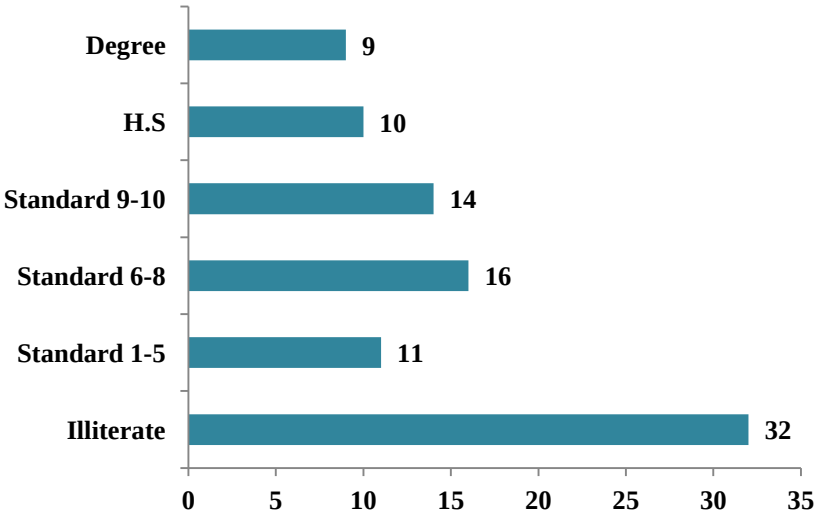

Fig 2.C: Educational status of the Kalita Community

More than 1/3rd (34.78%) of the respondents were illiterate.

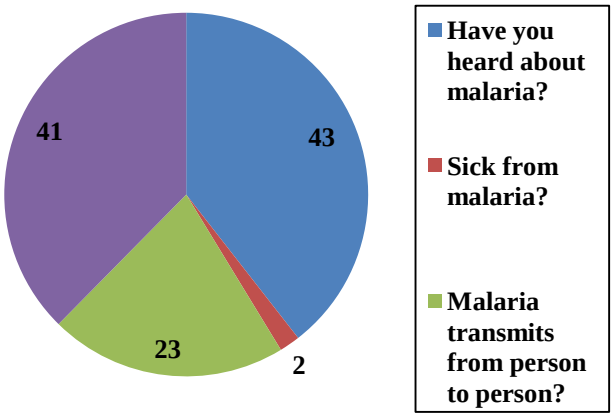

Fig 3.A: Knowledge about cause and mode of transmission of malaria

Fig3.A depicts variables used to collect community awareness about public health importance, cause and mode of transmission of malaria. Among the total of 92 participants, 43(46.7%) responded that they have heard about malaria. Among the respondents who heard about malaria, 23 (25%) individuals said that malaria can be transmitted from person to person. Of these, 42 (45.65%) mentioned that the infection is transmitted through mosquito bites as shown in Fig 3.B

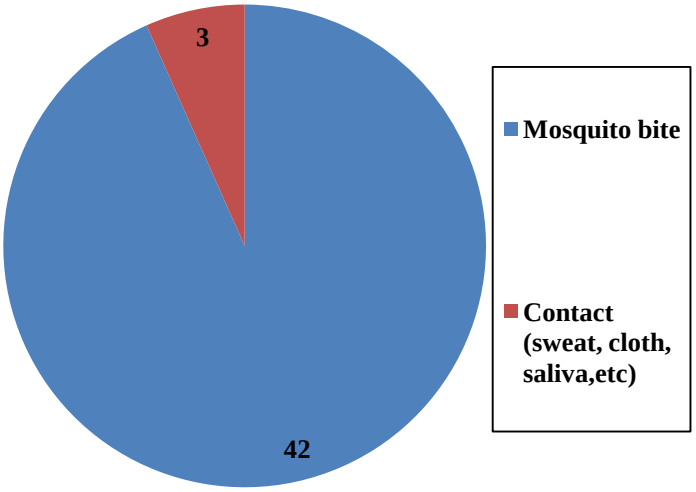

Fig 3.B: Knowledge about cause and mode of transmission of malaria

More than half of the respondents had no information whether malaria can be transmitted from person to person. Age or educational status was not significantly associated with the level of basic awareness (how malaria is caused, transmitted or prevented). Few of them have misconceptions including body contacts (like sweat, sharing cloth, saliva, vomit), breathing or through sharing meals with a malaria patient were also suggested as ways of malaria transmission. 40 (43.4%) respondents reported that malaria breeding site is in stagnant water followed by soil, dirty water i.e. 10(10.86%) as shown in Fig3.C.

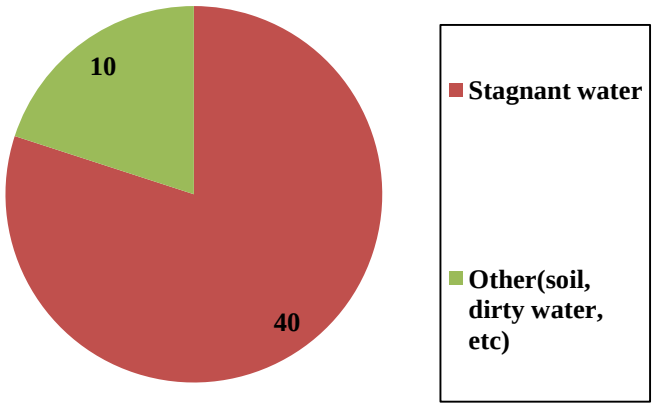

Fig 3.C: Knowledge among the studied population on mosquito breeding site

20(21.7%) of the participants aware that mosquito biting time is in the evening which is followed by anytime i.e.10 (10.86%).

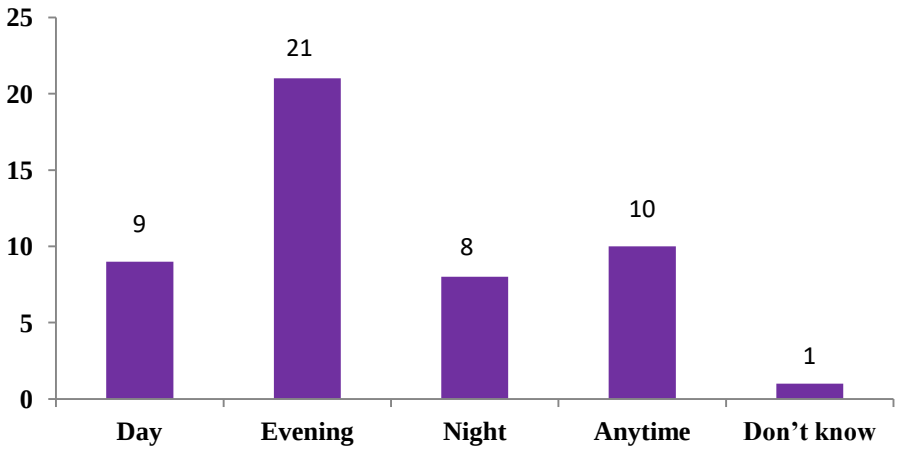

Fig 3.D: Knowledge about mosquito biting time

Only 37 (40.2%) of the study participants mentioned that mosquito associated the disease with drinking dirty water. Table 3 presents communities awareness about signs/ symptoms of malaria in the study areas. More than 1/3rd of the study participants reported that fever is one of the most common symptoms of malaria while others mentioned symptoms like headache, loss of appetite, vomiting, weakness, body pain.

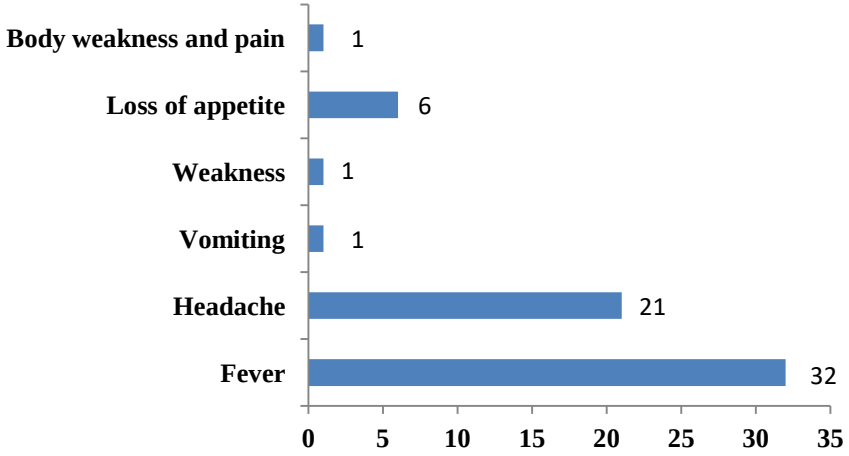

Fig 4.A: Knowledge among the studied population on sign and symptoms of malaria

Only one-third have their knowledge from the sources of doctor. 26 (28.26%) mentioned that malaria could be prevented by keeping surrounding clean followed by clean water i.e. 15(16.03%) as shown in Fig 4.B

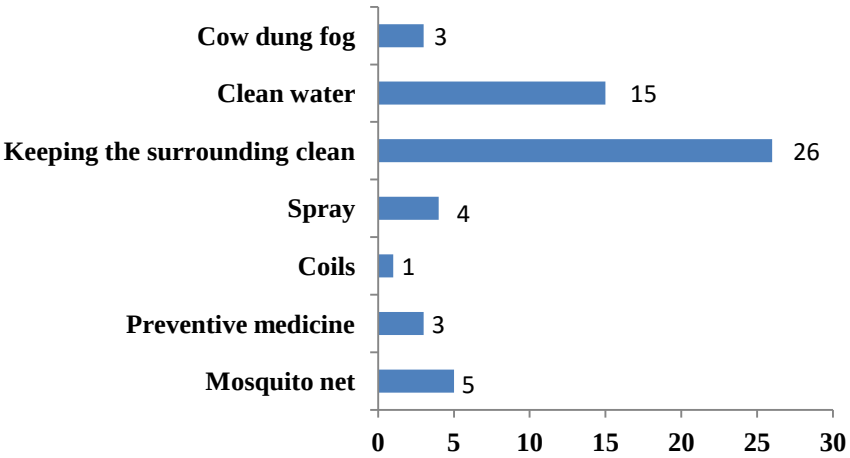

Fig 4.B: Awareness among the studied population on different methods of malaria prevention

IV. Discussion

Community-based cross-sectional study on knowledge, attitude and practice towards the cause, transmission, prevention of the disease was undertaken in Kalita community of Dhemaji and Dibrugarh district, Assam. The study indicated that the majority of people living in the study areas had little or no information regarding the cause, mode of transmission and preventive methods of malaria. Very low proportion of the participants was aware that malaria could be transmitted from person-to-person through mosquito bites. The study also states that less than half of respondents heard about malaria. On the other hand Majority (84.7%) of the respondents heard about the malaria disease[5], other study reported that The questionnaire survey results showed that all respondents had ever heard of malaria and more than 90% of them believed that malaria was one of the most important health problems of the community affecting both sex and all age groups, which is consistent with previous reports[6, 7]. From the present study 23 (25%) individuals said that malaria can be transmitted from person to person. Of these, 42 (45.65%) mentioned that the infection is transmitted through mosquito bites. Very low proportion of the participants was aware that malaria could be transmitted from person-to-person through mosquito bites. Similar studies said that though mosquito bite was implicated as a cause of malaria, the aetiologic agent of malaria was not suggested as people usually incriminate mosquitoes as the causative agents of malaria[8,9,10]. Transmission of malaria by mosquito bite was known to 69.8% of the adolescents which was lower as compared to Mpumalanga and Guyana studies[11,12] . However, the study conducted in Surat revealed that only 43.2% of the people knew that malaria is spread through mosquito bite with 37% harboring misconceptions such as spread through flies[13]. However, the study conducted at Nigeria reported that 77% of the respondents were aware that malaria caused by mosquito bite[14]. Other stated KAP surveys done in Butajira Ethiopia and three towns of Western Ethiopia revealed that 48% and 43.7% have knowledge about the transmission of malaria, respectively[15,16]. Present reflects that 40 (43.4%) respondents reported that malaria breeding site is in stagnant water followed by soil; dirty water i.e. 10(10.86%). Others reported that more than half of our study participants mentioned mosquitoes' habit of biting during sleeping time, breeding in stagnant water as well as resting at edges of streams. However, in rural parts of central Ethiopia, night biting habit of mosquitoes and breeding in stagnant water were reported by 42.6% and 36.2% of the respondents, respectively[6]. This correct perception among respondents of the present study is encouraging to take appropriate preventive measures and proper use of mosquito nets. In this paper found that more than 1/3rd of the study participants reported that fever is one of the most common symptoms of malaria while others mentioned symptoms like headache, loss of appetite, vomiting, weakness, body pain. Similarly, Fifty one percent of the adolescents had knowledge of symptoms of malaria as fever. None of the adolescents were aware about the new strategy of insecticide treated bed nets. The information about breeding habits of mosquitoes to most of the adolescents were dirty stagnant water 57.7%, Green plants and cow dung 42.3%, containers and tires 31.1% and clean water 20.7%. Responses on 57.7% dirty water as a cause of malaria transmission was high as compared to other studies[17,18] while 78.1% of respondents indicated that stagnant water bodies serving as potential mosquito breeding sites. Previous studies in Ethiopia have also confirmed similar findings[19,20]. Only one-third have their knowledge from the sources of doctor. 26 (28.26%) mentioned that malaria could be prevented by keeping surrounding clean followed by clean water i.e. 15(16.03%) (present study). Similar studies states that Most of respondents received information on malaria prevention through multiple sources most commonly television and radio (51.7%) followed by newspaper and magazines (36.3%), parents (26.7%), teachers (20.7%) and friends (18.1%)[21]. The most common sources of treatment mentioned by respondents in this study were health facilities.19 Most of the respondents knew about malaria related information through mass media and friends/family members. Findings were consistent with a study in Ethiopia[22]. The most common source of information about malaria was from relatives. Radio was ranked third after medical personnel as a major information source[22].

V. Conclusion

Misconceptions about malaria transmission and its cause still exist. Knowledge about preventive measures does not necessarily translate into improvement in practices. The level of knowledge in the community was found to be ranked as low to average. These findings suggest a need for a health education program aimed at the local community and also there is a need to strengthen the primary health care.

Conflicts of Interest

All authors have none to declare.

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