Research Paper

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# "Knowledge, Attitude and Practices of People Towards Malaria In Squatter's Colony, Malvani, Malad, Mumbai"

Healthcare

**KEYWORDS :** Knowledge, Attitude, Practices, Malaria, Malvani Slum, Maharashtra.

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## ABSTRACT

*Background:*

*Malaria continues to be one of the final frontiers in public health problems that face the country. To reduce malarial morbidity and mortality, it is imperative to have active community participation which depends on people's knowledge, attitude and practices towards the disease. Objectives:The objective of the study is to assess the levels of knowledge regarding malaria in the squatter's colony of Malvani Slum and to identify attitudes and practices in the prevention of malaria and mosquito bites.Methodology: A cross sectional community based KAP sample survey was carried out. Data Collection: Data was collected by face to face interview by using structured questionnaire. Results: The results show, 39.7% have a low knowledge level and 53.7% obtained an average level and very few have high level of knowledge. With regard to attitude levels, very few respondents have a low and high level, with a large proportion of the respondents, 71.8%, have the average level score for attitude. In the practices category, 83.1% of people have an average level, while 2.2% found a low level score and 14.7% found high level score.Conclusion:Health education program with direct interaction to community should be emphasized in order to improve the knowledge, attitude, and practice regarding malaria and its prevention.*

**Introduction**

Malaria is a major global health problem, with over 40% of the world population, an estimated total of 2,400 million people being exposed to a varying degree of malaria risk in some 101 countries and territories. (Kyawt-Kyawt-Swe & Pearson, 2004) India reports approximately two-thirds of all confirmed malaria cases in the South-East Asia Region, with five states accounting for 60% of these cases.(World Health Organization, 2010) The National Health Policy – 2002(Ministry of Health and Family Welfare, 2002)has set the goals of reduction in mortality on account of malaria by 50% by 2010 and efficient control of morbidity. To achieve these targets it is imperative to have active community participation to control malaria which in turn depends on people's knowledge and attitude towards the disease. In fact human behaviour as a contributing factor has been largely neglected in research on vector borne diseases in part because of the long-standing separation of the behavioural disorder from the physical and biomedical disciplines.

There is around 55% of the urban poor population of Mumbai resides in slums has a high-incidence of vector borne diseases and cases of malaria. (Reddy, Chennamaraju, & Sankar, 2013) (Government of India, 2010)(National Urban Health Mission, 2012-13)Malwani is one of those slums and holding second rank according to area of the slum. When asked about the common illnesses in the area during the community profile study, malaria was the most frequently described response. Therefore, the present study was undertaken to assess the knowledge, attitude and practice of the population in Malwani, Mumbai on malaria and the information from this study would help in planning the policies for malaria control.

Directorate of National Vector Borne Disease Control Programme (NVBDCP) has framed technical guidelines/ policies and provides most of the resources for the programme. Annual Parasite Incidence (API) rate has consistently come down from 2.12 per thousand in 2001 to 1.30 per thousand in 2010 but confirmed deaths due to malaria have been fluctuating during this period between 1707 and 767. (Planning Commission of Government of India, 2011)

Studies pertaining to knowledge, attitude and practices (KAP) showed that direct interaction with community plays an important role in circumventing malaria problem. (Ahorlu, Dunyo, Afari, Koram, & Nkrumah, 1997)(Singh, Singh, Saxena, Sharma, & Kalra, 1998)Studies pertaining to knowledge, attitude and practices (KAP) showed that direct interaction with community plays an important role in circumventing the problem of malaria. Researchers have included direct or indirect measure of people's knowledge of malaria in equations describing the risk of infection and suggest that Health education would offer promise of influencing individuals to adopt better attitude and practices towards preventive measures. (Tyagi, Roy, & Malhotra, 2005)

Being the first of its kind in a desert community is a testimony to the prevalent deep gaps in knowledge about the disease, and its results warrant sincere efforts to link up the malaria control programme with the community participation for protection against this scourge in future(Yadav, Tyagi, & Ramnath, 1999) . These studies have reported diverse findings. It was observed that the knowledge about clinical features, mechanism of spread and prevention measures was less among residents of south India compared to that of other parts of the country, after adjusting for age, sex and educational status. This may be attributed to low prevalence of the disease in southern India. It also has been observed in our study that tribal population had poor knowledge status compared to other respondents in almost all aspects of the disease not withstanding their geographical location and educational status. (Sharma, Bhasin, & Chaturvedi, 2007)

**Methods:**

The approximate population of the squatter's colony is 8500 to 9000 as told by the community health volunteers of the urban health centre in that area. In the squatter's colony majority of the population is Commercial Sex Workers. Squatter's colony is a part of the Malwani slum in Malad (west) of Mumbai and the major public health problems are the very poor water drainage and sanitary system which leads to the dirty surroundings and more number of vector borne and other communicable diseases.

Simple Random Sampling was planned but it was not possible because of unavailability of list or records of the households in

the squatter's colony. So the sample population was selected by systematic random sampling. Every 7th household was selected for the interview. It was done by the lane-wise manually counting of the households. The study approached 152 households as planned and out of them 136 had participated in the study. Structured Questionnaires were designed, pre-tested and standardized, and were self or researcher-administered to the heads of selected households (or the next most responsible household members in the absence of the head) and other concerned members by face to face interview.

Data was analysed with the help of SPSS software. Frequency tables and cross tables have been used. Graphs also have been included the representation of the data. The purpose of the study was very carefully explained to them and their consents were individually obtained before the questionnaire was administered. Confidentiality about the identity of the participant was maintained.

**Results**

The responses from the head of the householdswere noted using structured questionnaire consisting of mainly socio-demographic profile and questions related to the knowledge, attitude and practices regarding prevention of malaria.

The table 1 indicates the background characteristics of the participants as the majority of the population in the squatter's colony is of Commercial Sex Workers, female percentage is more than males. About half of the samples have their age between 25 to 35years followed by the 24% share of age group of 36 to 45yrs. In terms of the occupation majority of the population about 87% are engaged in the private type of occupation which is based on the different type of private works. Very few means only 1% are in public sector mainly in Brihan Mumbai Municipal Corporation.

Educational status of the sample is quite good, only 14.7% of the sample is illiterate. The housing structure of the squatter's colony is mostly of semi Pakka type and about 29% people have their Pakka house.In the squatters colony majority of the population around 70% using the shared flush toilet and only 30% people have their own flush toilets. In case of the shared flush toilets, there is an availability of one shared toilet complex per 30 households. One toilet complex is present in the community having the 6 male toilets and 6 female toilets.

**Table 1: Background Characteristics of the Participants**

| Characteristics | Freq. (Per)(N = 210) |
|---|---|
| Sex | |
| Male | 56 (41.2) |
| Female | 80 (58.8) |
| Age | |
| 25 – 35 | 65(47.8) |
| 36 – 45 | 33(24.2) |
| 46 – 55 | 18(13.2) |
| 56 – 65 | 20(14.7) |
| Occupation | |
| Public | 2(1.5) |
| Private | 118(86.8) |
| Other | 16(11.8) |
| Educational status | |
| Illiterate | 20(14.7) |
| Primary | 18(13.2) |
| Secondary | 72(52.9) |
| Higher secondary | 15(11.0) |
| Graduation | 11(8.0) |
| Structure of the house | |
| Semipakka | 97(71.3) |
| Pakka | 39(28.7) |
| Toilet facility | |
| Own flush | 41(30.1) |
| Shared flush | 95(69.9) |

Knowledge, Attitude and Practices towards Malaria

**Knowledge**

Themajority correctly understood that malaria is transmitted by mosquitoes. Table 2 shows that 71% of the population knows the correct cause of the malaria, so the knowledge level of the population about the cause is good. This may be due to the educational level of the community as there is more than 86 % of the population resides which is literate.

As per the preventive perspective, communityknowledge of malaria symptoms, such as fever accompaniedby shivering, fever on alternating days, headaches, vomiting and rigors is very important for malarial control.Knowledge of the individual about the different symptoms described above is different for the different symptoms. Identification response was found 100% for fever and feeling cold which are the basic symptoms for malaria. Among other symptoms only headache has been identified by the majority of the respondents and for the rest of the symptoms it was a very low response.

The knowledge level of individuals towards symptoms of malaria is low to average

**Table 2: Knowledge towards Malaria (Causes and Symptoms)**

| Knowledge – Causes of Malaria | | Freq.(Perc.) |
|---|---|---|
| From getting cold | | 6(4.4) |
| From drinking dirty water | | 9(6.6) |
| From another person with malaria | | 25(18.4) |
| From being bitten by mosquito | | 96(70.6) |
| Knowledge – Symptoms of Malaria | | |
| Fever | Yes | 136(100) |
| | No | 0 |
| Feeling cold | Yes | 136(100) |
| | No | 0 |
| Headache | Yes | 89(65.4) |
| | No | 47(34.6) |
| Vomiting | Yes | 2(1.5) |
| | No | 134(98.5) |
| Diarrhea | Yes | 0 |
| | No | 136(100) |
| General body weakness | Yes | 35(25.7) |
| | No | 101(74.3) |
| Loss of appetite | Yes | 8(5.9) |
| | No | 128(94.1) |
| Body pain | Yes | 5(3.7) |
| | No | 131(96.3) |

**Attitude and Practices**

Towards severity perception: Table 3 indicates that majority of the sample that is 81% individuals perceived that malaria is a severe disease and person can die due to its seriousconsequences. So this perception is the predictor of their attitude towards malaria.Towards cleaning the surrounding: 54.4% of the sample saying that they think that cleaning the surrounding will help to prevent the mosquito bite and malarial infection while 45.6% don't think so.

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Removal of standing water (anopheles breeding places): Attitude towards removal of standing water is very low which a breeding place for anopheles mosquito. Only 27.2% of the sample said that they are agree that the removal of standing water will prevent to breed mosquito more.Early diagnosis and prompt treatment and Indoor residual spraying: Above in the two category of attitude table indicates that 66.2% of the sample are seeking the early diagnosis and treatment but in the contrary in case of indoor residual spraying the attitude level is very poor that only 20% think that IRS as an important prevention method to protect from mosquito bite and malaria.Out of All the important practices regarding prevention and control of malaria the mostly followed practices in the squatters colony is use of mosquito coils with its 100% findings and closing windows and doors in the evening which is peak period of the mosquitoes to bite, but it is not sufficient

**Table 3: Attitude towards Malaria**

| Attitude | | Freq. (Perc.) |
|---|---|---|
| Towards severity perception | Yes | 110(80.9) |
| | No | 26(19.1) |
| Towards cleaning the surrounding | Yes | 62(45.6) |
| | No | 74(54.4) |
| Removal of standing water(Anopheles breeding places) | Yes | 37(27.2) |
| | No | 99(72.8) |
| Early diagnosis and prompt treatment | Yes | 90(66.2) |
| | No | 46(33.8) |
| Indoor residual spraying | Yes | 27(19.9) |
| | No | 109(80.1) |
| Practices | | |
| Use of mosquito nets | Yes | 4(2.9) |
| | No | 132(97.1) |
| Use of insecticidal spray | Yes | 16(11.8) |
| | No | 120(88.2) |
| Clean the area around the house | Yes | 124(91.2) |
| | No | 12(8.8) |
| Close windows and doors | Yes | 133(97.8) |
| | No | 3(2.2) |
| Use mosquito coils | Yes | 136(100) |
| | No | 0(0) |
| Apply mosquito repellent to the skin | Yes | 8(5.9) |
| | No | 128(94.1) |
| Allowing insecticidal fogging inside the house | Yes | 103(24.3) |
| | No | 33(75.7) |

The very important practices like use of mosquito nets, indoor residual spraying, allowing the insecticidal fogging inside the house, cleaning the surroundings are followed by a very few population which is need to be addressed.

**KAP Scale scores:**

To assess the final level of knowledge, attitude, and practices we have developed a scale based on how many symptoms, attitude and practices the individual have and set the minimum level of score, average level and maximum level of score. (Table 4) This scale has been developed by the help of KAP study of malaria in Myanmar which is published in South East Asian Journal of Tropical Medicine and Public Health. The changes have been made according to the demand of the community setting.

In the developed scale mean is about the scale only and not describing the mean of the score obtained. Mean is used only to divide the scale equally for the low, average, and high values.So according to these scale ratings the results for the total score for knowledge, attitude and practices have obtained.

**Table 4: KAP Scale scores**

| KAP Scale scores | | Freq.(Perc.) |
|---|---|---|
| Level of knowledge | Low | 54(39.7) |
| | Average | 74(53.7) |
| | High | 8(5.8) |
| Level of attitude | Low | 22(16.2) |
| | Average | 99(71.8) |
| | High | 15(16.9) |
| Level of practices | Low | 3(2.2) |
| | Average | 113(83.1) |
| | High | 20(14.7) |

In the present study 39.7% have a low knowledge level and 53.7% obtained an average level and very few have high level of knowledge. With regard to attitude levels, very few respondents have a low and high level, with a large proportion of the respondents, 71.8%; have the average level score for attitude. In the practices category, 83.1% of people have an average level, while 2.2% found a low level score and 14.7% found high level score.

**Conclusion**

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.Both attitude and practices were found to be ranked as average. In this section the specific practices & attitudes like use of mosquito nets, IRS spraying, standing water management, followed by very little population. Awareness about the breeding sites of anopheles mosquitoes (standing water) and its management should be campaigned. It will improve their attitude towards breeding-place management and to avoid mosquito- bite. We recommend campaigns (IEC programmes) for developing the attitude towards Indoor insecticidal fogging in the community. In conclusion health education program with direct interaction with community should be emphasized in order to improve the knowledge, attitude, and practice regarding malaria and its prevention.

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## REFERENCE

Ahorlu, C. K., Dunyo, S. K., Afari, E. a, Koram, K. a, & Nkrumah, F. K. (1997). Malaria-related beliefs and behaviour in southern Ghana: implications for treatment, prevention and control. Tropical Medicine & International Health : TM & IH, 2(5), 488–499. http://doi.org/10.1111/j.1365-3156.1997.tb00172.x | Government of India. (2010). Annual Report, Ministry of Health and Family Welfare, 2010-2011. Retrieved from http://62.232.224.38/NR/rdonlyres/C5FD5010-0DF2-48D4-B0A7-BF01A9147675/0/AnnualReport2011.pdf | Kyawt-Kyawt-Swe, & Pearson, A. (2004). Knowledge, attitudes and practices with regard to malaria control in an endemic rural area of Myanmar. Southeast Asian Journal of Tropical Medicine and Public Health, 35(1), 53–62. | Ministry of Health and Family Welfare. (2002). NATIONAL HEALTH POLICY - 2002, Government of India. | National Urban Health Mission. (n.d.). National Urban Health Mission, Framework Report, 2012-13, (L), 1–89. | Planning Commission of Government of India. (2011). Report of the Working Group on Communicable Disease Burden for the 12th Five Year Plan (Vol. 3). | Reddy, P. B., Chennamaraju, S., & Sankar, M. S. (2013). Population Management in India a Study Slum People, (2277), 107–109. | Sharma, A. K., Bhasin, S., & Chaturvedi, S. (2007). Predictors of knowledge about malaria in India. Journal of Vector Borne Diseases, 44(3), 189–197. | Singh, N., Singh, M. P., Saxena, A., Sharma, V. P., & Kalra, N. L. (1998). Knowledge, attitude, beliefs and practices (KABP) study related to malaria and intervention strategies in ethnic tribals of Mandla (Madhya Pradesh). Current Science. | Tyagi, P., Roy, A., & Malhotra, M. S. (2005). Knowledge, awareness and practices towards malaria in communities of rural, semi-rural and bordering areas of east Delhi (India). Journal of Vector Borne Diseases, 42(1), 30–35. | World Health Organization. (2010). World Malaria Report. | Yadav, S. P., Tyagi, B. K., & Ramnath, T. (1999). Knowledge, attitude and practice towards malaria in rural communities of the epidemic-prone Thar Desert, Northwestern India. Journal of Communicable Diseases, 31(2), 127–136.