ORIGINAL RESEARCH ARTICLE
pISSN 0976 3325 | eISSN 2229 6816
Open Access Article
www.njcmindia.org
DOI: 10.5455/njcm.20210620051020

Community Perception on Malaria in Urban Area of Tumkur

Vidya KR[1], Lohit K[2], Narasimha BC[3], Swamy RM[4]

[1]Associate Prof., Dept of Community Medicine, Sri Atal Bihari Vajpayee Medical College & Research Institute, Bangalore
[2]Associate Professor, Dept. of Pharmacology, Sri Siddhartha Institute of Medical Sciences and Research Center, T. Begur
[3]Assistant Professor, Department of Community Medicine, Kodagu Institute of Medical Sciences, Madikeri, Kodagu
[4]Professor, Department of Pharmacology, Sri Siddhartha Medical College, Tumkur

ABSTRACT

Background: Malaria is the parasitic disease that affects people around the world with highest rate of morbidity and mortality. There is a need to intensify efforts at grassroots levels to reach the most vulnerable people with advanced health care and technologies

Methodology: A community based cross sectional study was conducted in the urban slum area of Tumkur. All individuals aged more than 20 years of age, permanent residents, who were present on the day of survey were included in the study. Multistage random sampling method used to select participants, semi-structured questionnaire using interview method used to collect data.

Results: A total of 112 families were interviewed during the study. Among respondents 56.3% were females. Majority were in the age group of 20-39 years (50%). Regarding housing condition 67.9% of the houses were pukka while 18.3% of the houses. Majority of participants (76.7%) knew about malaria. Among them 60.5% said malaria is a communicable.

Conclusion: The study revealed that perception about malaria was satisfactory and there was varied perception about causes, spread of disease, and source of infection and prevention of malaria disease.

Key words: Malaria, Perception, Multistage random sampling, Communicable disease

INTRODUCTION

Malaria is the parasitic disease that affects people around the world with highest rate of morbidity and mortality. World malaria report, released on November 2020 suggests an estimated 229 million cases of malaria worldwide in 2019, and 4.09 lakhs death.[1]

South-East Asia Region had documented 69% and 70% less cases as compared to 2010 which is the largest decline among all six WHO Regions. India being highest burden country of the region reduced its reported cases by half as compared with 2017.[2] Even with such decline, prevention and also management of malaria has become complicated due to increased mosquito breeding area of the affected areas, vulnerability of population and emergence of resistance, causing negative impact on the socioeconomic development.[3]

There is a need to intensify efforts at grassroots levels to reach the most vulnerable people with advanced health care and technologies. The major stakeholder in preventing the spread, management and elimination of the malaria is the residents of each region. Knowledge on malaria transmission and its management, such as breeding places, steps to protect from mosquito bites, early diagnosis and management place a vital role in controlling malaria. Hence the current study was conducted to assess

How to cite this article: Vidya KR, Lohit K, Narasimha BC, Swamy RM. Community Perception on Malaria in Urban Area of Tumkur. Natl J Community Med 2021;12(7):180-183. DOI: 10.5455/njcm.20210620051020

Financial Support: None declared **Conflict of Interest:** None declared

Date of Submission: 21-06-2021; **Date of Acceptance**: 12-07-2021; **Date of Publication**: 31-07-2021

Correspondence: Lohit K (Email: Lohitk4u@gmail.com)

perception about malaria among residents of urban area of Tumkur.

METHODOLOGY

A community based descriptive cross-sectional study was conducted in the urban slum area of Tumkur. In order to calculate sample size for this study, In a study done by Mahesh V et al, knowledge component was 78% in rural area of Kolar was considered, expecting similar prevalence and to get 95% confidence level and relative precision of 10%, 112 subjects were included in the study.[4] Study was conducted from July 2018 to December 2018.

All individuals aged more than 20 years of age, permanent residents, who were present on the day of survey were included in the study. Those individuals who were not willing to participate in the study were excluded. Multistage random sampling method used to select participants, there were 3 Anganawadi centres in that slum area. Using lottery method one slum was selected. From the centre of that area, streets were numbered first, and then one street was selected using currency note. In that street by tossing a coin, side of the street was selected. Houses were numbered in that selected side of street. Then the first house was selected using a random number from currency note, and then selected house in that particular street was visited. Interview was done for head of the family, available at the time visit.

Study subject was explained about the purpose of the study, an informed consent was obtained from each individual prior to administering the semi-structured questionnaire using interview method. Ethical clearance was obtained prior to conducting the study from the Institutional Ethical Committee.

Questionnaire had two parts; first one regarding demographic details of the participants and second part was on perception component on malaria, treatment seeking behaviour, bed nets usage. Data collected was entered in Microsoft excel sheet and analysed using statistical package for Social Sciences Software.

RESULTS

A total of 112 families were interviewed during the study. Among respondents 56.3% were females. Majority were in the age group of 20-39 years (50%). Muslim households constituted 53.6% of the total. Most of the participants were literates (91.1%) and majority were involved in skilled profession (40.2%). Majority of participants (58.1%) had Below Poverty Line card Table 1)

Regarding housing condition 67.9% of the houses were pukka while 18.3% of the houses were kuccha and 13.8% were mixed. Only 23 (20.5%) of the houses had adequate ventilation and 53(47.3%) had adequate natural light. Overcrowding was present in 36.3% of the households.

Table 1: Demographic details of study subjects (n=112)

Characteristics	Participants (%)
Age	
20-39 years	56 (50)
40-59 Years	26 (23.2)
>60 years	31 (26.8)
Gender	
Male	49 (43.7)
Female	63 (56.3)
Religion	
Hindu	43 (38.4)
Muslim	60 (53.6)
Others	9 (8)
Education	
Not literate	10 (8.9)
Primary	26 (23.2)
Secondary and above	76 (67.8)
Occupation	
Semi professional	23 (20.5)
Skilled professional	45 (40.2)
Semi skilled profession	32 (28.5)
Unskilled & others	12 (10.8)
Socio- economic status	
BPL	65 (58.1)
APL	38 (33.9)
No ration card	4 (3.5)
Missing	5 (4.5)

Table 2: Knowledge about Malaria (n=86)

Characteristics	Participants (%)
Know about malaria	
Yes	86 (76.7)
No	26 (23.3)
Malaria communicable	
Yes	52 (60.5)
No	34 (39.5)
Malaria curable	
Yes	76 (88.3)
No	10 (11.7)
Symptoms	
Fever with chills	36 (41.9)
Other symptoms	26 (30.2)
More than one symptoms	24 (27.9)
Malaria transmission	
Mosquito bite	46 (53.5)
Other sources	23 (26.7)
More than one source	17 (19.8)

Majority of participants (76.7%) knew about malaria. Among them 60.5% said malaria is a communicable disease. Most of them (53.5%) responded as it spreads through mosquito bite. Fever with chills was the common answer for symptom in malaria. Majority of participants (88.3%) knew that malaria is curable; Medicines are available for its treatment.

Perception regarding vector, most of the participants (52.3%) reported mosquito bite during night time spreads malaria and 65.11% answered clean water as the breeding place of mosquito while 52.3% responded as dirty water. Regarding Mosquito control measures, majority (84.8%) responded that personal protective measure like full sleeve cloths helps to prevent mosquito bite followed by filling up water

Table 3: Perception on Malaria vector (n=86)

Characteristics	Participants (%)
Time of Mosquito bite	
Night	45 (52.3)
Other time	41 (47.7)
Breading place (multiple answers)	
Clean water	56 (65.11)
Dirty water	45 (52.3)
Garbage	23 (26.7)
Don't know	10 (11.6)
Mosquitoes control (Multiple answers)	
Filling water bodies	67 (77.9)
Personal protective measures	73 (84.8)
Repellents	45 (52.3)
Bed net use	56 (65.11)
Mosquitoes rest (Multiple answers)	
Indoor	45 (52.3)
Outdoor	31 (36.1)
Dark places	45 (52.3)

Table4: Source of information on Malaria

Source of Information	Participants (%)
Doctor	46 (41.1)
Friends	23 (20.5)
Mass media	25 (22.3)
Health worker	10 (8.9)
More than one source	8 (7.2)

bodies (77.9%) to reduce mosquito breeding places. Most of them reported as mosquito rest in dark places. (Table 3) The information regarding malaria and its spread was received from doctors, mass media and friends. (Table 4)

DISCUSSION

The present study was conducted in urban area to perception about the cause, prevention and treatment of malaria and their bearing on the control of the disease. Study population had good knowledge about malaria and its symptoms as the disease prevalence is high in this area.

It was observed that majority (50.0 %.) were in age group 20 to 39yrs, belong to Muslim religion Most of them were females and literates, had BPL card. Similar findings were seen in study done by Mahesh V et al in kolar area.[4]

In the present study most of the houses were pukka. Only 20.5% of the houses had adequate ventilation and 47.3% had adequate natural light. Overcrowding was present in 36.3% of the households. But in a study done by Muralidhar Mk et al majority of the houses had adequate ventilation (75.5%),[5] while Kumar BA et al in a similar study, found majority of houses to be poorly ventilated (81.6%). [6] He also found overcrowding in 65% of the households which is in quite contrast to our study findings (36.3%). This contrast could be a result of good housing standards and population density. The human behaviour is also a contributing factor to malaria prevalence which has been largely neglected in research on vector borne diseases[7]

The awareness about malaria was high in this study area which could be due to occurrence of malaria every year and implementation of awareness programs conducted by health team. Doctors and friends were the most common source for information in 61.6%. Similar findings were seen in other study done at kolar area where doctors and health care workers were common source of information provider on malaria,[4] in a study done at udapi health care workers and TV were major sources of information.[5]

In present study majority were aware of cause of the disease and presentation of disease. Similar to the our results fever was reported as the most common symptom in studies by Mukherjee et al, Ravi Kumar et al, Vala M et al and Dhaduk M et al[8,9,10,11]

In current study clean water and dirty water collections were major answers for source of breeding places of mosquito, similar findings were seen in , Mukherjee et al, Ravi Kumar et al, Vala M et al and Boratne et al found that polluted and stagnant water collections and drains were the common breeding places.[8,9,10,12] There are reports of misconceptions about malaria causing agent, breeding places and transmission pattern due to lack of knowledge.[13] Use of mosquito nets was also found very popular allround the year in Bhutan and Mexico.[14,15] This is in accordance to study findings where most of the respondents believed in use of bed nets and they were using bed nets at night time.

Since the survey was done in the month of September, which is the season of malaria cases, awareness level was good, but as the survey was undertaken during the working hours, perception of the youth (working population) could not be gauged.

Despite limitations, the study has its own strengths. It is a community-based study done in area where malaria cases were common. We gathered information related to disease as well as vector behaviour.

CONCLUSION

The study revealed that varied perception about cause spread of disease, and source of infection and prevention of disease. Health personnel were the major source of information in this the population.

REFERENCES

1. World malaria report 2019. Geneva, World Health Organization. Available at: https://www.who.int/news-room/fact-sheets/detail/malaria. Assessed on 19/6/2021
2. World malaria report 2020. Available at https://www.who.int/teams/global-malaria-programme/reports/world-malaria-report-2020, Assessed on 19/6/2021
3. Canelas T, Castillo-Salgado C, Baquero OS, Ribeiro H. Environmental and socioeconomic analysis of malaria transmission in

the Brazilian Amazon. Rev Saude Publica. 2019;53:49. doi: 10.11606/S1518-8787.2019053000983.

4. Mahesh.V, Muninarayana.C, Anil.N.S et. al. Knowledge, Attitude, Practices about malaria in a Rural Endemic area of Kolar, India. Int J Health Sci Res. 2014;4(3):9-15.
5. Muralidhar M K , George PJ, Asha K , Swati G, Mahathi R. Knowledge, attitude and practices regarding mosquito borne diseases among adults in Udupi District, Karnataka. Indian Journal of Forensic and Community Medicine: 2017;4(3):158-163
6. Kumar B A, Madhavi K V P. Knowledge and practice regarding vector borne diseases among urban slum dwellers of Guntur district, Andhra Pradesh. JEMDS. 2013;2(26):4756-62
7. Dunn FL . Behavioural aspects of the control of parasitic diseases. Bull World Health Organ 57: 499-512.
8. Mukherjee A, Chatterjee D, Patra S, Mandal B, Ghosh A. Differences in community perceptions on mosquito borne diseases between rural and urban localities of Bankura District, West Bengal, India. Journal of Mosquito Research; 2015;5(1):1-5.
9. Ravi Kumar K, Gururaj G. Community Perception Regarding Mosquito-borne Diseases in Karnataka State, India. Dengue bulletin. 2006;30:270-77.
10. Vala M, Patel U, Joshi N, Zalavadiya D, Bhola C, Viramgami A. Knowledge and Practices regarding commonly occurring mosquito borne diseases among people of urban and rural areas of Rajkot District, Gujarat. J Res Med Den Sci 2013;1(2):46-51.
11. Dhaduk KM, Gandha KM, Vadera BN, Mehta JP, Parmar DV, Yadav SB. A Community level KAP study on mosquito control in Jamnagar district. Natl J Community Med. 2013;4(2):321-328.
12. Boratne A V, Jayanthi V, Datta SS, Singh Z, Senthilvel V, Joice Y S. Predictors of knowledge of selected mosquito-borne diseases among adults of selected periurban areas of Puducherry. J Vector Borne Dis. 2010;47:249–56.
13. Tyagi P, Roy A, Malhotra MS. Knowledge, awareness and practices towards malaria in communities of rural, semi-rural and bordering areas of east Delhi (India). J Vector Borne Dis .2005;42: 30-35.
14. Zangpo K, Zangpo N, Polulsen K. A study on Knowledge, attitude and practice about awareness and Bed Net Use. Jour Bhutan Studies.2006; 136-146.
15. Rodríguez AD, Penilla RP, Henry-Rodríguez M, Hemingway J, Francisco Betanzos A, et al. Knowledge and beliefs about malaria transmission and practices for vector control in southern Mexico. Salud Publica Mex . 2003;45: 110-116