



## PERCEPTION AND BELIEFS REGARDING VECTOR BORNE DISEASES AMONGST THE RESIDENTS OF ORMANJHI BLOCK OF JHARKHAND.

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**ABSTRACT** **Background:** This study attempts to assess the awareness regarding vector borne diseases and its health seeking behaviour amongst residents of Ormanjhi block of Jharkhand.

**Methodology:** The study was conducted in the catchment area of rural health training centre of Rajendra Institute of Medical Sciences, Ormanjhi, Ranchi during the period May 2016 to April 2017. It was a cross-sectional study done in 363 study participants after taking their informant consent.

**Results:** Majority of the study participants were female (56.6%) and male comprised of 161 out of 363 (44.4%). Most 175 (48.2%) used to contact health personnel for illness, followed by elders in the house/ neighbour (36.6%), literate person in the house/ neighbour (12.9%) and AWW/ASHA (2.2%). None were going to local political/spiritual leader. Majority 178 (49.0%) were used to visit a government hospital for any symptoms or illness, followed by Unqualified medical practitioner (24.0%), retail drug store (17.9%) and few (9.1%) also used to visit to a traditional healer/faith healer.

**Conclusion:** It was concluded from the study that the awareness about the vector borne diseases is very poor and in regards to health seeking behaviour, elder persons of the family are the important persons.

**KEYWORDS :** Malaria, Vector Borne Diseases, Health Seeking Behaviour

### Introduction

The vector borne diseases are commonly found in tropical and subtropical regions and places where access to safe drinking water and sanitation system is problematic. They are on the rise because of failure of the existing methods of control of vector and vector borne diseases and the climatic changes. A steep rise of vector borne diseases is due to several factors such as rise of insecticide resistant vector population, drug resistant parasite population, and lack of effective vaccines against vector borne diseases.

Recently, it has been suggested that vector borne diseases incidence is between 9 and 50 times greater than reported with approximately 13 fold under estimation of malaria-related mortality<sup>(1)</sup>. Personal protection measures have become important tool against vector borne diseases. A variety of Personal protection measures are available including repellent creams, mosquito nets, mosquito coils, liquid repellents, electric rackets, mats, smokeless coils, intense sticks, and naphthalene balls. Under national vector borne diseases control program, government has introduced insecticide treated nets for the endemic communities<sup>(2)</sup>. Considering the increasing problem of vector borne diseases, it is important that the people should be aware about various measures available and how to use them correctly. Success of these measures largely depends on the access, acceptability, and proper usage by the target population<sup>(3)</sup>. Further role of community participation in vector control is imminent. Community participation in turn depends on public awareness and knowledge toward the diseases and their prevention<sup>(4)</sup>.

Tribal malaria and other vector borne diseases are common causes of morbidity and mortality among the tribal People in Jharkhand. Besides presence of environmental factors for cause of these vector borne diseases, lack of education, poor knowledge and attitudes towards the disease are also the cause of high cases. Health seeking behaviour is an important factor in success of public health delivery systems, but this is often overlooked while considering schemes for providing health facilities to people. As a result, new schemes for providing health care do not get the desired acceptance of the community, and are therefore rendered unsuccessful. About 47% of rural tribal live under poverty line. Most of them are employed in labour oriented jobs. Their monthly per capita expenditure is 617 Rs. Of which 59% is spent on food intake.

Out of Pocket Spending on a treatment of diseases like malaria, dengue and filaria, which are treated free of cost under government programme puts economic burden on these communities pushing them under more poverty<sup>(5-6)</sup>. A number of cases and few deaths were reported from the rural areas of Jharkhand in the recent years. Therefore, this study on awareness and health seeking behaviour of vector borne diseases has tried to find out the status of awareness and also to understand the present situation of health seeking behaviour among the people residing in Ormanjhi block.

### Materials and Methods

Study Type: Cross-sectional Study

Study Area This study was carried out at Rural Health Training Centre, Ormanjhi, attached to Preventive and Social Medicine Department, RIMS, Ranchi. Rural Health Training Centre (RHTC) is located at Ormanjhi Block, which is about 15 Km away from RIMS. The RHTC caters a population about 98,349. Sub-centres IRBA, CHAKLA and ANANDI are attached to RHTC with approximate population of 7596, 5575 and 3423 respectively.

Study period : June 2015-November 2017

### Eligibility criteria

#### Inclusion Criteria:-

All the patients attending OPD of RHTC, RIMS, Ranchi of the age group 18 years to 65 years

#### Exclusion Criteria-

1. Study subjects who were not willing to participate in the study.
2. Critically ill patients
3. Patients who were unable to communicate

### Sample Size

Total study subjects were 363.

**Study Tool:** A Semi-structured questionnaire was developed as per the objectives and under the guidance of faculties. The questionnaire was pre tested by conducting a pilot study in 10 subjects and necessary modification made in the questionnaire again. Finally this pre-tested semi-structured questionnaire was used after taking Informed consent by the researcher on the basis of subject's response to the questions

related to following variables:

1. Socio demographic profile covering, age, sex, religion, residence, occupation, marital status, socioeconomic class etc.
2. Awareness related to vector borne diseases
3. Their health seeking behaviour for vector borne diseases.
4. Questions related to study subjects utilisation of nearby government health services

**Methodology**

Data were collected from the month of February 2016 to January 2017 (12 months) after taking the IEC, RIMS, Ranchi approval.. Patients were approached on Monday and Thursday of the week during OPD time (10am to 1pm) of RHTC. To maintain the adequate time between takings data from one patient to another, consecutive systematic sampling were done that is every fifth patient was selected for personal interview. After taking written consent from patient written in Hindi language, those who met eligibility criteria, were interviewed by using pre-tested, semi structured questionnaire. The subjects were explained about the purpose of study. A total of 363 patients were interviewed during this period of data collection. In case when fifth patient were not consenting for participation or that patient who was not within the inclusion criteria, then next patient in the sequence, who was fulfilling the eligibility criteria, was interviewed. Data entry was done and 10% of data were randomly checked to assure the quality of data entry under the supervision of Guide. The data were analysed by using software-Statistical Package for Social Science (SPSS) 20.0 Version.

**Results**

Among all the subjects, 109 (30.0%) were of 26 to 35 years age group, which was followed by patients from 18 to 25 years age group 76(20.0%).Majority 202 (56.6%) of the study subjects were female and male comprised of 161 (44.4%). By religion 162 (44.6%) were Hindu followed by Sarna 79 (21.8%), Muslim 67 (18.5%) and Christian 55 (15.2%) respectively According to BG Prasad SES classification, most 150 (41.4%) the study subjects were from Socio-economic class V then from class IV 136 (37.5%). Few were from class III 58 (16.0) and class II 18 (5.0%) and almost none from Class I 1 (0.3%).

Most 175 (48.2%) used to contact health personnel for illness, followed by elders in the house/neighbour (36.6%), literate person in the house/neighbour (12.9%) and AWW/ASHA (2.2%). None were going to local political/spiritual leader.

Most 172 (47.4%) of the study subjects responded that vector was an insects or Mosquito or fly, 121 (33.3%) said it some non-living things and 70 (19.3%) told that they do not know.(Table 1).

More than half (53.2%) of the subjects responded that they have heard of only malaria or Dengue or Filariasis and 127 (35.0%) did not heard of anyone and only 43 (11.8%) heard of all.(Table 2)

Major risk factors of getting infected with these diseases told by the study subjects were poor garbage collection (38.8%) , increasing urban population (25.9%), changing life style e.g use of coolers (9.6%), Shortage of water supply (7.7%), traditional water storage (5.5%), rapid transportation (5.0%) and 7.4% were not knowing.

Most 167 (46%) responded garbage as breeding places for mosquitoes. Stagnant water (25.9%), on the wall (6.6%), mud (6.3%), on hanging objects (5.5%), and sand (5.5%) were responded. 4.1% responded that they did not know the answer.(Fig 1)

Most 126 (34.7%) responded that they were using mosquito nets as personal protective measures. Nearly one-fourth (22.6%) were not practicing any protective measures. Mosquito coils (14.0%), All out (12.4%), Odorous (6.9%), Insecticides spray (5.5%) and smokes and dhooop (3.9%) were next in the sequence.

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Majority 178 (49.0%) were used to visit a government hospital for any symptoms or illness, followed by Unqualified medical practitioner (24.0%), retail drug store (17.9%) and few (9.1%) also used to visit to a traditional healer/faith healer.

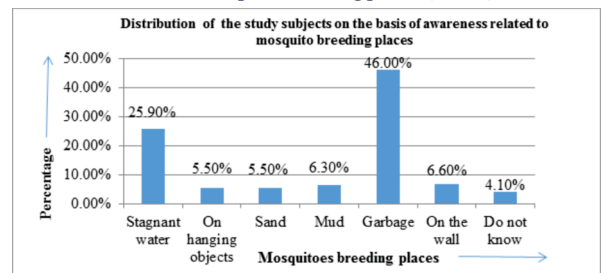
**Table 1:- Distribution of the study subjects according to knowledge about vector (n=363)**

Knowledge about vector	Frequency	Percentage (%)
Insects/Mosquito/Fly	172	47.4
Non-living	121	33.3
Don,t know	70	19.3
Total	363	100.0

**Table 2:- Distribution of the study subjects according to awareness of various vector borne diseases (n=363)**

Awareness of various vector borne disease	Frequency	Percentage (%)
Heard of Malaria/ Dengue / Filariasis	193	53.2
Heard of all	43	11.8
Did not Heard of Anyone	127	35.0
Total	363	100

**Figure: 1: Distribution of the study subjects on the basis of awareness related to mosquito breeding places (n=363)**



**Discussion**

The study was carried out in the OPD of RHTC associated with RIMS, Ranchi during the period of February 2016 to January 2017. Area being endemic for vector borne diseases needs to be educated about the diseases. But assessment of their perception and beliefs regarding these diseases along-with health seeking behaviour is paramount for controlling the transmission and successful implementation of National Vector Borne Disease Control Programme(NVBDCP).

In comparison to our study Study by Singh RK et al<sup>(7)</sup> found that the knowledge about malaria transmission routes was poor as considerable (28.4%) number was not aware that malaria is caused by mosquito bite. Respondents were asked about malaria, transmission season, symptoms, prevention of malaria and prevention methods adopted. Most of the respondents (92.5%) were aware of malaria disease, 44.4% of the respondents reported transmission season as rainy season and 31.4% post rainy season and others did not respond. The respondents (74.4%) were known to common symptoms of malaria, 82.4% respondents reported fever, shivering and cold etc., and about prevention of malaria, 79.6% respondents reported malaria can be prevented and 15.7% reported that it cannot be prevented. On being asked about malaria transmission, mosquito breeding and resting sites, 28.4% of the respondents were not aware of malaria transmission by mosquito bite. Only one fourth (26.5%) community were aware about mosquito breeding in clean water bodies as ponds, rivers and streams etc. and only one third (32.6%) respondents were taking control measures. The knowledge of resting sites of mosquito was good as 48.8% respondents reported cattle sheds and 32.4% reported human dwellings and 15.7% dump dark places. About two third (73.2%) respondents taken preventive measures to avoid mosquito bite and 18.5% did not take any control measures. The use of bed nets was found popular as 67.8% respondents used bed nets to protect them from mosquito bite and malaria prevention. The rest of 29.6% respondents did not use bed nets mainly because of financial reasons. Some of the respondents were finding the bed nets inconvenient during summer season when it becomes too hot to sleep inside the net. Use of coil/repellant was not popular among the community (12.4%) due to side effects like congestion, breathing trouble etc.

Suresh Balan Kumarswamy et al<sup>(8)</sup> found in their study that most of the patients from a non-endemic area opted for private hospital for their treatment whereas majority of them from the endemic area received the treatment from a government hospital and the difference was found to be statistically significant. Similarly study done Singh RK et al<sup>(7)</sup> found that a large number of persons (77.9%) were taking treatment from the nearest Primary Health Centre (PHC) and 12.6% were taking

treatment from private clinics. In the present study it was found that majority (49.0%) were used to visit a government hospital for any symptoms or illness, followed by Unqualified medical practitioner (24.0%), retail drug store (17.9%) and few (9.1%) also used to visit to a traditional healer/faith healer. Majority (73.8%) used to take treatment within first week, followed by 20.1% between 1 to 2 weeks and 6.1% between 2 to 3 weeks. Most (77.1%) used to take medicine as prescribed by the doctor as compared to 22.9% who do not used to take medicine as advised.

In various studies of India and South East Asia , similar findings to our study regarding awareness and health seeking behaviour towards vector borne diseases has been found.<sup>(9-14)</sup> So it is important to increase the awareness through mass media. Health as well as other allied departments must come forward in this campaign. Undergraduates and nursing students may be motivated to take this task in the catchment area of RHTC.

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