

## Original Research Article

# AWARENESS OF MULTIPURPOSE HEALTH WORKER MALE REGARDING RABIES AND ITS PREVENTION.

Durga Madhab Satapathy<sup>1</sup>, Shrabani Palai<sup>2\*</sup>, Sithun Patro<sup>2</sup>

<sup>1</sup>Professor & HOD Department Of Community Medicine, MKCG Medical College, Berhampur, Odisha

<sup>2</sup>Post Graduate Student Department Of Community Medicine, MKCG Medical College, Berhampur, Odisha

## Abstract

**Introduction:** Rabies is a highly fatal zoonotic disease which is given low public health importance. India is an endemic country for rabies. Health Worker Males are the first line service providers in the community. So it is important to know their awareness regarding the disease rabies and its management.

**Objective:** To study about the awareness of MPHWS towards the disease rabies and its prevention.

**Methodology:** It was a cross sectional study conducted from July to November 2018 in three districts of Odisha selected randomly. Total 78 participants from three districts took part in the study. Data was collected by self-administered pre-tested, semi-structured questionnaire and analyzed by SPSS Version 16.

**Results:** A total of 78 participants took part in the study. The mean age of the participants was  $32.3 \pm 2.8$  and the mean year of service was  $7.9 \pm 3.28$  years. All the 78 participants were aware of the disease rabies and knew it was caused by dog. Around 19.2% and 7.7% study participants believed that it is caused by human bite and rat bite respectively. Maximum respondents (83.3%) practice washing of the wound with soap and water as the first step to be followed after an animal bite. Majority of the participants (84.6%) knew that Anti Rabies Vaccine is given to the animal bite victims. Around 55% were aware of immunoglobulin.

**Conclusion & Recommendation:** Awareness regarding the cause and management of rabies was found to be good but still needs improvement. Training programs regarding rabies should be carried out regularly for the field level workers to fill the knowledge gap we found in this study.

**Key Words:** Rabies, Health worker male, Awareness, practice

## Introduction

Rabies is a highly fatal zoonotic disease that is transmitted to humans by bites and scratches of infected animal<sup>1</sup>. Dogs are the main source of human rabies deaths accounting for 99% of all rabies transmission to humans. Over 95% of human deaths due to rabies occur in Asia and Africa region<sup>2</sup>. India is endemic for rabies and contribute 36% of deaths globally. In India about 30-60% of reported rabies cases and deaths occur in children below 15 years<sup>3</sup>.

---

**\*Corresponding Author:** Shrabani Palai, 2Post Graduate Student, Department of Community Medicine MKCG Medical College, Berhampur, Odisha Email : drshra12@gmail.com, Mob : 7787086202

**Received :** 12.03.2020    **Revised :** 27.04.2020

**Accepted :** 21.05.2020    **Published :** 30.06.2020

Rabies is prevented by adequate immune prophylaxis by rabies vaccine and immunoglobulin to the animal bite victims. Vaccination of the dogs is one of the most cost-effective strategy for prevention of rabies in humans<sup>3</sup>. It predominantly affects poor and vulnerable population living in remote rural areas<sup>2</sup>. Lack of awareness about the disease among the people and lack of availability of vaccines in those areas are the main cause of spread of the disease and death in the animal bite victims.

Multipurpose health workers are the first contact point between the health care system and the people. People in the rural areas goes to them for minor health ailments for which they provide the first aid care. So adequate knowledge about rabies and its prevention among the health workers is a key component for control of the rabies.

## Objective

To study about the awareness of MPHWs towards Rabies and its prevention.

## Material & Method

It was a cross sectional study conducted over a period of five months from July to November 2018. Out of the total 30 districts of Odisha; 3 districts (10%) i.e. Nabarangapur, Khurda and Nayagarh were selected randomly by a random number generator app<sup>4</sup>. We visited one of the CHC of a district catering maximum population on a fixed day. After taking consent from the respective CDMO of the district and the Medical Officer in Charge of the CHC, MPHWs were contacted over phone from the nearby CHCs and PHCs. About 50 MPHw from each district were contacted out of which 29 from Nabarangapur, 25 from Khurda, 24 from Nayagarh gave the consent and recruited for study. A total of 78 participants were included in the study. They were given a self-administered pre-tested, semi-structured questionnaire and response were recorded. Data were analyzed by IBM SPSS Version 16.0.

## RESULTS

A total of 78 participants took part in the study. The mean age of the participants was  $32.3 \pm 2.8$ . Mean year of service was  $7.9 \pm 3.28$  years (Table 1). All the 78 participants were aware of the disease rabies and knew it was caused by dog. Knowledge about other animals causing rabies were cat (50%), monkeys (38%). Around 19.2% and 7.7% study participants believed that it is caused by human bite and rat bite respectively (Figure 1). Almost 60% of the participants believed that the disease is curable. Majority of the participants (71%) knew that it was caused by bite of an animal but knowledge about other causes of the disease transmission like scratches and licking over injured skin by a rabid animal were lacking (Table 2).

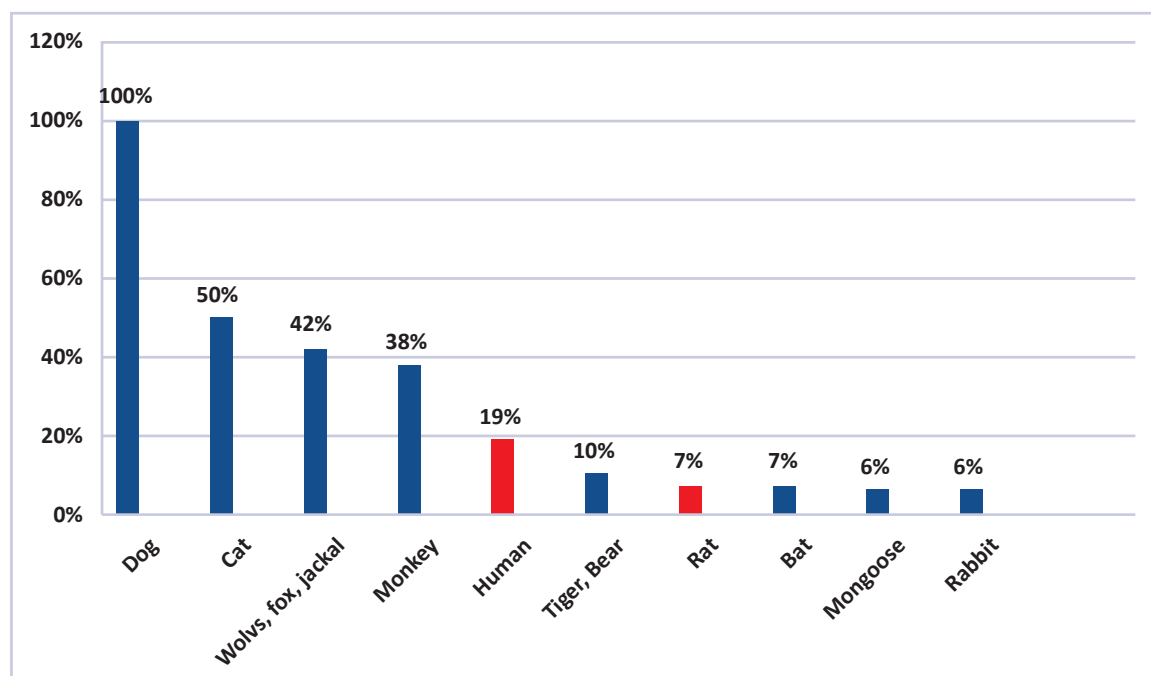
Maximum respondents (83.3%) practice washing of the wound with soap and water as the first step to be followed after an animal bite. About 10.3% of the study subjects do not have idea what steps to be taken after the bite of an animal (Table 3). A total of 73.1% knew about the application of povidone iodine after washing of the wound. About 80.8% refer the patient to the nearest hospital after an animal bite. Around 66.6% of the study subjects answered that due to non-availability of vaccines in CHC they refer the patients to the DHH.

Majority of the participants (84.6%) knew that Anti Rabies Vaccine is given to the animal bite victims and 55% were aware of immunoglobulin (Figure 2). Among them 63% answered that it is given in severe deep penetrated wound (Figure 3). Only 4(0.05%) were aware of the fact that monoclonal antibodies are given in animal bite cases. Around 39.7% of the study subjects believed that vaccination of the dogs is one of the steps taken for control of rabies in community (Table 4).

**Table 1: Educational qualification and service experience of MPHWs (n=78)**

Educational qualification	Number	Percentage (%)
Matriculation	4	5.1
Diploma in Pharmacy	41	52.6
Higher Secondary	6	7.7
Graduate	23	29.5
Post graduate	4	5.1
<b>Total</b>	<b>78</b>	<b>100</b>

Service Experience in years	Number	Frequency
2-5	17	21.8
6-10	42	53.9
>10	19	24.3
<b>Total, Mean(SD)</b>	<b>78, 7.9(3.28)</b>	<b>100</b>



**Figure 1: Awareness of MPHW about cause of rabies by other animals**

**Table 2: Awareness about mode of transmission of rabies (n=78)**

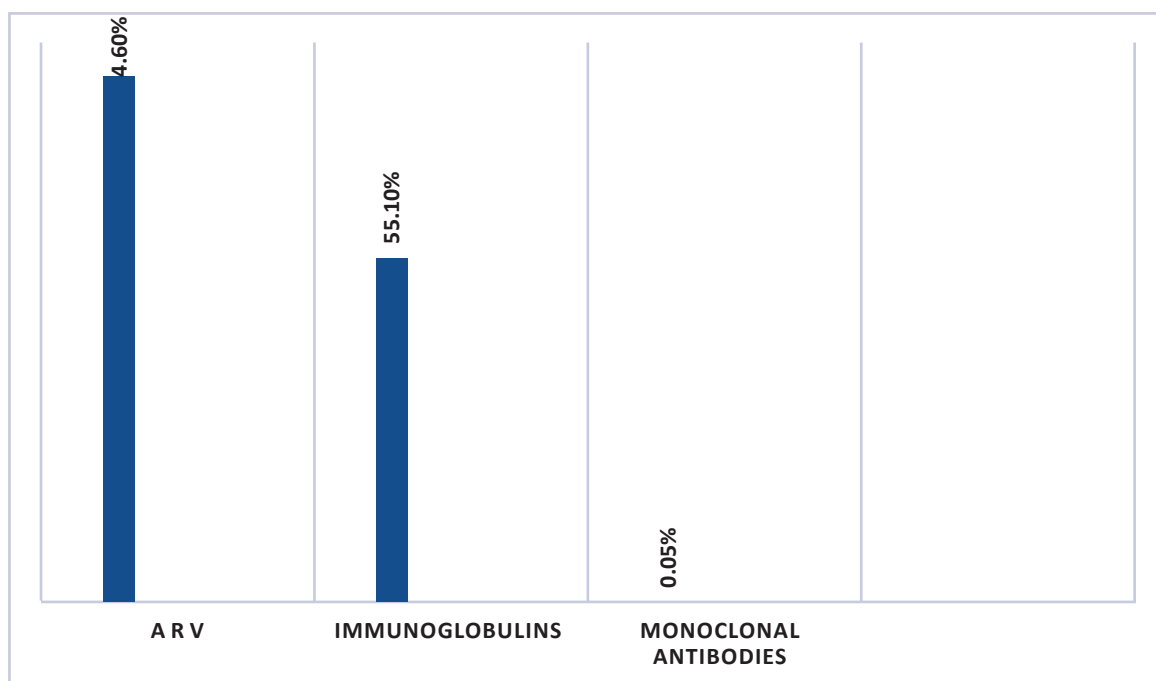
Mode of transmission*	Number	Percentage (%)
Bite	71	91
Scratch	5	6.4
Licking over intact skin	7	9
Licking over injured skin	8	10.3
Don't have idea	3	3.8

\*Multiple Response

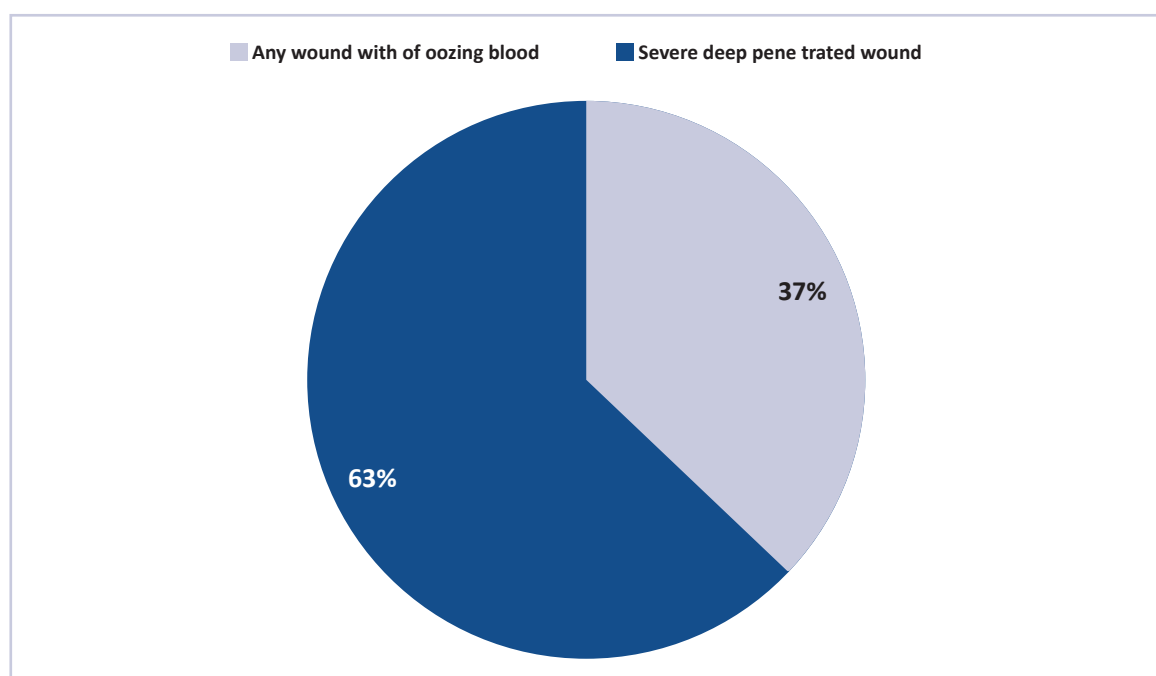
**Table 3: Practices done by MPHWs after an animal bite (n=78)**

Steps*	Number	Percentage (%)
Wash the wound with soap and water	65	83.3
Apply antiseptic ointment after wash	46	59
Give Tetanus Toxoid	36	46.2
Refer the patient to nearest hospital	63	80.8
Don't have idea	8	10.3

\*Multiple Response



**Figure 2: Awareness about treatment of rabies (n=78)**



**Figure 3: Awareness about use of immunoglobulin (n=43)**

**Table 4: Steps to be taken for prevention and control of rabies in community (n=78)**

Steps*	Number	Percentage (%)
Health education & community awareness	26	33.3
Vaccination of dogs	31	39.7
Birth control	8	10.3
Don't provoke animals	7	9
Kill the rabid animals	2	2.6
Availability of vaccines at CHC level	3	3.8
Don't have idea	23	29.4

\*Multiple Response

## Discussion

The study was conducted on MPHWs as they are the first contact point of the community and people will seek advice from them where hospital facilities are far away. So they play a vital role in control and spread of the disease. No training programs are given by the government regarding rabies and its control in spite of being a highly fatal disease. Hence the present study focused on the perception of the MPHWs towards rabies.

In the present study all of the participants knew about the disease rabies which is similar to the findings of D. Shobha Malini et al, conducted on MPHWs of Ganjam and Gajapati districts of Odisha<sup>5</sup>. Our study findings are better than a multi centric study conducted by Ichhapujani et al in general population where it was 68.7%<sup>6</sup>.

In our study 7.7% of the participants believed that rabies is caused by rat which is less than findings of Malatesh Undi et al. where it is 34.78% in primary care providers, 12.50% of health care providers and 14.29% of School teachers<sup>7</sup>. About 15(19.2%) of study participants answered that human bite causes rabies which shows there is lack of knowledge regarding the causes of rabies other than dog bite.

In the present study 60% of the respondents believed that the disease is curable which is less than the findings conducted by Sudeepti Panat et al on nursing students where it is 74%<sup>8</sup>. The lack of knowledge regarding this may lead to delay in treatment seeking of the people leading to more number of deaths. Almost 91% of our study subjects knew that the disease is caused due to bite of an animal which was less than the findings of E. Kenu et al on frontline health service providers where it is 99.2%<sup>9</sup>.

First aid following animal bite as washing the wound with soap and water was known to 83.3% of subject in the present study which is less than a study conducted by Hluvadi Shivalingaiah Anwith et al on Anganwadi Workers where it was 94.59%<sup>10</sup>. The findings are also less than the study of E. Kenu et al on frontline service providers where it is 98.3%<sup>9</sup>.

In our study 55.1% of MPHw were aware of immunoglobulin where as 82.61% of primary care providers were not aware of immunoglobulin in a study by Malatesh et al<sup>7</sup>. The present study findings are better than a study conducted by D. Shobha Malini et al where none of the MPHw had idea about immunoglobulin<sup>5</sup>. Knowledge regarding immunoglobulin are better in our study than a study by Kishore S et al where 83.3% health workers had no idea of immunoglobulin<sup>11</sup>. Out of all the MPHws 4 were having knowledge about monoclonal antibodies for the treatment of animal bite victims.

Mass vaccination of dogs is the most effective measure to control rabies and prevent human death<sup>3</sup> but in our study only 39.7% participants were able to answer about vaccination of dogs. Around 10% of participants answered about birth control as a step for control of rabies. It shows that there is a gap of knowledge about preventive steps taken for control of rabies.

## Conclusion & Recommendation

Though the awareness towards rabies was good in the study still there are many shortcomings in the knowledge regarding cause and mode of transmission of the disease. The knowledge about the treatment and first-aid of rabies was found to be good but it still needs improvement. Furthermore there is lack of awareness about the curability of rabies and how it can be prevented in the community like vaccination of dogs and animal birth control. Training programs regarding rabies and its prevention should be carried out regularly for the field level workers to fill the knowledge gap we found in this study.

## Conflicts Of Interest Nil

## Financial Support Nil

## References

1. *India: Rabies | IAMAT [Internet]. [cited 19 Desember 2018]. Available at: <https://www.iamat.org/country/india/risk/rabies#>*
2. *Rabies [Internet]. [cited 19 Desember 2018]. Available at: <https://www.who.int/en/news-room/fact-sheets/detail/rabies>*
3. *World Health Organization, Rabies. SEARO [Internet]. 2018 [cited 19 Desember 2018]; Available at: <http://www.searo.who.int/india/topics/rabies/en>*
4. *RANDOM.ORG - True Random Number Service [Internet]. [cited 21 Desember 2018]. Available at: <https://www.random.org/>*
5. *D Shobha Malini, Suchitra Haldar, R M Tripathy, D Jena. Perception of Male Health Workers regarding rabies & its prevention. APCRI Journal 2016; Volume XVIII. Issue I.*
6. *Ichhpujani RL, Chhabra M, Mittal V, Bhattacharya D, Singh J, Lal S. Knowledge, attitude and practices about animal bites and rabies in general community--a multi-centric study. J Commun Dis [Internet]. Desember 2006 [cited 22 Desember 2018];38(4):355–61. Available at: <http://www.ncbi.nlm.nih.gov/pubmed/17913213>*
7. *Malatesh Undi, N R Ramesh Masthi. knowledge and practice of primary care providers, Health care providers and School Teachers regarding human rabies and its prevention in a rural area, near Bangalore. APCRI Journal 2013; Volume XIV, Issue II.*
8. *Panat S, Singh A, Joshi HS, Upadhyay D. Awareness of Animal Bite Wound Management and Rabies Immunization. Int J Adv Integr Med Sci [Internet]. [cited 21 Desember 2018];2(4):193–7. Available at: <http://www.jaypeejournal.com/eJournals/ShowText.aspx?ID=14048&Type=FREE&TYP=TOP&IID=1096&Value=47&isPDF=YES>*

9. Kenu E, Ganu V, Noora CL, Adanu R, Lartey M. Management of dog bites by frontline service providers in primary healthcare facilities in the Greater Accra Region of Ghana, 2014–2015. *Infect Dis Poverty* [Internet]. 28 Desember 2018 [cited 21 Desember 2018];7(1):18. Available at: <https://idpjournal.biomedcentral.com/articles/10.1186/s40249-018-0398-3>
10. Shivalingaiah Anwith H, Gopalakrishna Upadhya K, Shankaraiah Ravish H, Thenambigai R, Prashanth Ramya M, Thejaswini P. Awareness on rabies and its prevention among anganwadi workers. *Int J Med Sci Public Heal* [Internet]. 2018 [cited 21 Desember 2018]; Available at: <http://www.ijmsph.com>
11. Kishore S, Singh R, Ravi S. Knowledge, Attitude and Practice Assessment in Health Workers regarding Rabies Disease and its Prevention in district Dehradun of Uttarakhand. *Indian J Community Health* [Internet]. 30Sep.2015 [cited 22Dec.2018];27(3):381-5. Available from: <https://www.iapsmupuk.org/journal/index.php/IJCH/article/view/589>