ORIGINAL ARTICLE

Community Belief, Myths and Perceptions about Animal Bite Cases in an Urban area of Berhampur: A Qualitative Study

Dr Nivedita Karmee[1], Prof Durga Madhab Satapathy[2], Prof Radha Madhab Tripathy[2], Dr Sithun Kumar Patro[3], Dr Smaranita Sabat[3]

[1] Associate Professor, Department of Community Medicine, MKCG Medical College, Berhampur Odisha

[2] Professor, Department of Community Medicine, MKCG Medical College, Berhampur Odisha

[3] PG Student, Department of Community Medicine, MKCG Medical College, Berhampur Odisha

Abstract

Introduction: Rabies is an enzootic and epizootic disease worldwide. 99% of all human deaths due to rabies are occurring in the developing countries. Rabies is highly fatal disease yet preventable. **Objective:** To find out the common beliefs, myths and perception about animal bites in an urban community in Berhampur, Odisha. **Materials & Methods:** This was a qualitative study done in Gandhinagar, an urban area in the town of Berhampur, Odisha using Free-listing. After obtaining consent, the data was collected until the point of saturation by door to door survey and analyzed using Anthropac version 4.983. **Results:** The mean age of the participants was 46.67 ± 3.59 years. Majority of the people believed that Dog was the most common cause for Rabies (SS score = 0.879). A very few people believed wound toileting with water and soap was necessary (SS Score = 0.077). **Conclusion:** The general idea about the first aid was low but majority of the respondents believed that treatment in hospital was necessary. **Recommendations:** The awareness about First Aid and PEP of Rabies can be increased by educating the community by various IEC methods. Control of stray dog population by ABC program through the municipality must be taken up at a larger scale.

Keywords: Rabies, Qualitative, Myths, Misconceptions, Freelisting

Introduction

Rabies is an enzootic and epizootic disease worldwide. 99% of all human deaths due to rabies are occurring in the developing countries.[1] India is known for its diverse social and cultural backgrounds. Between the States and between the districts itself the people's belief and practices vary. Even now, a wide range of myths and misconceptions related to diseases/ illnesses are prevalent and people have great faith in rudimentary folk medicine of unproven efficacy.[2] In India it is estimated that the number of death due to rabies may be 10 times more than those reorted.[1] Myth refers to widely held but false belief or idea with reference to particular illness/ diseases. In India, various cultural practices are followed after exposure to a dogbite, for example, application of soil, chili paste, oil etc.[3] Rabies is one of the neglected tropical diseases which is highly fatal yet preventable. Effective treatment soon after

Corresponding Author: Dr. Sithun Kumar Patro, Email: drsithun@live.com, Mobile: 9438604420

exposure to rabies can prevent the onset of symptoms and death.[4] Due to various misconceptions, myths and lack of knowledge regarding proper first aid and post exposure prophylaxis; majority of the people are unable to escape the wrath of this dreadful disease.

Free listing has been a standard approach used in anthropology to define the elements of a domain (such as "Animals causing Rabies") and the extent to which group members share those definitions[5]; however, this approach has not been used widely in public health. In free listing, participants generate a list of terms, chosen from the universe of all words, to describe their perceptions or definitions of a domain[6]. Salience was derived using a salience index (Smith's S) defined as:

$S = ((L - R_j + 1)/L)/N$, where L is the length of each list, R_j is the rank of item J in the list, and N is the number of lists in the sample[7]. Salience characterizes terms that are prototypes for the particular domain of interest accounting for both the frequency and order of the words.

With this background the study was done with the objective to find out the common beliefs, myths and perception about animal bites in an urban community in Berhampur, Odisha.

Materials and Methods

This was a qualitative study done in the month of May 2017 among the residents of Gandhinagar, an urban area in the town of Berhampur of Southern Odisha. IEC approval was sought and out of 40 wards in Berhampur, Gandhinagar was selected purposively for the study. Door to door survey was carried out and one individual per house were selected conveniently for the purpose of data collection after obtaining their consent. The data was collected using the self-administered questionnaire that contained both closed and open-ended questions. The questionnaire also incorporated a Free listing tool that consisted of two domains namely- 1) Animals causing rabies 2) First aid and treatment. Data was collected till the point of data saturation. The quantitative data was expressed in frequencies. The qualitative data was analyzed using Anthropac version 4.983 and Smith's salient Score was calculated.

Results

A total of 86 participants took part in the study that consisted of 54 males (62.79%) and 32 females (37.20%). The mean age of the participants was 46.67 ± 3.59 years.

Figure1. Socio Economic Status (Modified BG Prasad's scale, 2016
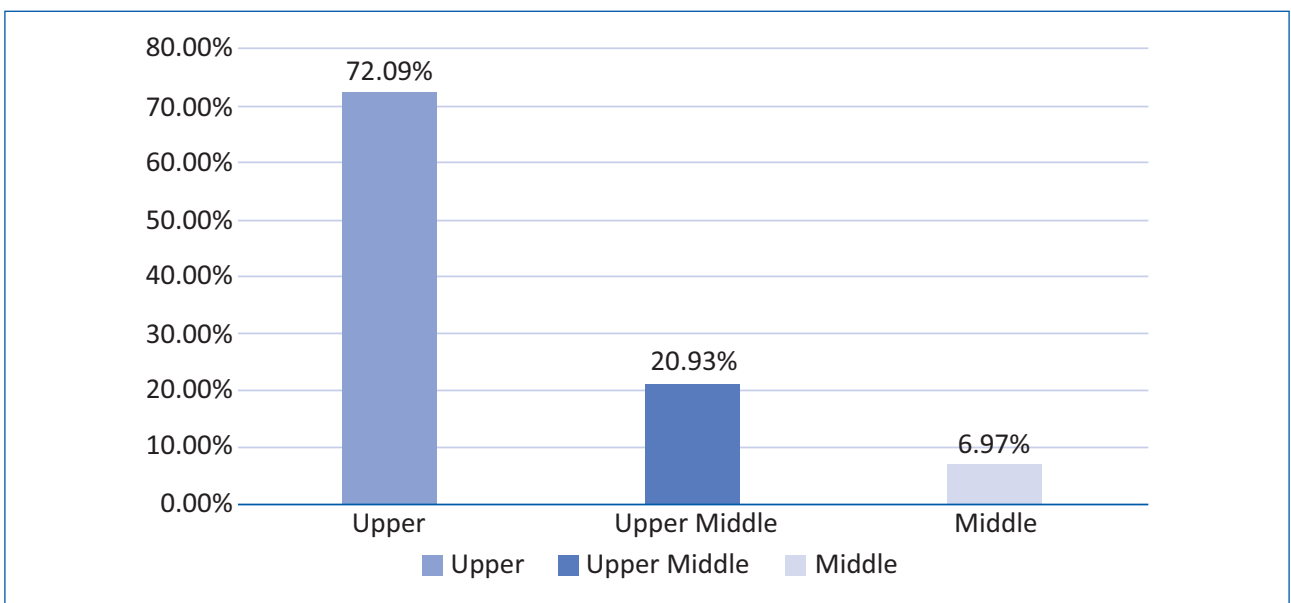
None of the participants belonged to lower middle or lower class. Majority (72.09%) belonged to the upper class followed by Upper middle (20.93%) and Middle class (6.97%).

Majority of the respondents believed that some infection is caused when an animal bites. A few people knew about the term "Rabies".

Table 1: Free Listing results for the domain: "Animals causing Rabies"

Sl No.	Item	Frequency	Resp Percentage	Avg Rank	Smith's Salient Score
1	DOG	83	97	1.482	0.879
2	MONKEY	65	76	2.475	0.705
3	CAT	58	67	2.910	0.610
4	WOLF	48	56	7.917	0.098
5	DONKEY	47	55	7.064	0.151
6	FOX	46	53	5.652	0.243
7	JACKAL	44	51	4.341	0.305
8	PIG	43	50	5.674	0.220
9	BEAR	39	45	6.385	0.177
10	OX	9	10	4.222	0.059
11	COW	7	8	7.429	0.019
12	RAT	3	3	6.000	0.013
13	LION	3	3	4.667	0.020
14	BOAR	3	3	4.333	0.020
15	PARROT	2	2	9.000	0.004
16	BAT	1	1	4.000	0.005
17	RABBIT	1	1	2.000	0.010
18	SNAKE	1	1	12.000	0.002
19	HORSE	1	1	5.000	0.005
20	DEER	1	1	5.000	0.002

Maximum people believed Dog bite is the most common cause for rabies. Smith's salient score for dog was 0.879. This was followed by Monkey (Smith's salient score = 0.705) and Cat (Smith's salient score = 0.610).

There were a number of myths still persistent in the community out of which majority of the respondents believed that the person who is bit by the dog must not go out in the rains. Many people believed that they must not eat sour things if any animal bit them and also that when small children are bitten by dog, they must be taken to the traditional healer for "jhaadaphoonka" which will help in removal of the evil eye.

Table 2: Free listing results for the domain "First Aid and treatment"

Sl No.	Item	Frequency	Resp Percentage	Avg Rank	Smith's Salient Score
1	HOSPITAL	57	69	2.561	0.402
2	TT	29	35	2.552	0.204
3	DETTOL & TT	22	27	1.227	0.247
4	NEEM	20	24	2.300	0.165
5	DETTOL	15	18	2.533	0.127
6	TURMERIC	13	16	2.385	0.099
7	BITTERGOURD	11	13	3.091	0.067
8	SAVLON	9	11	2.111	0.080
9	SOAP & WATER	8	10	2.000	0.077
10	DRESSING	8	10	2.625	0.053
11	OINTMENT	7	8	1.714	0.062
12	SPIRIT	6	7	2.333	0.054
13	BANDAGE	6	7	2.333	0.051
14	CLOTH TIE	6	7	2.167	0.046
15	TRADITIONAL HEALER	5	6	3.000	0.033
16	ARAKHA LEAVES	4	4	2.000	0.028
17	WATER	4	4	1.000	0.036
18	ANTIBIOTIC	2	2	3.500	0.010
19	NAILPOLISH	2	2	2.000	0.016
20	LIME	2	2	2.500	0.015

Most of the people believed that some treatment in the hospital is necessary (Smith's salient score = 0.402). The Smith's salient score for first aid with Dettol and TT was 0.247. Very few people listed soap and water for first aid (Smith's Salient Score = 0.077).

Discussion

Bite by a rabid dog will lead to rabies, which is a fatal disease without any cure. Rabies is one of the most important zoonotic diseases in India and one of the oldest recognized diseases which affect humans[8]. Various cultural practices are followed after dog bite and different myths are associated with the disease, which can influence the post exposure treatment seeking behavior of the victims[9].

In this study a total of 54 males and 32 females took part. The mean age of the participants was 46.67 ± 3.59 years. This was similar to the study conducted by Jakasania AH et al[3]. Maximum people in this study believed that rabies is caused by Dog bite which was similar to the findings in the study conducted by Varsharani et al[8], Ghosh S et al[10] and Sekhon A S et al[11].People also listed parrot (SS score = 0.004) and snake (SS score = 0.002) as a cause of rabies that clearly indicates towards the knowledge gap about rabies in the community.

In this study, a vast majority of the people believed that people must not eat sour things and should not go out in rains. They also believed that small children needed to be taken to the traditional healer in case of animal bites. People also believed that neem, bittergourd and arakha leaves are to be applied on the wound for dressing. This was similar to the findings of the study done by ChinnaianS et al[2]. Knowledge about wound toileting with soap and water was low which was consistent with the study done by Icchpujani R L et al[12].

Conclusion

Maximum people believed that dogs are the most common cause of Rabies, followed by monkeys. The general idea about the first aid was low but majority of the respondents believed that treatment in hospital was necessary. The various myths which are still present need to be addressed.

Recommendations

The awareness about First Aid and PEP of Rabies can be increased by educating the community by various IEC methods. Some chapters or activities can be introduced in the school curriculum involving the students and the parents which will improve the awareness

level in the community against this dreadful disease. Control of stray dog population by ABC program must be initiated at a larger scale by the municipalities for the prevention of Rabies.

Financial and Conflicts of Interest

Nil

References

1. Valekar S, Kshirsagar M, Ashturkar M, Mhaske M, Chawla P, Fernandez K. A cross-sectional study of awareness regarding dog bite and its management in rural community of Maharashtra. Int J Community Med Public Heal. 2014;1(1):8.

2. Chinnaian S, Sekaran G, Ramachandran U, Ravi R, Pandurangan MK. Taboos Related to Dog Bite in an Urban Area of Kancheepuram District of Tamil Nadu, India. J Clin Diagn Res. 2015 Jul;9(7):LC11-4.

3. Arjunkumar H Jakasania, Grishma T Dixit, Akash P Patel, Farzana M Mansuri KDM. Misconceptions and Myths Regarding Animal Bite and Rabies: A Community Based Study in Ahmedabad. Natl J Community Med. 2018;9(2):87–90.

4. Rabies [Internet]. [cited 2018 Dec 26]. Available from: https://www.who.int/news-room/fact-sheets/detail/rabies

5. Weller SC, Romney AK (Antone K. Systematic data collection. Sage Publications; 1988. 96 p.

6. Bernard H R. Nonprobability samples and choosing informants.

7. Borgatti SP, Halgin DS. Consensus Analysis.

8. Varsharani K V, T CL, U JY, Professor A, Professor A. Cultural Practices among Animal Bite Cases of Government Medical College, Latur. Vol. 1, MedPulse-International Medical Journal. 2014.

9. Menezes R. Rabies in India. CMAJ. 2008 Feb 26;178(5):564–6.

10. Ghosh S, Chowdhury S, Haider N, Bhowmik RK, Rana MS, Prue Marma AS, et al. Awareness of rabies and response to dog bites in a Bangladesh community. Vet Med Sci. 2016 Aug;2(3):161–9.

11. A S Sekhon, Amarjit Singh, Paramjit Kaur SG. Misconception and Myths in the management of animal bite cases. Indian J Community Med. 2002;XXVII(Jan-Mar 2002).

12. 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. 2006 Dec;38(4):355–61.