

# Knowledge attitude and practices regarding animal bites and rabies in urban population of North-Goa

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**Abstract** — Rabies is an endemic zoonotic disease in India. Dog is the main reservoir of rabies in India and other developing countries? An estimated 20565 deaths are reported in India due to rabies annually. It is a universally fatal disease but preventable by timely post-exposure prophylaxis. The current study was undertaken to assess the knowledge, attitude and practices towards animal bites and rabies in an urban community catered to Urban Health Centre, Santa Cruz, North Goa. 150 adult family members, one from each randomly selected family from the urban community catered to Urban Health Centre, Santa Cruz, North Goa were interviewed using a semi-structured questionnaire regarding their personal details and their knowledge attitude and practices about animal bites and towards rabies. Out of the 150 study participants, 132 (88%) were aware of the disease rabies and majority i.e. 140 (93%) knew that dog bites lead to rabies. However only 60 (40%) were aware of other animal bites causing rabies. 116 (77%) of study subjects preferred a hospital for wound treatment. However a significant 34 (22%) preferred traditional remedy or healer. Nearly one third i.e. 44 (29%) of the study subjects preferred to observe the dog for at least ten days following dog bite before being advised the same at health facility. 47 (31.33%) of the study participants had been bitten by a dog in the past of which 35 (74.47%) were bitten by a stray dog. 62 (41.33%) owned a pet dog of which 32 (51%) were vaccinated.

**Keywords:** Knowledge, Attitude and Practices, Rabies, Dog bites

## I. INTRODUCTION

Rabies is one of the oldest and deadliest diseases known to man and still continues to cause significant human mortality in India and other developing countries. This fatal viral encephalitis is a zoonotic disease transmitted to man by bites or licks or scratches from rabid animals. India is reported to have the highest incidence of rabies globally. Dogs are the main source of human rabies, contributing up to 99% of all rabies transmissions to humans.<sup>1</sup> Annually about 15 million people are bitten by animals, mostly dogs and need post-exposure prophylaxis. An estimated 20565 deaths are reported in India due to rabies annually.<sup>2</sup>

It is a universally fatal disease but preventable by timely Post exposure prophylaxis. Community awareness is essential to prevent and control rabies. Thus to improve community awareness it is crucial to assess community knowledge about dog bites and rabies. The current study was undertaken to assess the gaps in knowledge, attitude and practices towards animal bites and rabies in an urban community catered to Urban Health Centre, Santa Cruz, and North Goa.

## II. METHODOLOGY

The present community-based cross-sectional study was conducted in an urban community of Santa Cruz, North Goa over a period of three months from July 2017 to October 2017. Institutional Ethics Committee approval was obtained prior to commencement of the study. Informed written consent was taken from the study participants prior to interviewing them.

150 adult family members, one from each randomly selected families from the urban community catered to Urban Health Centre, Santa Cruz-Goa were interviewed using a semi-structured questionnaire regarding their personal details and their knowledge attitude and practices about animal bites and towards rabies.

Locked household and those not willing to give consent were excluded from the study. Data was entered and analyzed using SPSS software version 22.

## III. RESULTS

Out of the 150 study participants majority i.e. 90 (60%) were females. More than one third i.e. 58 (38%) belonged to the age group of 30–40 years of age. (Table 1)

**Table 1**  
**Socio-demographic Profile of Study Population (N=150)**

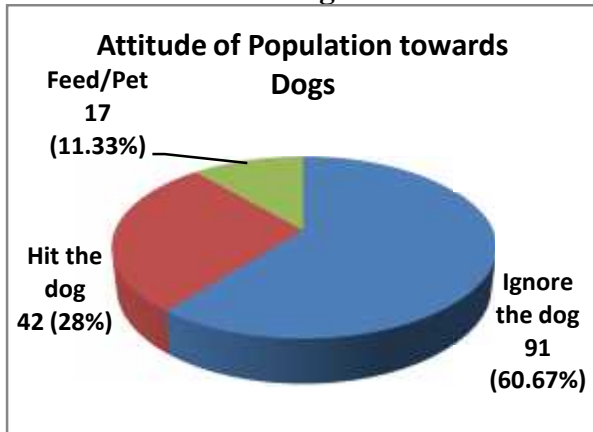
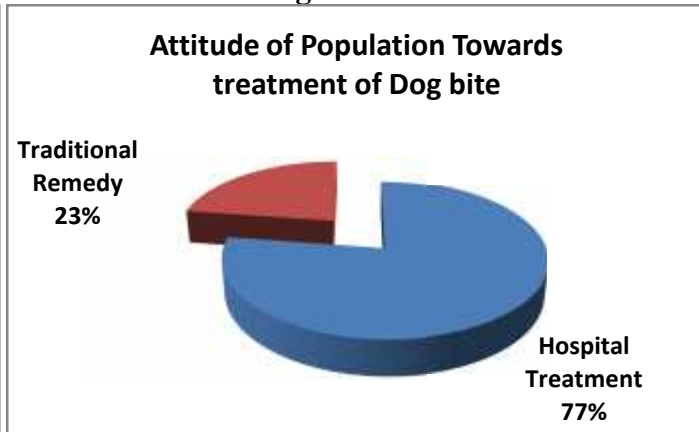
S. No.	Socio-demographic Variable	Number	Percent	
1	Age (in Years)	20 – 30	40	26.67
		30 – 40	58	38.67
		40 – 50	34	22.67
		50	18	12
2	Sex	Male	60	40
		Female	90	60

A high proportion of study participants 132 (88%) were aware about the disease rabies. Majority i.e. 140 (93%) knew that dog bites lead to rabies. However only 60 (40%) were aware of other animal bites can cause rabies. As much as 106 (70%) did not know that rabies is a fatal disease and 126 (84%) believed that vaccination can prevent rabies after a dog bite. Only 56 i.e. 37% of the study participants were aware of the free availability of Anti-Rabies Vaccine at Government Hospitals. Only 70 (46%) had the adequate knowledge of wound washing technique following dog bite. Majority i.e. 102 (68%) of the study participants were unaware of the need for tetanus immunization following a dog bite. (Table 2)

**Table 2**  
**Knowledge of Study Population regarding animal bite and rabies (N=150)**

S. No.	Knowledge	Number	Percent
1	Awareness about rabies	132	88
2	Dog bite is cause of Rabies	143	95.33
3	Other animal bite is cause of Rabies	40	26.67
4	Rabies is Fatal	106	70.67
5	Rabies is prevented by Vaccination	126	84.00
6	Importance of Wound Washing	70	46.67
7	Need of Tetanus	102	68.00

When inquired about the attitude of the study participants towards dogs in the vicinity majority i.e. 91 (61%) said that they would ignore the dog. Whereas 42 (28%) would chase or hit the dog and only 17 (11%) preferred to feed or pat the dog. (Figure 1)

**Figure 1****Figure 2**

116 (77%) of study subjects preferred a hospital for wound treatment. However a significant 34 (22%) preferred traditional remedy or healer. (Figure 2)

Nearly one third i.e. 44 (29%) of the study subjects preferred to observe the dog for at least ten days following dog bite. 47 (31%) of the study participants had been bitten by a dog in the past, of which 35 (74%) were bitten by a stray dog. 62 (41.33%) owned a pet dog of which only 32 (51.61%) were vaccinated.

#### IV. DISCUSSION

A significant number of study participants (88%) were aware that dog bites lead to rabies which is little lower than a similar study done by US Singh et al in Gujarat which showed that 98.6% of the study participants were aware about the disease.<sup>3</sup> A very low proportion (40%) of study participants were aware of other animals causing rabies which is similar to findings reported in a multi-centric study across the country done by Ichupujani R et al.<sup>4</sup>

The knowledge regarding appropriate wound washing following dog bite was found to be inadequate among the study participants. Though 84% of the study participants were aware that vaccination following dog bite can prevent rabies, only 37% were aware of the free availability of Anti-rabies vaccine in Government Hospitals which may be a reason for high number of deaths due to rabies in India.

In this study, 77% of study subjects preferred a hospital for wound treatment. However a quite a high proportion (22%) preferred traditional remedy or healer which was higher than that reported by Tripathy RM et al in Odisha, which reported that 19% had positive attitude towards traditional healers.<sup>5</sup>

In this study, 31% of the study participants had been bitten by a dog in the past of which 35 (74%) were bitten by a stray dog which explains the need for mass canine vaccination drives by appropriate authorities to prevent and control rabies.

This study reports that 41.33% owned a pet dog of which only 51.61% vaccinated their pets. Although lower proportion of owned /pet dogs were reported by M. Prakash et al in pune which reported that 25% of the study participants but proportion of vaccinated owned dog was quite similar to the present study i.e. 52%.<sup>6</sup>

## V. CONCLUSION

Knowledge regarding dog bite management in relation to various aspects of prevention of rabies is poor among the urban population of Santa Cruz, Goa. IEC activities are necessary to increase the awareness among the people regarding dog bites and correct measures for Post Exposure Prophylaxis in this urban area in order to control and prevent rabies in the community.

## CONFLICT OF INTEREST

None declared till now.

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