

## Rabies Clinic at SRVS Medical College and Hospital, Shivpuri Central India: A Cross-Section Study of Rabies Knowledge

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Conflict of interest: Nil

### Abstract

**Background:** We discovered preventable rabies cases in the Shivpuri area; the health agency is responsible for handling all rabies-related tasks. The government should create a policy for the prevention of rabies and provide information to the public regarding its prevention. The primary goal of this study was to increase public awareness of rabies in the community surrounding the Shrimant Rajmata Vijaya Raje Scindia Medical College & Hospital in Shivpuri, central India.

**Materials and Methods:** From January 2022 to June 2022, participants in this observational cross-sectional study were those who visited the Shrimant Rajmata Vijaya Raje Anti-Rabies Clinic at Shrimant Rajmata Vijaya Raje Scindia Medical College & Hospital Shivpuri in central India. 400 people participated in the study's data sample, which was collected using a questionnaire.

**Result:** Among the participants in this survey, 78 (19.5%) had good knowledge, 228 (57%) had moderate knowledge, and 94 (23.5%) had bad knowledge. The death rate for rabies was known to 72.2 percent of the participants. 33.3 percent of participants are aware that there is no treatment for rabies. Participants' knowledge of rabies' treatability was at 79%. Of the participants, 53% are aware that bites should be washed with soap and water. Of the participants, 32% are aware that it is an infectious disease. About 7.5 percent of the participants were aware that the rabies virus can be found in a rabid patient's vomit, saliva, tears, and urine. One injection is sufficient in the opinion of about 18% of participants.

**Conclusion:** In this study, we discovered that lack of awareness is a significant issue for both urban and rural populations in Shrimant Rajmata Vijaya Raje Scindia Medical College & Hospital Shivpuri, central India. According to the study's findings, government programmes in India should place a strong emphasis on raising knowledge of the rabies virus and its potentially lethal effects.

**Keywords:** Awareness, Consultation, Dog bites, Rabies virus.

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### Introduction

Rabies – Probably an angry beast with foaming lips comes to mind when you hear this word. An encounter with an infected animal can lead to the development of this unpleasant, perhaps fatal ailment. A virus that

attacks the central nervous system (CNS), particularly the brain, is the source of rabies. Wild animals like skunks, raccoons, and bats, as well as domestic dogs, cats, and rabbits, can infect people by biting or scratching them. A

prompt reaction is essential in the viral battle. The Centers for Disease Control and Prevention (CDC), an authoritative authority, reports that rabies claims the lives of about 59,000 individuals annually throughout the world. Of them, a rabid dog bit around 99 percent of them. Both human and animal vaccines are readily available, which has Virtually all warm-blooded animals, including humans, are susceptible to the highly lethal and currently fully preventable acute viral disease of the central nervous system known as rabies, which causes deadly encephalomyelitis [1]. The pathogen is a member of the Rhabdoviridae family's Lyssavirus genus. The pathogen is a member of the Rhabdoviridae family's Lyssavirus genus [2] Everywhere throughout the nation, with the exception of the Andaman and Nicobar Islands and Lakshadweep, it is endemic [3]

The disease rabies is categorised as a neglected zoonotic tropical illness. Numerous cultural practises and myths continue to be practised without any basis in fact or understanding of rabies. The use of red chilli, lime, and herbs as opposed to cleansing the wound with soap and water is one of the numerous myths that are widely accepted in the community regarding the treatment of animal bite wounds. The cause of this problem is a lack of knowledge about post-exposure prophylaxis guidelines and rabies prevention strategies. Additional causes include insufficient dog vaccination, an unchecked dog population, and an irregular supply of rabies vaccine and immunoglobulin, particularly in primary healthcare facilities in rural India. The prevention of rabies in the community was the main topic of our investigation. As rabies serum is now available, more research on vaccine and vaccination needs to be done [4]. The number of rabies-related deaths may be ten times more than what has been reported, according to estimates [5]. The cost of rabies vaccines

alone in India is estimated to be INR 15 billion, inflicting a heavy financial load on the government [6]. Appropriate prophylaxis should be administered in a timely manner to prevent rabies deaths [7]. The goal of this study was to evaluate the knowledge of anti-rabies clinic participants about rabies at the Shrimant Rajmata Vijayaraje Anti-Rabies Clinic of Scindia Medical College & Hospital Shivpuri in central India.

### Materials and Methods

From January 2022 to June 2022, participants in this observational cross-sectional study were those who visited the Shrimant Rajmata Vijaya Raje Anti-Rabies Clinic at Shrimant Rajmata Vijaya Raje Scindia Medical College & Hospital Shivpuri in central India. 400 people were included in the study's data sample, which was collected through a questionnaire. Using the 4PQ/E2 formula, a sample size of 400 was determined, assuming that victims of animal bites had a 50% understanding of the maximum variance and a relative tolerated error of 5%. All attendees at the rabies clinic received a pre-designed questionnaire; those who agreed and answered the questions truthfully were included in the study.

### Exclusion criteria:

1. <18-year-old participants,
2. Those who did not give consent
3. Subsequent visitors (repeat visitors).

During the initial clinic visit, information was gathered utilising a questionnaire. The information was gathered in this way, and MS Excel and IBM SPSS 24.0 were used for analysis. Count data were expressed as proportion, whereas continuous data were expressed as mean and standard deviation. A standardised questionnaire with a total of 13 items about knowledge of rabies was created. The questionnaire also contained information on socio-demographic factors. A erroneous

response received a score of 0, and a right answer received a score of 1. Scores of 0–4 were considered low, 5–8 were considered ordinary, and 9–13 were considered good.

### Result

According to this study, offenders possessed knowledge that was good in 18.5 percent of cases, average in 56 percent, and bad in 21.5 percent. The death rate for rabies was known to 72.2 percent of the participants. 33.3 percent of participants are aware that there is

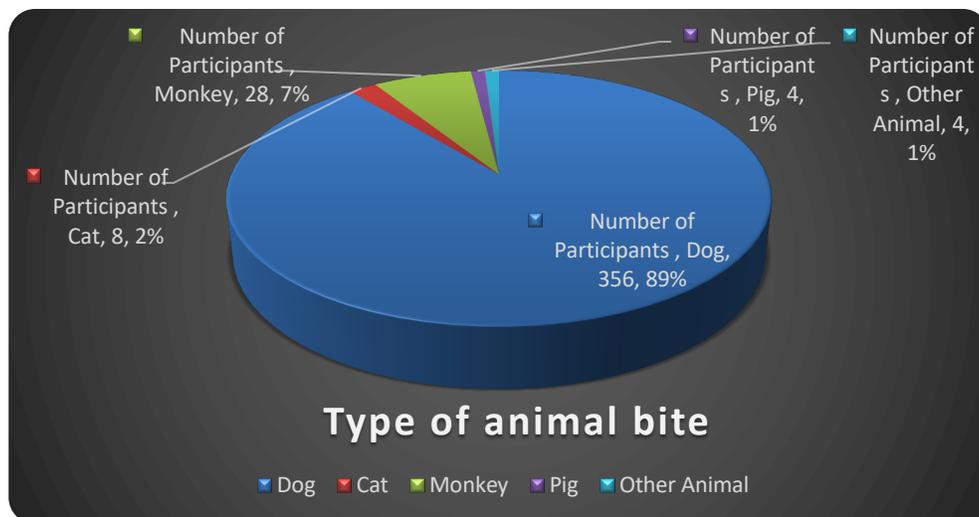
no treatment for rabies. Participants' knowledge of rabies' treatability was at 79%. Of the participants, 53% are aware that bites should be washed with soap and water. Of the participants, 32% are aware that it is an infectious disease. Only 7.5% of the participants were aware that the rabies virus can be present in a rabid patient's vomit, saliva, tears, and urine. One injection is sufficient in the opinion of about 18% of participants.

**Table 1: Socio-demographic profile of participants of ARC (Anti-rabies clinic)**

	Number participants	Percentage
Age (year)		
<10	79	19.75
10-20	108	27.00
20-30	153	57.30
30-40	33	24.81
40-50	14	3.50
>50	13	3.25
Sex		
Male	267	66.75
Female	133	33.25
Education		
Illiterate	43	10.75
5 <sup>th</sup>	16	4.00
8 <sup>th</sup>	96	24.00
10 <sup>th</sup>	88	22.00
12 <sup>th</sup>	49	12.25
Graduate	76	19.00
Postgraduate and above	32	8.00
Residence		
Rural	127	31.75
Urban	273	68.25

**Table 2: Type of Animal Bite**

Type of Animal Bite	Number of Participants
Dog	356
Cat	8
Monkey	28
Pig	4
Other Animal	4

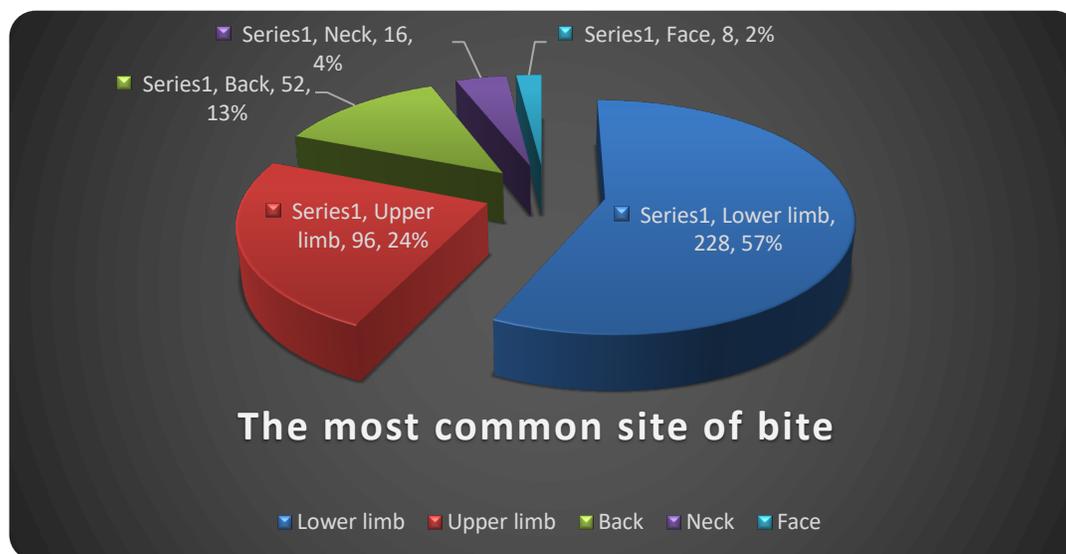


**Graph 1: Type of animal bite**

We have include 400 participants in our study, 66.75% males and 33.25% females. Maximum participants were from the age group of 20-30 years 153(57.30%), from urban area 273 (68.25%), and studying in 8<sup>th</sup> standard 96 (24%) [Table 1]. Most participants were victims of dog bite 356(89%) [Graph 1].

**Table 3: Common site of bite**

Common site of bite	Number of participants
Lower limb	228
Upper limb	96
Back	52
Neck	16
Face	8

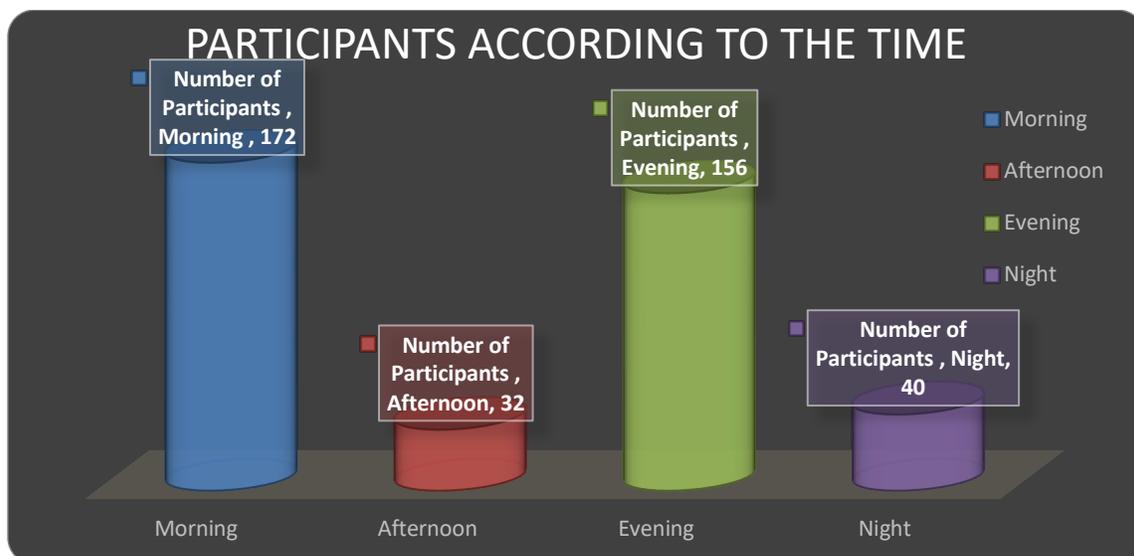


**Graph 2: The most common site of bite**

The most common site of bite was lower limb 228(57%), followed by upper limb 96(24%), back 52(13%), neck 16(4%) and face 8(2%) [Graph 2].

**Table 4: Participants according to the time.**

Time	Number of Participants
Morning	172(43%)
Afternoon	32(8%)
Evening	156(39%)
Night	40(10%)

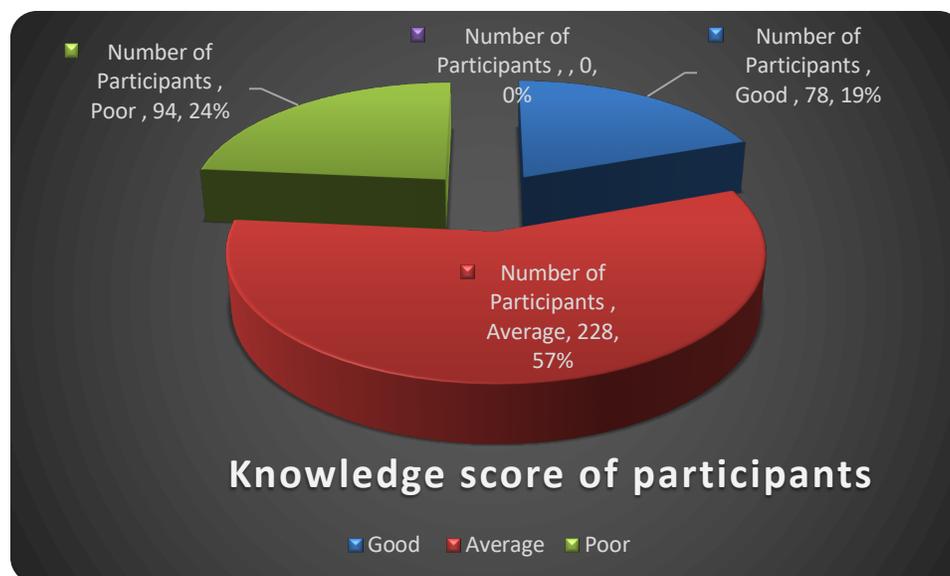


**Graph 3 Participants according to the time**

In this study study, maximum incidences of dog bite occurred in the morning 172(43%), same as evening 156(39%), night 40(10%), and the lowest in the afternoon 32(8%) [Graph 3].

**Table 5: participants according to knowledge score**

knowledge score	Number of Participants
Good	78(19.5%)
Average	228(57%)
Poor	94(23.5%)



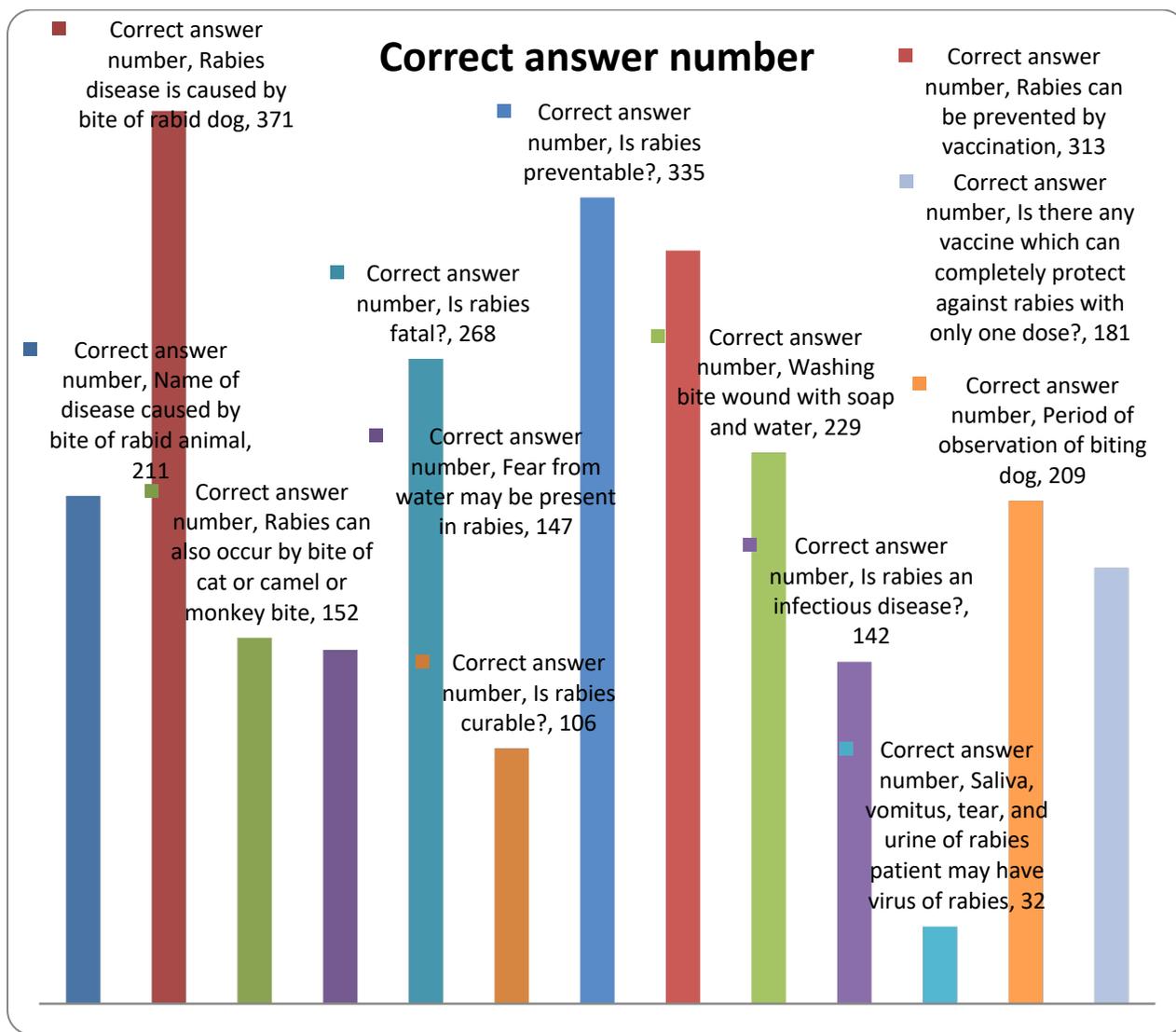
**Graph 4: Knowledge score of participants**

Only 78(19.5%) participants had good knowledge. 228(57%) percent had average knowledge, and only 94(23.5%) participants had poor knowledge [Graph 4]. Approximately 211(52.75%) of the contributors knew the call of the ailment resulting from a rabid animal. extra than 377(92.75%) of the members have been aware of the fact that it's miles because of the chunk of a rabid dog. The fact that rabies also can be as a result of the chew of monkey or cat or camel became regarded to 152(38%) of the contributors. best one 147 (36.75%) of the participants have been aware of fear from water in rabies. Fatality of rabies was regarded to about 268 of the members (67%). 106(26.5%) of the individuals knew that rabies is not curable, but approximately 335(83.75%) knew that it's far preventable and 313(78.25%) knew that it can be avoided by vaccination. 229(57.25%) percent of the individuals have been privy to washing the chew wound with soap and water. approximately 142 (35.5%) of the contributors knew that it's far an infectious sickness, however simplest 32(8%) knew that saliva, vomitus, tear, and urine of rabies affected person may also have rabies virus. correct period of commentary of biting dog was recognized to nearly 209(2.25%) of the contributors. approximately 181(43.93%) of the attendees had a wrong notion that a single injection is enough for immunization [Table 6].

**Table 6: Knowledge about rabies/animal bite**

S.N.	Question	Correct number	Percentage
1.	Name of disease caused by bite of rabid animal	211	52.75
2.	Rabies disease is caused by bite of rabid dog	371	92.75
3.	Rabies can also occur by bite of cat or camel or monkey bite	152	38
4.	Fear from water may be present in rabies	147	36.75
5.	Is rabies fatal?	268	67
6.	Is rabies curable?	106	26.5
7.	Is rabies preventable?	335	83.75
8.	Rabies can be prevented by vaccination	313	78.25

9.	Washing bite wound with soap and water	229	57.25
10.	Is rabies an infectious disease?	142	45.25
11.	Saliva, vomitus, tear, and urine of rabies patient may have virus of rabies	32	8
12.	Period of observation of biting dog	209	52.25
13.	Is there any vaccine which can completely protect against rabies with only one dose?	181	45.25



**Graph 5: Correct answer number**

**Discussion**

Our take a look at covered seventy two% adult males just like the studies of Ganasva *et al.* (71.7%),[8] Acharya *et al.* (76.4%),[9] Jain *et al.* (72%),[10] Chandan *et al.*

(85%),[11] Tripathy (72.5%).[12] In our look at, most members were from an urban vicinity (72%), while most populace become from a rural area (87.5%) in the examine

through Tripathy.[12] most contributors were analyzing in 10th fashionable (22.5%), and 11.22% of the participants were illiterate in our observe; while 52.5% of the individuals had studied up to number one college and 33.75% have been illiterate in the have a look at by using Tripathy.[12] most bites had been of category 2 (73.8%) in our study, whereas inside the look at via Agarvval,[13] 48% have been elegance II bites. In our study, the most frequent place of bite was a lower limb (62%) but in Agarvval's study, the most frequent site of chew was the legs (72%). In the study by Agarvval, street dogs and puppies were responsible for nearly the same number of bites, however in our observation, street dogs were responsible for 69 percent of bites and puppy puppies for 31 percent. In our study, the majority of chew incidents occurred in the morning (43 percent), followed by night (35.5 percent), night (14 percent), and the least in the afternoon (7.5 percent), but the study by Agarvval revealed no significant difference in bites occurring at particular times of the day.[13]

In our study, In Herbert's study, the mass media (television, radio, newspaper) and family members were the most common sources of information, whereas the most common source of information was the hospital/doctors/health workers/health professionals (50.5 percent). In Herbert's study, the mass media (television, radio, newspaper) and family members were the most common sources of information, whereas the most common source of information was the hospital/doctors/health workers/health professionals (50.5 percent).[14] In Herbert's examination, a total of 74.1 percent (137) had knowledge about rabies; in our observation, about half of the participants knew the name of the disease caused by the rabid animal. 84 percent of the participants had heard about the illness in the study via Tripathy. .[12] In our study, more than 90% of the participants knew that rabies

is transmitted by the chew of a rabid dog, whereas in Herbert's study, only 67% of participants knew that rabies is transmitted through puppies.[14] About 98 percent of participants were aware that Tripathy's dog was the test's source of contamination. Only 10.11 percent of those who took the Tripathy-based examination realised that other animals were the source of contamination.[12] 39 percent of people in our study knew the equivalent at the same time. In our study, the death rate from rabies was estimated to be close to two-thirds of the participants (68.2 percent), whereas this parent was 54.1% in Herbert's study[14] and 84% in Agarvval's study. [13]

An essential step in preventing rabies is to wash the area around the wound with soap and water right away for at least 15 minutes. This helps to get rid of the rabies virus from the wound site. 56 percent of the participants in our study were aware that the chew wound should be cleaned with soap and water. Similar findings were made in Herbert's study, where almost half of the population was unaware that an animal chew wound should be cleaned with water. [14]

1% of the participants in the study revealed they have a phobia of water Chandan *et al.*,[11] 12% inside the take a look at by Singh,[15] and 35.5% contributors in our take a look at. cognizance about the rabies vaccine turned into suggested via 42.7% of the participants in Herbert's study[14] and 80% in our take a look at. According to Tripathy's test of 400 participants, 137 (34.25 percent) had the right knowledge, mindset, and practises (KAP), while 263 (65.75 percent) had poor KAP. About half of the participants (51%) had very good comprehension scores, and 196 (49%) had unsatisfactory knowledge scores. [12] Only 22.5 percent of the participants have the necessary expertise. In our have a look at, 56% percentage had truthful know-how and 21.5% contributors had poor expertise

## Conclusion

For the past few years, there has been no noticeable decline in the prevalence of rabies in India. Because rabies is still not a recognised illness in India, the apparent incidence is likely sarcastic in nature. Public education efforts must be launched to inform people about rabies, especially in remote places, and the critical importance of seeking hospital treatment immediately after an animal chew. A thorough grasp of rabies could be very helpful in the quick and successful fight against this fatal disease.

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