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Awareness And Perception About Rabies Among Person Attending Rabies Clinic In Government Medical College Orai, Jalaun

[1]Dr. Pawan Kumar Agrahari, [2]Dr. Santosh Kumar Verma
[1]Junior Resident, [2]Professor
Department Of Community Medicine,
Government Medical College, Orai, Jalaun, Uttar Pradesh

***Corresponding Author:**
Dr. Santosh Kumar Verma
Professor, Department Of Community Medicine,
Government Medical College, Orai, Jalaun, Uttar Pradesh

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Abstract

Background

Rabies is a vaccine-preventable viral disease that remains endemic in India, accounting for approximately 36% of global rabies deaths. This study investigates the awareness and perceptions of rabies among individuals attending the rabies clinic at Government Medical College Orai, Jalaun.

Methods

A cross-sectional study was conducted over three months, enrolling 110 participants who completed a structured questionnaire. The questionnaire assessed demographic information, knowledge of rabies, common misconceptions, and awareness of preventive measures.

Results

The study found that 70% of animal bites were due to dogs, with a significant proportion (83.64%) from street dogs. While 94.55% of participants acknowledged the importance of washing bite wounds, 16.36% reported no treatment. Vaccination rates were high, with 95.45% receiving tetanus and anti-rabies vaccines. However, only 40% were aware that multiple doses are required for effective rabies prevention. Awareness regarding rabies transmission from animals other than dogs was also low, with only 60% recognizing this risk.

Conclusion

The findings reveal critical gaps in knowledge and practices concerning rabies prevention and treatment. There is an urgent need for comprehensive public health education campaigns to enhance awareness about proper wound management, the significance of timely medical care, and effective vaccination strategies. Addressing these educational gaps could significantly reduce the incidence of rabies in the community.

Keywords: Rabies, Awareness, Animal bites, Vaccination, Knowledge gaps, Perception

Introduction

Rabies is a zoonotic, fatal and progressive neurological infection caused by rabies virus. Rabies is a vaccine-preventable viral disease found in over 150 countries and territories, caused by the Lyssavirus from the Rhabdoviridae family.[1]

In India, rabies is endemic in all regions except for the Andaman and Nicobar Islands and Lakshadweep, accounting for approximately 36% of global rabies deaths. [2] The true extent of rabies in India remains unclear, but available data indicate it results in 18,000 to 20,000 deaths annually. [3]

Children under 15 years old represent 30-60% of reported rabies cases and fatalities, often due to unrecognized and unreported bites.[4]Dogs are responsible for up to 99% of human rabies transmissions. However, rabies deaths are 100% preventable with prompt and appropriate medical intervention. Vaccinating dogs is the most cost-effective strategy to protect humans from rabies. [5]

Cultural myths and misconceptions regarding rabies persist, often leading to ineffective wound management practices, such as using red chili, lime, or herbs, instead of properly washing wounds with soap and water. [6] Many people believe rabies only occurs from animal bites, lacking knowledge about the disease, vaccination schedules, and the importance of pet vaccination. [7]

This lack of awareness is compounded by insufficient dog vaccination, uncontrolled canine populations, and irregular supplies of anti-rabies vaccines and immunoglobulin, particularly in rural healthcare facilities. Therefore, my study focused on assessing the awareness and perceptions of rabies among individuals attending the rabies clinic at Government Medical College Jalaun. The findings aim to enhance public awareness and guide appropriate preventive measures, ultimately helping to reduce the burden of this disease.

Aim

To investigate the awareness and perceptions of rabies among individuals attending the rabies clinic at Government Medical College Orai, Jalaun.

Objectives

1. To examine the demographic characteristics of the study participants.
2. To evaluate the level of awareness and understanding of rabies among the participants.
3. To identify common misconceptions and cultural beliefs related to rabies in the community.
4. To assess the participants' knowledge of preventive measures and available treatments for rabies.

Methodology

1. **Study-Design**
   A cross-sectional study was conducted at the rabies clinic of Government Medical College Orai, Jalaun.
2. **Study duration** 3 month
3. **StudyPopulation**
   The study were including individuals attending the rabies clinic, including patients receiving post-exposure prophylaxis and their caregivers.
4. **SampleSize**
   all patients were enrolled for study who comes under 3month in antirabies clinic in the Government Medical College Orai, Jalaun. Total 110 patients were enrolled for study
5. **Data Collection Tools**
   - **Questionnaire**: A structured questionnaire will be developed to assess demographic information, awareness, and perceptions regarding rabies. The questionnaire will include:
     - Demographic details (age, gender, occupation, educational background)
     - Awareness of rabies (symptoms, transmission, prevention)
     - Perceptions and beliefs about rabies (common myths, cultural practices)
     - Knowledge of vaccination and treatment options.
6. **Data Collection Procedure**
7. Informed consent will be obtained from all participants before administering the questionnaire.
8. Data will be collected through face-to-face interviews to ensure clarity and comprehensiveness of responses.
9. **Data Analysis**
   - Data will be analyzed using statistical software SPSS latest varsion
   - Descriptive statistics will be used to summarize demographic data and awareness levels.

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- Inferential statistics (e.g., chi-square tests) will be conducted to identify associations between demographic factors and levels of awareness and perception.

10. **Ethical Considerations**

- The study was conducted in accordance with ethical guidelines, ensuring participant confidentiality and voluntary participation.
- Ethical approval had sought from the institutional review board prior to the study commencement.

Result

Table 1: Sociodemographic profile of study participants(n=110)

Characteristics	**Frequency (%)**
Age group (in years)	
0-10yr	22 (20%)
11-20yr	28 (25.45%)
21-49yr	50 (45.45%)
≥50	10 (9.09%)
Gender	
Male	68(61.81%)
Female	32(29.09%)
Education	
No formal education	26 (23.6%)
Less than primary/primary	24 (21.81%)
Secondary/higher secondary	54 (49.09%)
Graduate/post graduate	6 (5.45%)
Residence	
Rural	68(61.82%)
Urban	42(38.18%)
Residential distance in killometres	
≤10 km	72(65.45%)
10-20 km	30 (27.27%)
≥20 km	8 (7.27%)

The sociodemographic profile of the study participants (n=110) is presented in Table 1. The majority of participants were aged 21-49 years (45.45%), followed by those aged 11-20 years (25.45%), 0-10 years (20%), and ≥50 years (9.09%). In terms of gender, a notable proportion of participants were male (61.81%) compared to females (29.09%). Regarding educational attainment, most individuals had secondary or higher secondary education (49.09%), while 23.6% reported having no formal education and

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only 5.45% were graduates or postgraduates. Additionally, a significant number of participants resided in rural areas (61.82%), with urban residents making up 38.18%. When examining residential distance to the health facility, 65.45% of participants lived within 10 kilometers, while 27.27% lived 10-20 kilometers away, and 7.27% lived more than 20 kilometers from the facility. Overall, these findings highlight a predominance of younger adults, a higher male-to-female ratio, diverse educational backgrounds, and a significant rural population among those attending the rabies clinic.

Table 2: Distribution of study participants according to animal bite (n=110):

Characteristics	Frequency	Percentage (%)
Type of Animal Bite		
Dog	77	70%
Monkey	25	22.75%
Cat and others	8	7.25%
Type of Animal		
Street animal	92	83.64%
Pet animal	18	16.36%
Pet Animal Vaccination Status		
Vaccinated	83	75.5%
Not vaccinated	27	24.5%
Previous History of Animal Bite		
Yes	22	20%
No	88	80%
Vaccination of Previous Bite		
Complete vaccination	8	36.36%
Incomplete vaccination	9	40.90%
Not vaccinated	5	22.72%
Whether the Bite was Provoked		
Yes	82	74.5%
No	28	25.5%
Site of Bite		
Lower limb	66	60%
Upper limb	20	18.18%
Face	11	10%
Back and neck	13	11.82%

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Table 2 summarizes the distribution of study participants according to the characteristics of animal bites (n=110). The majority of participants reported dog bites, accounting for 77 individuals (70%), followed by monkey bites (25 participants, 22.75%) and bites from cats or other animals (8 participants, 7.25%).

In terms of the type of animal involved, a significant proportion of bites were attributed to street animals, with 92 participants (83.64%) indicating this, while bites from pet animals accounted for 18 participants (16.36%). Regarding the vaccination status of pets, 83 participants (75.5%) reported that the animals were vaccinated, while 27 (24.5%) indicated that they were not.

When assessing previous history of animal bites, 22 participants (20%) had a prior history of bites, while the majority, 88 participants (80%), had no such history. Among those with a previous bite, the vaccination status varied, with 8 participants (36.36%) having completed vaccination, 9 (40.90%) receiving incomplete vaccination, and 5 (22.72%) not vaccinated at all.

The majority of bites were provoked, as reported by 82 participants (74.5%), compared to 28 participants (25.5%) who stated that the bite was unprovoked. Regarding the site of the bites, most occurred on the lower limb (60%), followed by the upper limb (18.18%), face (10%), and back and neck (11.82%).

Table 3: Distribution of study participants according to their knowledge and practices following animal bite (n=110)

Knowledge and Practices Following Animal Bite	Frequency	Percentage (%)
Toileting Procedure After Bite		
Running tap water only	56	50.9%
Wash with water & soap	36	32.72%
No treatment	18	16.36%
Local Application Over the Wound		
Applied chili	4	3.63%
Applied lime & turmeric	6	5.45%
Applied spirit or antiseptic	14	12.7%
No application	82	78.18%
Place of First Visit		
Quack	12	10.9%
Pharmacy	5	4.54%
Private practitioner	21	19.09%
Hospital	72	65.45%
Gap Between Bite and Visit to Health Facility		
On the day of bite	92	83.63%
1-2 days	10	9.09%
3 or more days	8	7.27%
Vaccination (Tetanus and ARV)		
Taken	105	95.45%

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Not taken	5	4.54%

Table 3 presents the distribution of study participants (n=110) according to their knowledge and practices following an animal bite.

Regarding the toileting procedure after a bite, the majority of participants (50.9%) reported using running tap water only, while 32.72% washed the wound with water and soap. A smaller proportion (16.36%) indicated no treatment was applied.

In terms of local application over the wound, most participants (78.18%) reported not applying anything. Among those who did, 4 participants (3.63%) applied chili, 6 (5.45%) used lime and turmeric, and 14 (12.7%) applied spirit or antiseptic.

When asked about their first place of visit after a bite, the majority (65.45%) went to a hospital, followed by private practitioners (19.09%), quacks (10.9%), and pharmacies (4.54%).

Regarding the time gap between the bite and the visit to a health facility, a significant 83.63% of participants sought treatment on the same day as the bite, while 9.09% visited within 1-2 days, and 7.27% waited 3 or more days.

Finally, vaccination status showed that 95.45% of participants had received tetanus and anti-rabies vaccines, while only 4.54% had not.

These findings reflect a generally good awareness and practice among participants regarding immediate wound management and seeking medical care after an animal bite, with high vaccination rates observed.

Figure 1: Type of animal bite

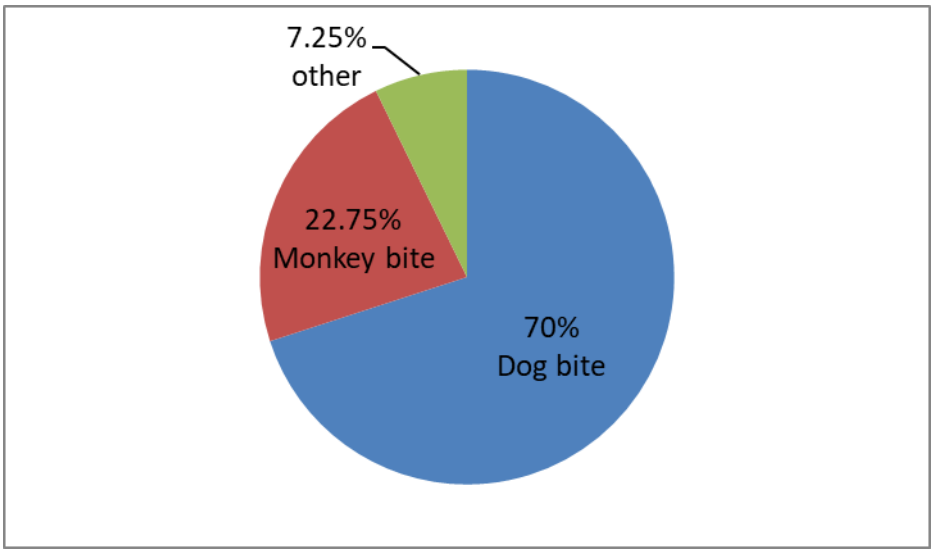

Figure 2: Distribution of study participants according to their category of bite (n = 110)

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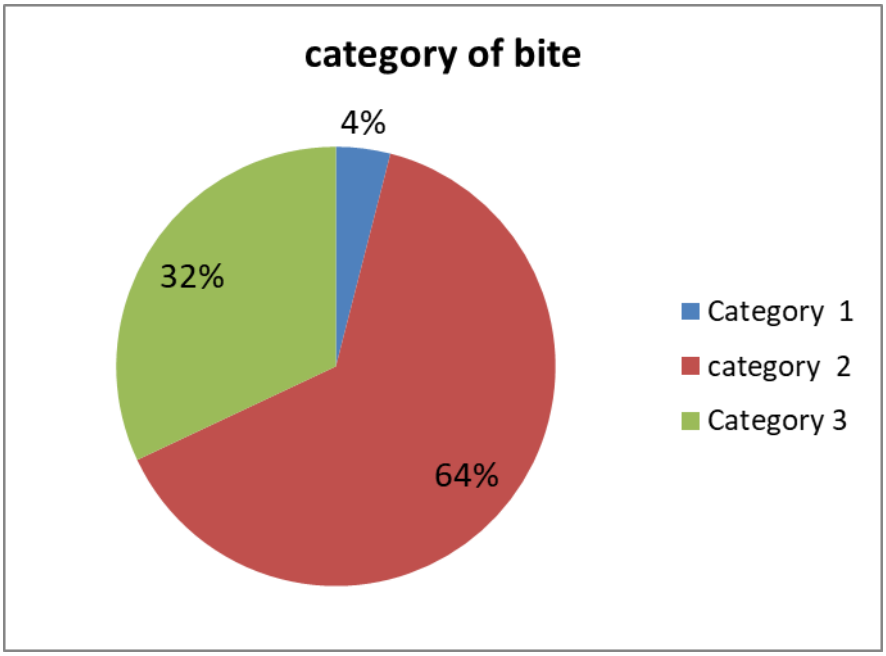

Graph 3: Distribution of participants according to the first source of information

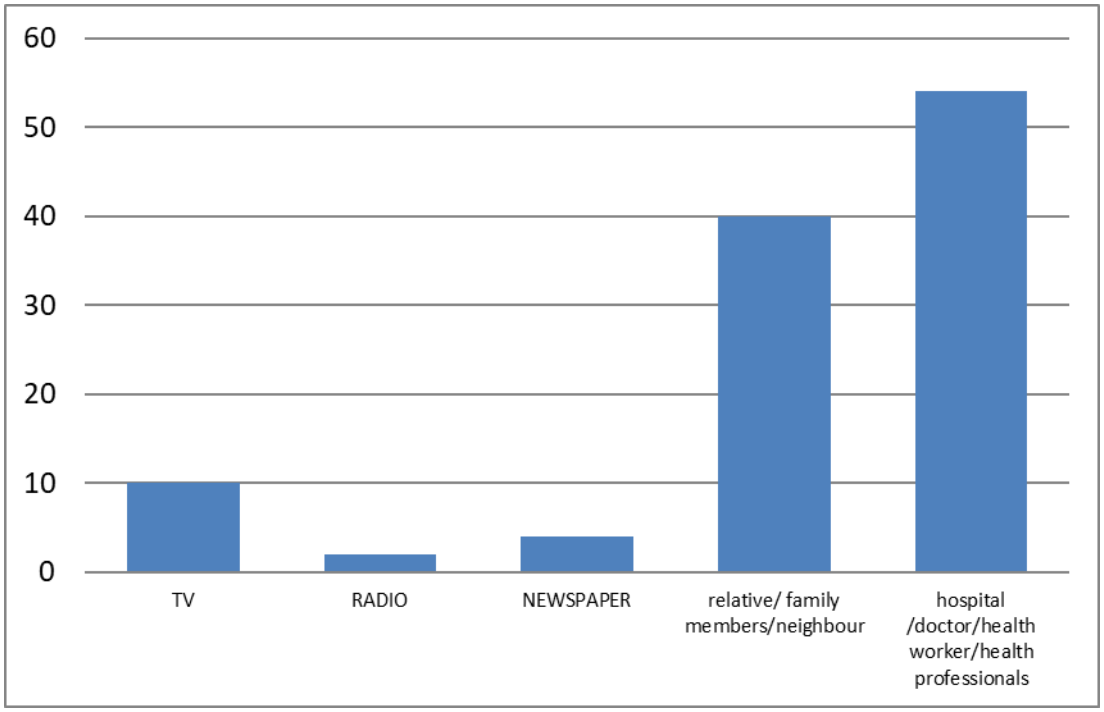

Table 4: Knowledge and perception about rabies/animal bite:

S.N.	Question	Correct Answer Number	Percentage (%)
1	Have you heard about Rabies?	66	60%
2	Do you know Rabies disease is caused by bite of rabid dog?	110	100%

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3	Do you know Rabies can also occur by bite of other animals like monkey, cat, rat, or camel?	66	60%
4	Any idea about washing bite wound?	104	94.55%
5	Local application of anything over the wound?	33	30%
6	Is rabies fatal?	70	63.63%
7	Is rabies curable?	32	29.09%
8	Is rabies preventable?	92	83.63%
9	Is rabies an infectious disease?	77	70%
10	Saliva, vomitus, tear, and urine of a rabies patient may have the virus of rabies?	30	27.27%
11	Do you believe that rabies can be prevented by vaccines?	108	98.18%
12	Is there any vaccine which can completely protect against rabies with only one dose?	44	40%
13	Knowledge regarding availability of free vaccines?	98	89.09%
14	Do you believe that rabies can be confirmed by laboratory?	40	36.36%
15	Is stray dog a problem in the community?	102	92.72%

Table 4 summarizes the knowledge and perceptions about rabies and animal bites among the participants. A total of 66 participants (60%) reported having heard about rabies, and all 110 participants (100%) correctly identified that rabies is caused by the bite of a rabid dog. However, only 66 participants (60%) were aware that rabies could also be transmitted through bites from other animals, such as monkeys, cats, rats, or camels.

Regarding wound management, 104 participants (94.55%) demonstrated awareness about the importance of washing bite wounds. Conversely, only 33 participants (30%) knew about local applications over the wound. A majority, 70 participants (63.63%), recognized that rabies is fatal, while 32 participants (29.09%) believed it to be curable. Furthermore, 92 participants (83.63%) understood that rabies is preventable, and 77 participants (70%) acknowledged it as an infectious disease.

Awareness of the potential for rabies virus transmission through saliva, vomitus, tears, and urine was low, with only 30 participants (27.27%) confirming this fact. A high level of belief in vaccine efficacy was noted, with 108 participants (98.18%) stating that rabies can be prevented by vaccines. However, only 44 participants (40%) knew that no single-dose vaccine can provide complete protection against rabies. Knowledge regarding the availability of free vaccines was reported by 98 participants (89.09%), while 40 participants (36.36%) believed that rabies could be confirmed through laboratory testing. Lastly, a significant majority, 102 participants (92.72%), recognized stray dogs as a problem in the community.

Discussion

The findings from this study provide valuable insights into the knowledge and practices of individuals following animal bites, particularly regarding rabies. A significant proportion of participants reported seeking medical attention promptly, with 83.63% visiting a healthcare facility on the same day as the bite. This is consistent with previous studies that emphasize the importance of immediate treatment in reducing the risk of rabies transmission (Md Sohel Rana et al.20218, Dandan Li,et al 20219).

The majority of participants (50.9%) reported using running tap water to clean bite wounds, while 32.72% used soap and water. This practice aligns with recommendations from the World Health Organization (WHO), which states that washing the

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wound thoroughly with soap and water is one of the most effective methods to prevent rabies after a bite (WHO, 202110). However, the fact that 16.36% of participants did not report any treatment indicates a need for further education about proper wound care.

When examining local applications over the wound, a concerning trend emerged, with 78.18% of participants opting not to apply any substance. Among those who did, only a small number used recognized antiseptics, while some applied non-evidence-based remedies such as chili and lime. This reflects a gap in knowledge and possibly the influence of cultural beliefs regarding wound management (Md Sohel Rana et al.20218, Priyanka Kapoor et al 20193). Educational interventions are necessary to dispel myths and promote evidence-based practices.

In terms of the type of animal bites, dogs accounted for 70% of cases, aligning with global trends that show domestic dogs as the primary source of rabies transmission to humans (Dandan Li,et al 20219, Priyanka Kapoor et al 20193). The high percentage of stray animals involved (83.64%) highlights a critical public health issue, as uncontrolled canine populations contribute significantly to rabies risk in communities (Kaushik Nag et al 20185, Md Sohel Rana et al.20218, Dandan Li,et al 20219).

Vaccination rates for tetanus and anti-rabies were remarkably high, with 95.45% of participants reporting having received vaccinations. This reflects an increased awareness of the importance of vaccinations, which are crucial for rabies prevention. However, the knowledge gap regarding the availability of single-dose vaccines and their efficacy against rabies remains concerning, with only 40% of participants aware of the limitations of such vaccines. This indicates a need for improved education around rabies prevention strategies.

Overall, while there are positive indicators in terms of immediate response to bites and vaccination uptake, the study highlights several areas for improvement in public health education. Increased awareness and education campaigns can help address knowledge gaps regarding wound management, the significance of seeking timely medical attention, and the realities of rabies transmission

Conclusion

This study reveals significant gaps in knowledge and practices regarding rabies and animal bites, with 77% of cases resulting from dog bites, primarily from street dogs (83.64%). Notably, 36% of bites were categorized as Category III, and pet vaccination rates were inadequate. While over half of the participants received information from health personnel, broader public education is necessary.

Improving medical care for animal bites and controlling street dog populations could effectively reduce rabies incidence in the long term. Furthermore, the current reporting of rabies cases is likely an underestimation, as rabies remains a non-notifiable disease in India.

To combat this, health education campaigns are crucial to raise awareness about rabies prevention, the importance of pet vaccination, and the need for timely medical care after bites. These efforts can help decrease morbidity and mortality related to rabies in the community.

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