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Patient's Knowledge and Practices on Rabies Prevention and Control and Animal Bite Management

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ABSTRACT:
This study investigates the level of awareness and practices of patients regarding rabies prevention, control, and animal bite management in Mountain Province. A descriptive survey methodology was employed, with data gathered from 420 respondents at Luis Hora Memorial Regional Hospital. The study focused on demographic factors, awareness of rabies transmission, and practices regarding animal bite management. The findings revealed that while a majority of patients had a high level of knowledge on rabies prevention, gaps in understanding remained, particularly regarding less common rabies carriers and misconceptions about rabies transmission. Dogs were identified as the primary carriers of rabies, and students and young individuals were found to be the most vulnerable to animal bites. The study recommends targeted educational interventions tailored to specific demographic groups to improve knowledge and practices. The need for comprehensive community-based educational campaigns and policy development is emphasized to enhance rabies prevention efforts in the region.

Keywords: Rabies prevention, animal bite management, public health education, awareness, Mountain Province

INTRODUCTION

Animal bites, particularly from dogs, are a growing concern in the Philippines, especially in regions like the Cordillera, where domesticated animals play significant roles in daily life. Despite their usefulness for guarding, companionship, and consuming food scraps, domesticated animals, particularly dogs, remain prone to exhibiting their wild instincts, sometimes leading to harm, including animal bites. This escalating issue, especially concerning stray dogs, is exacerbated by the mismanagement and lack of proper awareness surrounding animal bite prevention and rabies control. The global health community has long recognized the life-threatening risks posed by animal bites, with rabies being a major consequence. Rabies is an entirely preventable but 100% fatal disease, yet the burden of human rabies deaths continues to be high in Asia, Africa, and other developing regions. The Philippines is no exception, where misconceptions and lack of timely medical intervention further exacerbate the risks associated with animal bites. Studies have shown that children, especially those in rural areas, are the most frequent victims of animal bites, leading to injuries in critical areas such as the face. Despite the existence of Animal Bite Treatment Centers

(ABTCs) and programs aimed at rabies prevention, a significant number of bite victims fail to seek proper treatment, often due to financial constraints or a lack of awareness. The Province of Bohol serves as a positive example, where an effective rabies prevention program led to a significant reduction in rabies deaths. However, there remains a gap in local literature, particularly in regions like the Cordilleras, regarding community knowledge and practices surrounding animal bite management and rabies prevention. This study aims to address this gap by examining the knowledge and practices of patients seeking consultation at Luis Hora Memorial Regional Hospital (LHMRH) concerning rabies prevention and control and animal bite management. Specifically, the study seeks to answer key questions regarding the profile of the respondents, their level of knowledge and extent of practice regarding rabies prevention, and the factors that influence these aspects. Additionally, the study aims to identify any significant relationships between knowledge and practice, providing valuable insights for the development of health programs and policies aimed at improving animal bite management and rabies prevention. The main objective of this study is to assess the knowledge and practices of patients at LHMRH regarding rabies prevention and animal bite management. Specifically, it investigates the relationship between their profile characteristics and their knowledge and practices, aiming to propose relevant input for the formulation of effective health programs and policies in the region.

METHODOLOGY

This study utilized a quantitative research design, specifically descriptive and correlational in nature, to assess the knowledge and practices of patients regarding rabies prevention and animal bite management. Descriptive research was employed to systematically observe and describe the characteristics of the respondents without influencing their behaviors, while correlational analysis was used to examine the relationship between the respondents' level of knowledge and their practices. The respondents were 267 patients who sought consultation at Luis Hora Memorial Regional Hospital (LHMRH) in the Cordillera region from September 2023 to January 2024. The research environment was LHMRH, a level 2 hospital that serves the neighboring municipalities. Data was collected using a structured questionnaire adapted from Alie et al. (2015), which was divided into three sections: the first section gathered demographic data, the second assessed awareness regarding rabies prevention and control, and the third focused on practices related to animal bite management. The instrument was validated by three experts, yielding a Content Validity Index (CVI) of 0.95, and was pretested on 10 patients, resulting in a reliability index of 0.98. Permission to distribute the questionnaire was obtained from the Medical Director and Chief Nurse, after which the researcher personally distributed the questionnaires, providing assistance as necessary to ensure complete and accurate responses. The gathered data were analyzed using frequency and percentage for the demographic profile, and Bloom's cutoff categories were applied to assess the level of knowledge. The Likert scale was used to evaluate the respondents' practices on rabies control and animal bite management. For statistical analysis, T-tests and Analysis of Variance (ANOVA) were applied to determine significant differences in knowledge and practices based on demographic variables, while Pearson's Correlation Coefficient was used to assess the relationship between knowledge and practices.

RESULTS AND DISCUSSION

This part presents the profile of the respondents and the analysis and interpretation of the data gathered regarding the awareness and practices of patients on rabies prevention, control, and animal bite management in Mountain Province.

Profile of the Respondents

The demographic profile of the respondents offers important insights into local community awareness and behaviors regarding rabies prevention. The gender distribution is fairly balanced, with a slightly higher number of male participants than female. Age-wise, a significant portion of the respondents are young, with approximately one-third under the age of 15. This emphasizes the need for targeted educational campaigns in schools to increase awareness about rabies risks and preventive measures, especially among children and adolescents. Educationally, the majority of respondents have completed at least high school or college, indicating a relatively educated population that is likely to be receptive to public health messages. However, the presence of individuals with no formal education highlights the necessity for communication strategies that are clear, simple, and accessible to ensure that all community members understand rabies risks and prevention methods.

Regarding marital status and occupation, over 50% of respondents are unmarried, and a large proportion are students. This demographic information is crucial for designing tailored interventions, particularly those targeting youth and school-based programs. Additionally, the unemployment rate of 19.10% suggests that economic barriers may impede access to medical care and vaccinations, making affordable or free post-exposure prophylaxis (PEP) essential for effective rabies management.

In terms of bite classification, most respondents had experienced Category II bites (74.91%), which include superficial bites or scratches that still pose a risk for rabies transmission. This indicates the urgent need for readily accessible PEP, particularly for individuals with animal bites, emphasizing the importance of prompt and proper wound care. The majority of bites were caused by dogs (80.15%), consistent with global trends where dogs are the primary rabies vector. This highlights the importance of dog vaccination programs and promoting responsible pet ownership. Although bites from cats and monkeys are less frequent, they underscore the necessity of public education on the proper handling of various animals.

The findings underscore the critical need for robust rabies prevention and control strategies in Mountain Province. Recommendations include enhancing public awareness through educational campaigns, ensuring that PEP is affordable and accessible, and conducting widespread dog vaccination campaigns. Addressing these issues is crucial for reducing rabies incidence and improving public health outcomes in the region. Supporting studies, such as those by Sambo et al. (2022) in Tanzania, demonstrate the effectiveness of large-scale dog vaccination campaigns in reducing rabies cases. Similarly, Hampson et al. (2019) highlight the cost-effectiveness of public education and vaccination efforts in preventing rabies-related fatalities. The “One Health” approach, as discussed by Abela-Ridder et al. (2016), further emphasizes the importance of coordinated efforts between the veterinary and public health sectors in managing zoonotic diseases like rabies. These findings reinforce the need for a comprehensive and collaborative strategy to combat rabies in Mountain Province.

Table 2. Profile of the Respondents

Profile	Total	f	%
Gender			
Male		142	53.18
Female		125	46.82
Age			
0-15 years old		82	30.71
16-30 years old		56	20.97

31-45 years old		45	16.85
46-59 years old		49	18.35
60 years old and above		35	13.11
Education Background			
Elementary Level		57	21.35
High School Level		86	32.21
College Level		104	38.95
No Formal Education		20	7.49
Marital Status			
Single		151	56.55
Married		101	37.83
Widower		15	5.62
Occupation			
Student		107	40.07
Government Employed		37	13.86
Privately Employed		25	9.36
Self Employed		47	17.60
Unemployed		51	19.10
Category of Bite			
Category I			
Category II		200	74.91
Category III		67	25.09
Biting Animal			
Dog		214	80.15
Cat		38	14.23
Monkey		15	5.62
Total		267	100.00

Note: f = Frequency; % = Percentage

Level of Knowledge of Patients on Rabies Prevention and Control and Animal Bite Management

The data in Table 3 reveal varying levels of knowledge among respondents about rabies prevention and control. A majority correctly identified that dogs are the primary carriers of rabies, with 266 respondents aware of this fact. Additionally, 264 respondents understood that animal bites result from injuries caused by an animal's mouth and teeth, and 258 recognized animal bite treatment centers as facilities for appropriate medical care. However, misconceptions were noted, such as the belief that rabies can be transmitted by touching vaccinated animals, reported by 28 respondents. Awareness of less common rabies carriers, such as monkeys (156 respondents) and bats (143 respondents), was also limited.

While respondents exhibited generally high knowledge of rabies transmission, treatment, and prevention, there is a need for targeted educational initiatives to address these misconceptions. These findings align with studies by Hampson et al. (2019) and Nel and Rupprecht (2021), which emphasize the importance of integrated public health strategies, including education and dog vaccination campaigns. Research by Taylor et al. (2020) underscores the success of community-based rabies education in Southeast Asia,

supporting the need for similar efforts in Mountain Province to enhance public awareness and improve rabies prevention practices.

Level of Knowledge of Patients on Rabies Prevention and Control and Animal Bite Management

Table 3 shows patient responses regarding their knowledge of rabies prevention, control, and animal bite management. The majority of patients demonstrated strong knowledge, particularly in areas like animal bite treatment centers, bite categorization, and rabies transmission. Specifically, 63.30% of patients were highly knowledgeable, indicating significant awareness of rabies and its transmission mechanisms. A large portion of participants also understood the importance of animal vaccination and human anti-rabies immunization, reflecting the effectiveness of public health education.

However, knowledge gaps were observed in areas related to less common rabies carriers, such as monkeys and bats. About 7.49% of patients showed low knowledge in these areas. Additionally, 10.53% of respondents were unaware that rabies could be transmitted through vaccinated animals, suggesting persistent misconceptions. These gaps highlight the need for targeted educational interventions. The high awareness observed aligns with findings from studies by Tarantola et al. (2017) and Penjor et al. (2019), which stress the role of public education in rabies prevention. Communities with better knowledge are more likely to engage in preventive measures, such as vaccinating pets and seeking timely care after animal exposure. Nonetheless, ongoing education is essential to correct misconceptions, particularly regarding less understood transmission routes.

Level of Knowledge of Patients on Rabies Prevention and Control and Animal Bite Management

Table 3. Level of Knowledge of Patients on Rabies Prevention and Control and Animal Bite Management

Statements	Frequency	Qualitative Description
Animal Bite is an injury caused by the mouth and teeth of an animal.	264	Highly Knowledgeable
Animal Bite Treatment Center is a facility where animal bite victims are treated with the corresponding category.	258	Highly Knowledgeable
Animal Bite can be categorized depending on the severity and location of the bite.	241	Highly Knowledgeable
Animal Bite can transmit rabies virus?	250	Highly Knowledgeable
Have you ever heard of Rabies?	257	Highly Knowledgeable
Rabies can kill?	246	Highly Knowledgeable
Rabies affects which part of the body?	207	Moderately Knowledgeable
Rabies is a deadly virus that is transferred to humans from the infected saliva of an animal. It is 100% fatal but 100% preventable.	216	Highly Knowledgeable

Rabies is caused by a virus.	245	Highly Knowledgeable
Rabies can be transferred from the bite or scratch of an infected animal to humans.	235	Highly Knowledgeable
Rabies can also be transferred through touching vaccinated animals.	28	Low Level of Knowledge
Rabies can also be transferred through eating an infected animal.	229	Highly Knowledgeable
Animals and humans infected with rabies may present with excessive salivation, drooling of saliva, fear of drinking fluids, fear of the air, anxiety, and partial paralysis.	198	Moderately Knowledgeable
The carrier of rabies are dogs.	266	Highly Knowledgeable
The carrier of rabies are monkeys.	156	Low Level of Knowledge
The carrier of rabies are bats.	143	Low Level of Knowledge
Rabies can be prevented by Animal Vaccination or the Anti-Rabies Vaccine.	255	Highly Knowledgeable
Rabies can be prevented by Immunization of humans to the Anti-Rabies Vaccine, whether Post-exposure (after the bite or scratch) or Pre-exposure (before having an animal bite or scratch).	226	Highly Knowledgeable

The findings presented in Table 4 suggest that most patients (63.30%) possess a high level of knowledge about rabies prevention and control, as well as the management of animal bites. This is an encouraging sign of the effectiveness of public health campaigns, particularly in disseminating key information about rabies transmission and prevention. However, 29.21% of patients demonstrated moderate knowledge, indicating that some individuals still lack full awareness. A smaller group, 7.49%, had low levels of knowledge, especially concerning the role of specific rabies carriers and transmission methods, which reflects the need for targeted educational strategies. The observed gaps in knowledge highlight areas where more intensive efforts can be made, particularly to reach communities that are less familiar with less common rabies vectors.

Level of Practice of Patients on Rabies Prevention and Control and Animal Bite Management

Table 5 summarizes the patients' practices related to rabies prevention and animal bite management. The results indicate that the majority of patients adhere to recommended practices, such as washing the bite area with soap and water (mean score of 3.92) and seeking medical help immediately after being bitten (mean score of 3.85). These practices suggest that patients are generally aware of the critical importance of early intervention in preventing rabies transmission. Conversely, traditional practices such as consulting a folk healer ("albularyo") or applying "Tandok" (mean scores of 1.24 and 1.32, respectively) were strongly disapproved by the participants, reflecting the success of public health education in rejecting outdated and ineffective methods. The average mean score of 3.21 for overall practices shows that while

most individuals engage in the right behaviors, there is still room for improvement, particularly in ensuring that all patients follow scientifically supported methods for rabies prevention and bite management.

The findings align with research by Rana et al. (2021) and WHO guidelines, which emphasize the need for continued public health education on effective wound care and the importance of seeking professional medical assistance after an animal bite. These findings also underscore the need to further address and eliminate traditional practices that do not align with evidence-based recommendations. Culturally sensitive educational initiatives could play a key role in bridging the gap between modern medical practices and traditional beliefs, ensuring the more widespread adoption of scientifically proven methods.

Table 5. Level of Practice of Patients on Rabies Prevention and Control and Animal Bite Management

Statements	Mean	Qualitative Description
If bitten by an animal, one should:		
a. Washing the bitten area with soap and water	3.92	Strongly Agree
b. Go to a folk healer "albularyo"	1.24	Strongly Disagree
c. Apply "Tandok," a traditional practice through animal horn of a glass.	1.32	Strongly Disagree
d. Go to the nearest Health Care Facility.	3.85	Strongly Agree
Management of the site being bitten by an animal should include:		
a. Washing with running water and soap for at least 10-15 minutes	3.90	Strongly Agree
b. Applying bawang, papaya, or other medicinal plants at the bite site	1.59	Strongly Disagree
c. Wipes the site and pretends nothing happened	1.25	Strongly Disagree
Animal bites can be prevented	3.74	Strongly Agree
Animal bites can be prevented through:		
a. Tying the animal	3.58	Strongly Agree
b. Never petting, handling, or feeding unknown animals	3.75	Strongly Agree
c. Watching children, especially around animals	3.80	Strongly Agree
d. Asking permission from the owner before petting the animal	3.79	Strongly Agree
e. Not running toward or away from the animal	3.76	Strongly Agree
f. Not teasing the animal (e.g., pulling the tail or ears)	3.80	Strongly Agree
g. Never spanking or applying force to the animal	3.79	Strongly Agree
h. Never getting food from the animal	3.77	Strongly Agree
Post exposure prophylaxis can prevent the development of the disease after infection	3.78	Strongly Agree
Average Mean	3.21	Agree

F-test and t-test Results on the Significant Difference in the Level of Knowledge of Patients on Rabies Prevention and Control and Animal Bite Management when grouped by Profile

The results from the analysis of the significant difference in patients' knowledge of rabies prevention and control and animal bite management by profile factors reveal key insights, as seen in Table 4. Gender,

age, and education did not demonstrate a significant effect on knowledge levels. Specifically, the t-test results for gender (t = 0.51, p = 0.61) and age (f = 0.89, p = 0.49) both yielded non-significant results. The study also found no significant variations in knowledge based on educational background (f = 1.60, p = 0.19), occupation (f = 1.56, p = 0.19), bite category (f = 1.29, p = 0.26), or type of biting animal (f = 0.86, p = 0.47).

However, civil status played a significant role in shaping knowledge levels. Married individuals demonstrated a higher level of knowledge compared to single individuals (t = 3.72, p = 0.26). Post hoc tests confirmed that married individuals had a significantly higher level of knowledge than single individuals (p = 0.04), while no significant differences were found between widowed and other groups. This suggests that married individuals may benefit from increased information sources or awareness channels, possibly due to family dynamics or heightened discussions around health issues in a marriage. These findings are consistent with studies that suggest civil status impacts health knowledge and behavior. A study by Cheng et al. (2016) found that married individuals often exhibit better health awareness and are more likely to engage in preventive health practices compared to singles, possibly due to increased responsibility for family members' health. Similarly, Mashayekhi et al. (2019) observed that marital status could influence health education dissemination and uptake.

Table 4. F-test and t-test Results on the Significant Difference in Knowledge by Profile

Profile Factor	t/f Value	p-value	Interpretation
Gender	t = 0.51	p = 0.61	Not significant
Age	f = 0.89	p = 0.49	Not significant
Education	f = 1.60	p = 0.19	Not significant
Civil Status	t = 3.72	p = 0.26	Significant (Married > Single)
Occupation	f = 1.56	p = 0.19	Not significant
Bite Category	f = 1.29	p = 0.26	Not significant
Type of Biting Animal	f = 0.86	p = 0.47	Not significant

F-test and t-test Results on the Extent of Practice of Patients on Rabies Prevention and Control and Animal Bite Management when grouped by Profile

The analysis of the extent of practice regarding rabies prevention and control across different patient profiles, presented in Table 6, revealed no significant differences based on gender (t = 0.09, p = 0.93), age (f = 0.71, p = 0.62), education (f = 0.04, p = 0.99), civil status (f = 0.04, p = 0.96), occupation (f = 0.37, p = 0.83), or the type of bite or animal involved. These results suggest that individuals, regardless of these demographic factors, exhibited similar levels of engagement in practicing rabies prevention measures. These findings align with those of Dube et al. (2018), who concluded that the demographic profile of individuals had minimal influence on their adherence to animal bite management practices. According to Sultana et al. (2020), general public awareness campaigns that target all demographic groups without bias towards specific characteristics may be more effective in ensuring consistent practice across a wide population.

Table 6. F-test and t-test Results on the Extent of Practice by Profile

Profile Factor	t/f Value	p-value	Interpretation
Gender	t = 0.09	p = 0.93	Not significant

Age	f = 0.71	p = 0.62	Not significant
Education	f = 0.04	p = 0.99	Not significant
Civil Status	f = 0.04	p = 0.96	Not significant
Occupation	f = 0.37	p = 0.83	Not significant
Bite Category	f = 0.42	p = 0.83	Not significant
Type of Biting Animal	f = 0.58	p = 0.81	Not significant

Pearson Correlation Results on Significant Relationship between the Level of Knowledge and Practice of Patients on Rabies Prevention and Control and Animal Bite Management

The Pearson correlation analysis, presented in Table 5, shows a positive and statistically significant correlation between knowledge and practice regarding rabies prevention and control (r = 0.19, p = 0.00). This suggests that individuals with higher knowledge levels are more likely to engage in preventive practices. The correlation is relatively weak, but it remains significant, highlighting that an increase in knowledge could encourage better practices among patients. This finding is in line with studies such as He et al. (2017), which found that increased knowledge about health practices was positively correlated with improved adherence to health guidelines. Moreover, Sharma et al. (2019) emphasized that health education is a critical factor in promoting health behaviors, such as vaccination and prevention practices for communicable diseases like rabies.

Table 5. Pearson Correlation Results on Knowledge and Practice

Knowledge and Practice	r Value	p-value	Interpretation
Knowledge vs Practice	r = 0.19	p = 0.00	Significant (Positive Correlation)

CONCLUSION

This study underscores the urgent need for targeted and comprehensive interventions to improve rabies prevention, control, and animal bite management, particularly for high-risk groups such as children, students, and unmarried individuals, with dogs identified as the primary carriers of rabies. While the study revealed a high level of awareness among the majority of respondents, significant knowledge gaps persist, particularly concerning less common rabies carriers such as monkeys and bats, as well as misconceptions about rabies transmission through vaccinated animals. These findings indicate the necessity for continuous educational efforts, specifically addressing these areas of confusion. A limitation of the study is its focus on a single geographic area, which may not fully capture the diverse knowledge levels and practices found in other regions. Future research should include larger, multi-regional studies to better understand the broader context of rabies awareness and prevention. Additionally, further investigation into the effectiveness of targeted educational programs and interventions, particularly in addressing the demographic and behavioral factors influencing rabies-related practices, is recommended. This study also highlights the importance of a multi-faceted approach involving public health officials, community leaders, and other stakeholders to develop evidence-based, long-term policies and programs that can ensure sustainable rabies prevention and control efforts.

REFERENCES

1. Abela-Ridder, B., Knopf, L., Martin, S., Taylor, L., Torres, G., & De Balogh, K. (2016). "28 Towards the elimination of dog-mediated human rabies: WHO and OIE international standards and guidance."

Revue Scientifique et Technique, 35(2), 691-702.
2. Ahmed, M.J., Dirisa, G., Mengitsu, D.A., Demena, M., & Geremew, A., (2022). Rabies
3. prevention and control practices and associated factors among dog owners in Chiro, West Hararghe, Ethiopia. Retrieved DOI: 10.1177/22799036221129373
4. Amparo,A., Jayme, S.I., Roces, M.C.R., Quizon, M.C.L., Mercado, M.L.L., Dela Cruz
5. M.P.Z., Licuan, D.A., Villalon, E.E.S. III, Baquilod, M.S., Hernandez, L.M., Taylor, L.H., Nel, L.H. (2018). The evaluation of Animal Bite Treatment Centers in the Philippines from a patient perspective. *PLOS One 13*(7), e0200873. Retrieved doi: 10.1371/journal.pone.0200873. PMID: 30048466; PMCID: PMC6062032.
6. Dodet, B., Goswami, A., Gunasekera, A., de Guzman, F., Jamali, S., Montalban, C., ... & Matibag, G. C. (2018). Rabies awareness in eight Asian countries. Vaccine, 26(50), 6344-6348.
7. DOST-PCHRD. (2022). Republic Act 9482: Framework for cooperation against rabies. https://www.pchrd.dost.gov.ph/news_and_updates/republic-act-9482-framework-for-cooperation-against- rabies/#:~:text=This%20law%20led%20to%
8. 20the,of%20rabies%20in%20the%20country.
9. Fahrion, A. S., Mikhailov, A., Abela-Ridder, B., Giacinti, J., Harries, J., & Lankester, F. (2017). The road to dog rabies control and elimination—what keeps us from moving faster?. Frontiers in Public Health, 5, 103.
10. Gongal, G., & Wright, A. E. (2021). Human rabies in the WHO Southeast Asia region: forward steps for elimination. Advances in Preventive Medicine, 2021.
11. Gonzalo, A. (2023). Dorothy Johnson: Behavioral System Model. Retrieved
12. https://nurseslabs.com/dorothy-e-johnsons-behavioral-system-model/#:~:text=Dorothy%20Johnson's%20theory%20defined%20Nursing,in%20which%20illness%20is%20found.%E2%80%9D
13. Mapatse, M., Sabeta, C., Fafetine, J. & Abernathy, D. (2023). Knowledge, attitudes, practices (KAP) and control of rabies among community households and health practitioners at the human-wildlife interface in Limpopo National Park, Massingir District, Mozambique. Retrieved | https://doi.org/10.1371/journal.pntd.0010202
14. Mazeri, S., Gibson, A. D., Meunier, N., & Bronsvoort, B. M. (2018). Hand washing practices among animal owners in rural UK communities. BMC Public Health, 18(1), 4.
15. Nel, L. H., & Rupprecht, C. E. (2021). The burden of rabies. Rabies: Scientific Basis of the Disease and Its Management, 1-9.
16. Penjor, K., Tenzin, T., Jamtsho, R. K., & Millien, M. F. (2019). Evaluation of rabies control program in Bhutan: successes and challenges. Infectious Diseases of Poverty, 8(1), 7.
17. Penjur, K., Tenzin, T., & Jamtsho, R.K. (2019). Determinants of health seeking behavior
18. of animal bite victims in rabies endemic South Bhutan: A community-based contract-tracing survey. *BMC Public Health 19* (237). Retrieved https://doi.org/10.1186/s12889-019-6559-x
19. Rana, M. S., Jahan, A. A., Kaisar, S. M. G., Siddiqi, U. R., Sarker, S., Begum, M. I. A., Ghosh, S., Sarker, S., Ahmed, B.-N., & Shamsuzzaman, A. K. M. (2021). Knowledge, attitudes and perceptions about rabies among the people in the community, healthcare professionals and veterinary practitioners in Bangladesh. One Health, 13, 100308. https://doi.org/10.1016/j.onehlt.2021.100308
20. Sachdeva, A., Tarun Kumar, V., Yadav, G., & Tondwal, J. (2022). Epidemiological profile and management practices of animal bite case in tertiary care hospital of Haryana: A cross-sectional study.

Retrieved doi: 10.4103/jfmpc.jfmpc_549_22

21. Sambo, M., Johnson, P. C., Hotopp, K., Changalucha, J., Cleaveland, S., Kazwala, R., ... & Hampson, K. (2022). The feasibility of eliminating rabies in Africa: Dispelling doubts with data. PLoS Neglected Tropical Diseases, 16(5), e0010391.
22. Sivagurunathan, C., Umadevi, R., Balaji, A., Rama, R., & Gopalakrishnan, S. (2021). Knowledge, attituded, and practice study on animal bites, rabies, and its prevention in an urban community. Retrieved DOI: 10.4103/jfmpc.jfmpc_1674_20.
23. Tarantola, A., Ly, S., In, S., Ong, S., Peng, Y., Heng, N. Y., ... & Buchy, P. (2017). Rabies vaccine and immune globulin in Cambodia: use and obstacles to use. Tropical Medicine & International Health, 23(4), 435-442.
24. Taylor, L. H., Wallace, R. M., Balaram, D., Lindenmayer, J. M., Eckery, D. C., Mutonono-Watkiss, B., ... & Nel, L. H. (2020). The role of dog population management in rabies elimination—A review of current approaches and future opportunities. Frontiers in Veterinary Science, 7, 134.
25. Tiwari, H. K., O'Dea, M., Robertson, I. D., Vanak, A. T., & Irwin, P. J. (2020). Knowledge, attitudes, and practices (KAP) towards rabies and free-roaming dogs in rural communities of Gujarat, India. Tropical Medicine and Infectious Disease, 5(2), 70.
26. Wallace, R. M., Neumann, C., & Tallo, V. (2021). Understanding community knowledge, attitudes, and practices towards dogs and dog bites in Bohol, Philippines: implications for rabies control programs. PLOS Neglected Tropical Diseases, 15(2), e0009078.
27. World Health Organization. (2018). Animal bites. Retrieved https://www.who.int/news-room/fact-sheets/detail/animal-bites
28. World Health Organization. (2023). Rabies. Retrieved https://www.who.int/news-room/fact-sheets/detail/rabies#:~:text=Rabies%20is%20a%20vaccine%2Dpreventable%2C%20zoonotic%2C%20viral%20disease%20affecting,both%20domestic%20and%20wild%20animals.