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Knowledge, Attitudes, Perceptions and Health-Seeking Practices Towards Rabies and Dog-Bite Injuries among Residents in Ibadan, South-Western Nigeria

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Abstract

Background: Rabies is a fatal viral infection causing encephalomyelitis in carnivores and other vertebrates, including humans, primarily transmitted through bites or scratches from infected animals. Understanding knowledge and health-seeking behaviors related to rabies is critical for designing effective public health interventions. This study evaluated knowledge, attitudes, perceptions, and health-seeking practices regarding dog-bite injuries and rabies infection.

Methods: A community-based, cross-sectional study was conducted among 418 adults, selected using a multi-stage sampling technique. Data were collected via a pre-tested, interviewer-administered questionnaire and analyzed with descriptive and inferential statistics at a 5% significance level.

Results: The mean age of respondents was 35.6±12.7 years, with 35.4% aged 21–30 years. Nearly half of the respondents (45.2%) demonstrated poor knowledge of rabies and dog-bite injuries, while 60% showed a positive attitude toward prevention and management. A moderate negative correlation was found between knowledge and perceived susceptibility ($r = -0.314$, $p < 0.001$) and perceived severity ($r = -0.638$, $p < 0.001$).

Conclusion: The study identified low perceived susceptibility and severity of rabies, highlighting the need for One Health interventions and targeted advocacy campaigns to improve awareness and preventive practices.

Keywords: rabies, dog bites, knowledge, attitudes, perceptions, health-seeking behavior.

Introduction

Rabies, a viral infection caused by the Lyssavirus genus of the family *Rhabdoviridae*, is an acute disease affecting the central nervous system (CNS) of carnivores and other mammals, including humans, often leading to fatal encephalomyelitis if untreated (Singhai *et al.,* 2022; Thombare & Malviya, 2022). Globally recognized as a Neglected Tropical Disease (NTD), rabies remains endemic in many regions, transmitted predominantly through the saliva of infected animals via bites or scratches (Kapoor *et al.,* 2019; Thombare & Malviya, 2022). The disease imposes a significant economic and public health burden worldwide, yet effective prevention through post-exposure prophylaxis (PEP) is widely underutilized in low-resource settings, where awareness and access to treatment are limited (WHO, 2023; Meslin & Briggs, 2013).

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Rabies is a leading cause of mortality, with Africa and Asia accounting for over 95% of global rabies deaths, many of which occur in rural or underserved areas where health services are scarce (Adesina *et al.,* 2020; WHO, 2023). In Nigeria, rabies was first recorded in 1912, with subsequent studies revealing the disease's endemic nature and its persistent transmission to humans, primarily through bites from rabid dogs (Al-Mustapha *et al.,* 2021, 2022; Mshelbwala *et al.,* 2021; Adedeji *et al.,* 2020; Onyemocho *et al.,* 2020; Audu *et al.,* 2019). Despite the known routes of transmission and available PEP measures, knowledge gaps, and cultural beliefs surrounding rabies in Nigeria continue to hinder effective prevention and control efforts.

Previous studies in Nigeria and other developing countries have highlighted widespread misunderstandings about rabies transmission, treatment, and prevention. For instance, Charulatha *et al.* (2021) and Mshelbwala *et al.* (2021) have identified low rabies awareness levels in rural communities, which significantly impact morbidity and mortality. Similarly, Jakeman *et al.* (2020) and Kisaka *et al.* (2020) described how cultural myths and traditional healing practices often undermine scientific approaches to dog bite management in both Asia and Africa. This trend underscores the challenge of rabies control in regions where medical resources are limited, and reliance on traditional beliefs remains strong.

Dog bites are common in many developing communities, often involving unvaccinated or stray dogs, contributing to the high rabies exposure risk (WHO, 2023). Compliance with vaccination protocols for dogs remains limited, and the unregulated presence of stray dogs in urban and peri-urban areas exacerbates the problem (Mshelbwala *et al.,* 2021). Studies from other regions, including Southeast Asia, have reported that poor health-seeking behavior following dog bites is linked to a lack of awareness of rabies risk and reluctance to access healthcare due to costs or logistical barriers (Kapoor *et al.,* 2019; Ahmad *et al.,* 2018; Jakeman *et al.,* 2020; Kisaka *et al.,* 2020).
This is consistent with findings in Nigeria, where limited knowledge and cultural misconceptions about rabies contribute to delays in seeking medical intervention and increase the mortality burden associated with the disease.

Examining health-seeking behaviors and safety practices following dog bites or potential rabies exposure is essential to improve prevention strategies and reduce the rabies burden. Our study aims to fill gaps in the literature by assessing the current knowledge, attitudes, perceptions, and health-seeking behaviors regarding rabies and dog-bite injuries among residents in Ibadan, a southwestern city in Oyo State, Nigeria. Through a detailed comparison with studies in similar settings, this study highlights regional challenges and identifies critical areas for intervention in rabies awareness and prevention efforts.

Methods

Study design and sampling method.

This study employed a cross-sectional design and collected data through a semi-structured questionnaire administered to residents of Lagelu, a Local Government Area (LGA) in Ibadan, located in southwestern Nigeria. To ensure representativeness and minimize bias, individuals below 18 years and above 65 years, as well as those who had been residing in Lagelu LGA for less than two years at the time of data collection, were excluded from the study. To ensure a focused assessment of the adult population's knowledge, attitudes, perceptions, and health-seeking behaviors, we excluded individuals under 18 and over 65 years. Individuals younger than 18 were excluded because they may lack autonomy in health decision-making, and responses may not accurately reflect household-level knowledge or practices regarding rabies. Those over 65 were excluded due to potential recall bias or

differing health-seeking behavior patterns, which could complicate comparisons with the broader adult population.

Participants were selected using a multi-stage sampling technique. In the first stage, a simple random sampling method was applied to select four wards from the fourteen wards within Lagelu LGA. This ensured that each ward had an equal chance of being selected, reducing the likelihood of selection bias. In the second stage, one community was randomly chosen from each of the four selected wards. Households within each community were then systematically selected by choosing every nth household, depending on the total number of households and the required sample size from each community. Finally, within each chosen household, one respondent who met the inclusion criteria was randomly selected to participate in the study. This multi-stage approach helped ensure a diverse and representative sample of the population, allowing for a more accurate assessment of knowledge, attitudes, perceptions, and health-seeking behaviors regarding rabies and dog-bite injuries in the study area.

Questionnaire design and data collection

This study employed a quantitative approach, using a semi-structured questionnaire to collect data. The questionnaire was developed based on existing research on knowledge, attitudes, perceptions, and health-seeking behaviors related to rabies. It was divided into five sections to systematically gather relevant information viz: Section A - socio-demographic characteristics of respondents. Section B - knowledge of rabies, history of dog-bite injuries, and safety practices, section C - perceptions of rabies susceptibility, severity, and barriers, along with vaccination practices and service utilization following dog bites, section D - attitudes toward dog-bite injuries and rabies, and section E - Health-seeking behaviors in response to dog-bite injuries and rabies.

The questionnaire items were adapted from validated tools used in similar studies, notably those by Ba *et al.* (2021) and Tiwari *et al*. (2018), with modifications tailored to the objectives and population specifics of the current study. The socio-demographic section covered variables like age, gender, occupation, education level, and religion. Knowledge of rabies was measured using items assessing understanding of rabies causation, transmission, and prevention practices, scored on a 20-point scale, categorized into "poor" (≤10) and "good" (≥20) knowledge. Health-seeking behaviors were assessed on an 8-point scale, with scores of ≤4 categorized as poor and ≥8 as good. Perceptions of rabies risk were based on three constructs from the Health Belief Model, measured on a 13-point scale (Barley & Lawson, 2016).

Instrument validation

To ensure content and face validity, the questionnaire was developed through an extensive review of relevant literature. Construct validity was addressed by aligning items with the study objectives and theoretical framework, ensuring an accurate representation of key variables. The instrument was further reviewed by subject matter experts for quality assurance and refinement. To assess reliability, the draft questionnaire was pre-tested with a sample comprising 10% of the target population in Egbeda Local Government Area, Ibadan. This LGA was chosen for its similarities to Lagelu LGA in demographics and settings. Responses from the pilot were analyzed using Cronbach's alpha in SPSS, yielding a reliability coefficient of 0.949, indicating strong reliability (above the 0.7 threshold). Revisions were made to address ambiguities identified during the pre-test, ensuring clarity and accuracy.

Data was collected via interviewer-administered questionnaires, sequentially numbered for tracking. The authors, along with five trained research assistants, administered the questionnaire in selected households. Research assistants underwent two days of training with a structured manual

to standardize procedures and enhance data quality. Consent was obtained from participants, and completed questionnaires were reviewed on-site by the researcher to verify completeness and accuracy before concluding each field visit.

Statistical analysis

Data analysis was conducted using the Statistical Package for Social Science (SPSS®) for Windows Version 20.0 (Chicago, IL, USA). Sociodemographic characteristics were summarized as frequencies and percentages. To evaluate associations between variables, chi-square or Fisher's exact tests were used based on data distribution and sample size, enabling us to assess the relationships between knowledge, attitudes, safety practices, and health-seeking behaviors concerning rabies and dog-bite injuries at a 5% significance level. Additionally, Spearman's rank correlation was applied to explore potential relationships between knowledge levels and perceptions (e.g., susceptibility, severity), providing insight into the influence of knowledge on behavioral and attitudinal outcomes.

Ethical Considerations

This study received ethical approval from the Ethical Review Committee of the Oyo State Ministry of Health, Nigeria (AD13479/282) before data collection. Ethical standards were rigorously upheld throughout the research process to protect participants' rights, privacy, and well-being. Written informed consent was obtained from all participants before administering the questionnaire. Participants were provided with a detailed explanation of the study's purpose, procedures, and their rights, including the voluntary nature of participation and the option to decline or withdraw from the study at any time without any consequences. Consent forms outlined the purpose of the research, expected contributions, and assurances of data confidentiality. To ensure participants' privacy, no personally identifying information, such as names or home addresses, was collected. Data confidentiality was strictly maintained, with all information used solely for research purposes. Participants were informed that their responses would remain anonymous, and no data would be presented in a manner that could reveal individual identities.

The study's potential benefits were explained to participants, emphasizing that the data collected would contribute to the body of scientific knowledge on rabies, aid in assessing public knowledge and attitudes toward rabies and dog-bite injuries, and provide insights into strengthening safety measures. Participants understood that the findings could inform policy decisions to enhance rabies control, increase dog vaccination rates, and ultimately improve community health. Participation was entirely voluntary. Participants were made aware of their right to withdraw from the study at any point without any loss of benefits or repercussions, reinforcing their autonomy throughout the research. This approach ensured that all ethical principles, including autonomy, confidentiality, beneficence, and voluntary participation, were adhered to, safeguarding the rights and well-being of all participants.

Results

Respondents' Socio-Demographic Characteristics

A total of 418 respondents participated in this study, with a mean age of 35.6 years ±12.7. The majority (35.4%) were aged 21–30 years, while 61.2% were male, and 56.2% were married. In terms of education, 57.4% had tertiary education, and 60.5% identified as Christians. Most respondents (77.5%) were residents of the community, with 72.5% being tenants. Among occupations, 27.8% were artisans, and 37.1% lived with at least one dog.

Knowledge of Rabies and History of Dog-Bite Injuries

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Rabies knowledge and dog bite history were assessed on a 20-point scale, with an average score of 11.7 ± 4.4. Overall, 54.8% of respondents demonstrated good knowledge, while 45.2% scored in the lower range, indicating poor knowledge of rabies. 62.0% of respondents recognized that rabies is viral in origin, and 72.5% were aware that rabies can be transmitted from dogs to humans. Among the respondents, 55.5% noted that paralysis is one of the symptoms of rabies, while 56.5%, 64.4%, 54.8%, and 36.1% identified excessive salivation, aggressive behavior, identified difficulty breathing, and hydrophobia respectively. Furthermore, approximately 45% of respondents were aware of the need for annual dog vaccinations, but 62.0% disagreed with the misconception that being bitten by a rabid dog causes the person to "bark." Most participants (75.8%) believed that suspected rabid dogs should be euthanized and buried, while 79.7% affirmed the effectiveness of post-exposure vaccination for individuals bitten or scratched by rabid dogs. Interestingly, 33.7% held a misconception that chaining dog-bite victims could prevent them from transmitting rabies (Table 1).

Table 1: Knowledge, and safety practices regarding dog bite and rabies infection among Respondents

Variable	Frequency (**n**)	Percentage (%)
Knowledge of rabies and its prevention among respondents		
Know about rabies		
Yes	312	74.6
No	99	23.7
Don't Know	7	1.7
The virus can infect humans through dogs		
Yes	303	72.5
No	50	12.0
Don't know	65	15.6
Rabies is preventable in both humans and animals by vaccination		
Yes	314	75.1
No	47	11.2
Don't Know	57	13.6
One of the first aid to dog bite injuries is to apply pressure at the site of injection?		
Yes	269	64.4
No	75	17.9
Don't Know	74	17.7
Knowledge of safety practices towards dog bite and rabies infection		
People who are in contact with dogs should receive anti-rabies vaccinations to prevent them from rabies		
Yes	347	82.8
No	72	17.2
Dog bite injuries should be reported and presented only at healthcare centers		
Yes	347	83.0
No	71	17.0

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Stray and roaming dogs with unknown vaccination history should be eliminated from the community		
Yes	305	73.0
No	113	27.0
Only registered and licensed health practitioners should handle cases of dog bite injuries		
Yes	343	82.1
No	75	17.9

Perceptions and Attitudes Toward Rabies and Dog-Bite Injuries

Among respondents, 44.3% perceived themselves as at risk of being bitten by their dogs. Nearly half (46.4%) reported previous incidents where their dogs had scratched them, which they believed could heighten their risk of infection. The mean score for attitudes towards dog-bite injuries and rabies was 11.8±4.4, with 60.3% of respondents demonstrating a positive attitude towards prevention and safety practices (Table 2). These findings suggest a majority recognize the importance of preventive actions, yet a substantial portion remains either uncertain or holds beliefs that could undermine proactive measures.

Table 2: Respondents' perception and attitudes to rabies and dog bite injuries

Variable	Agree (%)	Disagree (%)	Undecided (%)
Perceived Susceptibility and Severity of dog bites among Respondents			
Do you consider yourself to be at risk of being bitten by your dog?	44.3	44.0	11.7
My dog has scratched my body before and that may increase my risk of infection	40.0	46.4	13.6
I don't have contact with dogs so I cannot have dog injuries or rabies	53.1	34.9	12.0
Rabies can lead to paralysis	60.0	18.2	21.8
Rabies can lead to death in infected persons	63.9	14.8	21.3
Rabies can lead to madness in infected humans	55.5	23.0	21.3
Perceived barriers to vaccination of dogs and utilization of services when bitten by dogs.			
Uninfected dogs can become infected during mass dog vaccination campaign venues because of fights among themselves	68.7	17.5	13.9
There is little awareness about dog vaccination campaigns in my community.	58.4	27.3	14.4
The quality of vaccines and veterinary services is not sufficient to prevent rabies infection in dogs	33.0	48.8	18.2
Most health workers are not familiar with the effective management and treatment of victims of dog bite	33.3	53.6	13.2

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Pre-exposure prophylaxis (PrEP) is not readily available to victims of dog bites in most health centers.	33.7	50.5	15.8
Victims of dog bites are often denied admission into health centers because of a lack of experience with healthcare workers.	26.6	58.9	14.6
Attitude to dog bite injuries and rabies infection among respondents			
Most dogs that bite their owners are demonic dogs	22.0	69.1	8.9
Victims of bites from rabid dogs should be taken for deliverance sessions at religious centers for spiritual healing	17.5	73.0	9.6
Injuries resulting from dog bites should be presented to healthcare facilities	74.6	18.7	6.7
Trained dogs, even when infected with rabies infection do not bite people	45.0	40.9	14.1
Those who allow their dogs to lick their faces are at higher risk of getting infected with rabies	68.4	20.8	10.8
Injuries resulting from dog bites can never be treated or cured even in the hospital	26.6	62.0	11.5
There is no need to seek medical care for rabies infection because the victim can never survive the infection	18.7	70.8	10.5
Local herbs and traditional medicine are the best approach for managing rabies infection	19.6	67.0	13.4
Rabies virus is a public health risk in my environment/area	62.0	19.1	18.9

Health-Seeking Behaviors for Dog-Bite Injuries and Rabies

Health-seeking behaviors for dog-bite injuries and rabies were assessed on a 9-point scale, yielding a mean score of 4.2± 1.8. Over half of the respondents (56.9%) demonstrated good health-seeking practices, including actions such as seeking medical care after a dog bite and awareness of post-exposure prophylaxis options. These findings are detailed in Table 3, providing insight into community readiness to manage potential rabies exposure effectively.

Table 3: Health-seeking behaviors to dog bite injuries and rabies among respondents

Variable	Yes (%)	No (%)	Don't Know (%)
I can take antibiotics and apply anti-tetanus injections if bitten by a rabid dog.	59.1	25.1	15.8
One of the first aid for dog bite injuries is to apply pressure at the site of the bite	62.7	21.3	16.0
Anti-toxins can be self-administered to treat bite wounds	28.0	55.3	16.7
I can treat dog bite injuries traditionally by applying chili pepper	17.9	62.4	19.6

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Dog infected with rabies can be treated with antibiotics	59.6	23.4	17.0
To treat rabies infection, once bitten, the victim should slaughter the dog and eat the meat	20.1	64.4	15.6
When bitten by a dog, the site of the bite should be washed with detergents, and the victim taken to the hospital	27.3	56.9	15.8
Victims of dog bites can be chained with iron and fetters to prevent them from biting humans and transmitting the infection	16.5	67.9	15.6
Once bitten by a rabid dog, the toxins should be pressed or sucked out using the hand or mouth	21.3	63.2	15.6

Association between socio-demography, knowledge, and safety practices among respondents.

Chi-square analysis identified significant associations between socio-demographic characteristics and respondents' knowledge of rabies, as well as their safety practices. Specifically, age ($p = 0.001$), educational level ($p < 0.001$), religion ($p = 0.026$), duration of residence in the community ($p = 0.001$), and whether respondents owned or lived with a dog ($p = 0.0012$) were all significantly associated with rabies knowledge and adherence to safety practices (Table 4). These findings indicate that higher education and longer community residence, for instance, may positively influence rabies awareness and responsible behaviors toward dog bites.

Table 4: Association between socio-demographic factors and knowledge of rabies and safety practices among respondents

Variables	Knowledge		χ^2	p-value
	Poor n (%)	Good n (%)		
Age (years)				
Up to 20years	79.3	20.7		
21-30years	49.0	51.0	19.660	0.001**
31-40years	36.3	63.7		
41-50years	37.5	62.5		
51 and above	44.4	55.6		
Educational status				
Primary	75.9	24.1		
Secondary	68.5	31.5	75.339	<0.001**
Tertiary	27.1	72.9		
Religion				
Christianity	41.1	58.9		
Islam	50.0	50.0	9.261	0.026**
Traditional	100.0	0.0		
Others	50.0	50.0		
Community Duration				
Up to 5years	41.5	58.5		

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6-10years	29.3	70.7	25.398	<0.001**
11-15years	65.5	34.5		
Above 15 years	50.0	50.0		
Own or lived with a dog				
Yes	38.1	61.9		
No	48.4	51.6	8.908	0.012*
I don't know	85.7	14.3		

** p < 0.05

Association between knowledge of rabies and safety practices and health-seeking behaviors to dog-bite injuries and rabies among the respondents

The analysis revealed a statistically significant association between respondents' knowledge of rabies and their safety practices and health-seeking behaviors related to dog-bite injuries and rabies ($p < 0.001$; Table 5), suggesting that higher knowledge levels about rabies are linked to more effective safety practices and proactive health-seeking behaviors following dog bites.

Table 5: Knowledge and safety practices and health-seeking behaviors to dog-bite injuries and rabies among the respondents

Variables		Health seeking behaviour		X2	p-value
		Poor n (%)	Good n (%)		
Knowledge	Poor	65.1	34.9	68.207	<0.001**
	Good	24.9	75.1		

** p < 0.05

Correlation Between Knowledge of Rabies and Perception Variables

Spearman's rank-order correlation analysis indicated a mild, negative correlation between respondents' knowledge of rabies and their perceived susceptibility to the disease ($r = -0.314$, $p < 0.001$), suggesting that higher knowledge levels may slightly decrease individuals' perception of their susceptibility. A stronger negative correlation was observed between knowledge of rabies and perceived severity ($r = -0.638$, $p < 0.001$), indicating that as knowledge of rabies increases, perceived severity tends to decrease notably. Additionally, there was a weak negative correlation between knowledge and perceived barriers ($r = -0.179$, $p < 0.001$), implying that increased knowledge may marginally reduce the perceived obstacles to taking preventive measures.

Discussion

This study assessed knowledge, attitudes, perceptions, and health-seeking behaviors related to dog-bite injuries and rabies infection. Results showed that over half of the respondents had a satisfactory level of knowledge about rabies, which is lower than the levels reported in similar studies, such as Edukugho *et al.* (2018) in the Federal Capital Territory (FCT), Abuja. The discrepancy in knowledge may reflect differences in socio-economic factors and public health awareness initiatives across regions, with FCT residents likely benefiting from more robust health campaigns compared to Lagelu, Ibadan.

Such disparities highlight the need for targeted education in lower-resourced areas to raise awareness about rabies.

Notably, all respondents recognized dogs as the main host for rabies and understood the preventive role of vaccination, which aligns with findings by Kabeta *et al.* (2015) in Ethiopia. This awareness suggests an effective transmission of core rabies knowledge across various African contexts, perhaps driven by recent awareness campaigns. However, the Health Belief Model (HBM) could further elucidate this finding by examining perceived susceptibility and perceived severity—key constructs that appear to diverge in our study. Although respondents were knowledgeable about rabies, over half did not perceive themselves as susceptible to dog-bite injuries. This risky perception, particularly among male dog owners, may stem from a sense of control over their dogs or cultural attitudes toward dog ownership. Addressing this through targeted behavioral interventions could improve safety practices among dog owners, emphasizing that even familiar dogs can pose risks.
Interestingly, knowledge of rabies did not correlate with the perception of its severity, a pattern also seen in studies like Tiwari *et al.* (2018) among healthcare staff in India. This gap may indicate a knowledge-behavior disconnect, where information about rabies does not translate into an accurate risk assessment. Future interventions should focus not only on knowledge dissemination but also on enhancing understanding of the severe consequences of rabies, especially fatal outcomes if left untreated. Such awareness could motivate preventive actions, including vaccination compliance and proper health-seeking behavior after dog bites.

The perception of barriers to accessing healthcare for dog-bite injuries was another critical finding, as some respondents reported denial of access at health centers. This barrier could stem from cultural or logistical issues, as noted in Abubakar & Bakari (2012) and Ogundare *et al.* (2015). Regional discrepancies in healthcare access for bite injuries could be addressed by policy interventions that ensure consistent medical support for rabies prevention across different Nigerian states. Strengthening partnerships with local health providers and incorporating traditional leaders into awareness campaigns could mitigate cultural resistance to seeking medical care.

The positive attitude of respondents toward proper management of dog-bite injuries, contrasting with findings from Uganda (Monje *et al.,* 2020), Kenya (Omemo *et al.,* 2012), and Senegal (Ba *et al.,* 2021), is encouraging. This may reflect higher educational levels and exposure to information among those sampled in the current study, particularly among married individuals and those with tertiary education. The Health Belief Model could be used here to interpret attitudes as a product of perceived benefits and cues to action, where educational attainment and familiarity with the disease might have strengthened the respondents' commitment to appropriate management practices. Encouraging a similar approach in regions with lower educational levels may promote positive health-seeking behaviors for rabies.

Respondents generally exhibited good health-seeking behavior, a factor possibly linked to educational background and awareness of rabies. However, expanding the study to include more remote areas in the region might yield different results, highlighting potential gaps in rabies awareness and healthcare access in underserved regions. Further research across diverse Nigerian communities could provide insights into regional health-seeking behaviors and inform targeted strategies to improve healthcare access and rabies education. Finally, respondents' awareness of first-aid measures for dog bites signifies a notable step toward the operationalization of the One Health approach (Ba *et al.,* 2021; Thys *et al.,* 2021). Continued reinforcement of this integrative model, through community-based education and cross-sector collaboration, could help sustain and expand rabies control efforts.
In summary, this study reveals critical areas where public health interventions could enhance rabies prevention, including addressing knowledge-perception gaps, reducing healthcare access barriers,

and promoting the One Health approach. By leveraging the Health Belief Model to understand these behavioral factors, public health practitioners can design more effective, context-sensitive campaigns to reduce rabies incidence and improve safety practices among dog owners and community members.

Implications for Health Promotion

This study underscores the need for tailored, evidence-based health promotion interventions to address gaps in perceptions of susceptibility and severity of rabies and dog-bite injuries within the community. The mixed views on personal risk and the gravity of rabies observed among respondents suggest that targeted education campaigns could be crucial in motivating preventive actions and timely healthcare-seeking behavior. These campaigns should emphasize the real risks and severe consequences associated with rabies, thereby encouraging individuals to adopt safety practices, vaccinate their pets, and seek prompt medical attention after dog bites.

The findings also reveal significant barriers to dog vaccination and healthcare utilization following dog bites, including concerns about the risk of infection during mass vaccination campaigns, doubts regarding the quality of vaccines, and a lack of trust in healthcare providers. To address these barriers, a coordinated approach is necessary, involving veterinarians to enhance vaccine quality and accessibility, particularly in rural areas. This partnership can ensure reliable vaccination campaigns while simultaneously building community confidence in the services provided.

Government health agencies and healthcare providers should collaborate to enhance the knowledge and skills of healthcare workers in managing dog-bite injuries and administering rabies post-exposure prophylaxis. Community-based awareness programs, including workshops and outreach initiatives, should focus on dispelling misconceptions, highlighting the importance of rabies prevention, and fostering trust in local healthcare and veterinary facilities. Engaging the community through schools, religious institutions, and media platforms can further extend outreach, help dispel myths and promote awareness regarding the symptoms and prevention of rabies, as well as the critical importance of seeking prompt medical care for dog bite injuries.

In conclusion, sustained efforts in public health education and collaboration across the One Health spectrum are essential for effectively preventing and controlling rabies. Continued partnerships among public health practitioners, veterinarians, and local stakeholders will strengthen rabies prevention and health-seeking behaviors throughout Nigeria. By building on the positive knowledge, attitudes, and practices observed in this study, public health programs should expand the One Health approach nationwide, ensuring that rabies prevention strategies are accessible, culturally relevant, and responsive to community needs. Implementing these recommendations will be pivotal in advancing Nigeria toward a safer, rabies-free future.

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