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Original Research Article

Rabies awareness and knowledge among adults in an urban Indian setting: evidence from Jaipur, India

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ABSTRACT

Background: Rabies is almost invariably fatal once symptoms appear yet preventable if post-exposure prophylaxis (PEP) is completed in time. National data show that almost half of those who begin a vaccine course in India do not complete it. Whether Jaipur residents possess the specific knowledge that governs treatment completion had not been assessed.
Methods: A cross-sectional survey used a bilingual questionnaire of ten factual knowledge items, administered online and face to face across Jaipur (September 2025 to February 2026). After exclusions, 349 adults were analysed.
Results: General awareness was high: 99.4% would attend a hospital after a bite and 89.1% knew rabies is preventable if treated in time. However, life-critical procedural knowledge was weak. Only 37.8% knew that rabies cannot be cured once symptoms appear, while 43.8% believed a hospital could still cure it, making the incorrect belief more prevalent than the correct one. Only 26.5% knew vaccine-induced protection is not immediate, 57.3% knew the full course requires four or five injections, and 42.1% knew that mammals other than dogs transmit the virus. Mean knowledge score was 6.07 of 10 (SD 1.87); 22.3% scored poorly. Scores were higher among those with a dog bite in the family or social circle (p=0.003).
Conclusions: High awareness coexists with critical gaps in the knowledge that determines survival: that rabies is incurable after symptom onset, that protection is not immediate, and that the course must be completed. Closing these gaps requires targeted communication at the point of post-exposure care, not broader awareness activity.

Keywords: Rabies, Knowledge, Post-exposure prophylaxis, Dog bite, Urban health

INTRODUCTION

Rabies is almost invariably fatal once clinical signs appear, and almost entirely preventable if the wound is washed promptly and PEP is completed.[1] What happens between exposure and completion of treatment is therefore decisive, and part of it depends on what the exposed person understands about their situation.

An estimated 59,000 people die of dog-mediated rabies each year worldwide.[2] India carries a substantial share of that burden. A recent national community-based study estimated 9.1 million animal bites and 5,726 human rabies deaths annually, a considerable reduction from the approximately 20,565 deaths estimated two decades earlier.[3,4] The same survey reported that one in five dog-bite victims received no anti-rabies vaccine, and that among those who began a course, almost half did not complete it.[3] Incomplete courses are not obviously explained by access alone, since those affected had already reached a facility and accepted a first dose, and understanding of what the treatment involves is one plausible contributing factor.

This distinction, between general awareness that dog bites are dangerous and specific knowledge of what the treatment achieves, recurs across community surveys. In

Tanzania, general awareness was widespread while knowledge of transmission and treatment was not.[5] Indian studies report similar patterns among construction workers in Odisha and in rural north India.[6,7] In a Maharashtra village almost all respondents had heard of rabies but fewer than half knew that licks or scratches could transmit it, while in urban Panchkula socio-economic position rather than urban residence predicted knowledge, which cautions against assuming that residents of large cities are adequately informed.[8,9]

Published evidence from Jaipur is limited to one clinic-based study of 107 attendees of an anti-rabies clinic, in which roughly a quarter knew that rabies is not curable and about 39% knew that animals other than dogs can transmit it.[10] Because that study sampled people who had already been bitten and had already reached a health facility, its findings cannot be assumed to describe the wider adult population, most of whom are never bitten yet whose knowledge governs what they would do after an exposure. No community-based assessment of rabies knowledge among adult residents of Jaipur has been published.

This study therefore aimed to measure rabies knowledge among adult residents of Jaipur, to identify question by question where correct knowledge is strong, where it is weak and which incorrect beliefs are common, and to summarise overall knowledge using a transparent index.

METHODS

Study design and setting

A cross-sectional community survey was conducted in Jaipur, the capital of Rajasthan, between September 2025 and February 2026. The 2011 Census of India recorded a municipal population of 3,046,163 for Jaipur Municipal Corporation, since considerably exceeded.[11] The city combines a dense eighteenth-century walled core with lower-density planned colonies to the south and west and mid-century administrative quarters in the centre. The study boundary corresponds to the Jaipur Development Authority (JDA) planning jurisdiction, a statutory body established under the Jaipur Development Authority Act 1982, which encompasses the municipal city and its planned urban extensions across approximately 3,000 sq km; the boundary is shown in Figure 1. Municipal services within the city, including dog vaccination and animal birth control, are delivered through wards of Jaipur Municipal Corporation; a 2019 notification divided the corporation into Jaipur Heritage and Jaipur Greater with 250 wards in total, and the two bodies were merged again during the study period.[12]

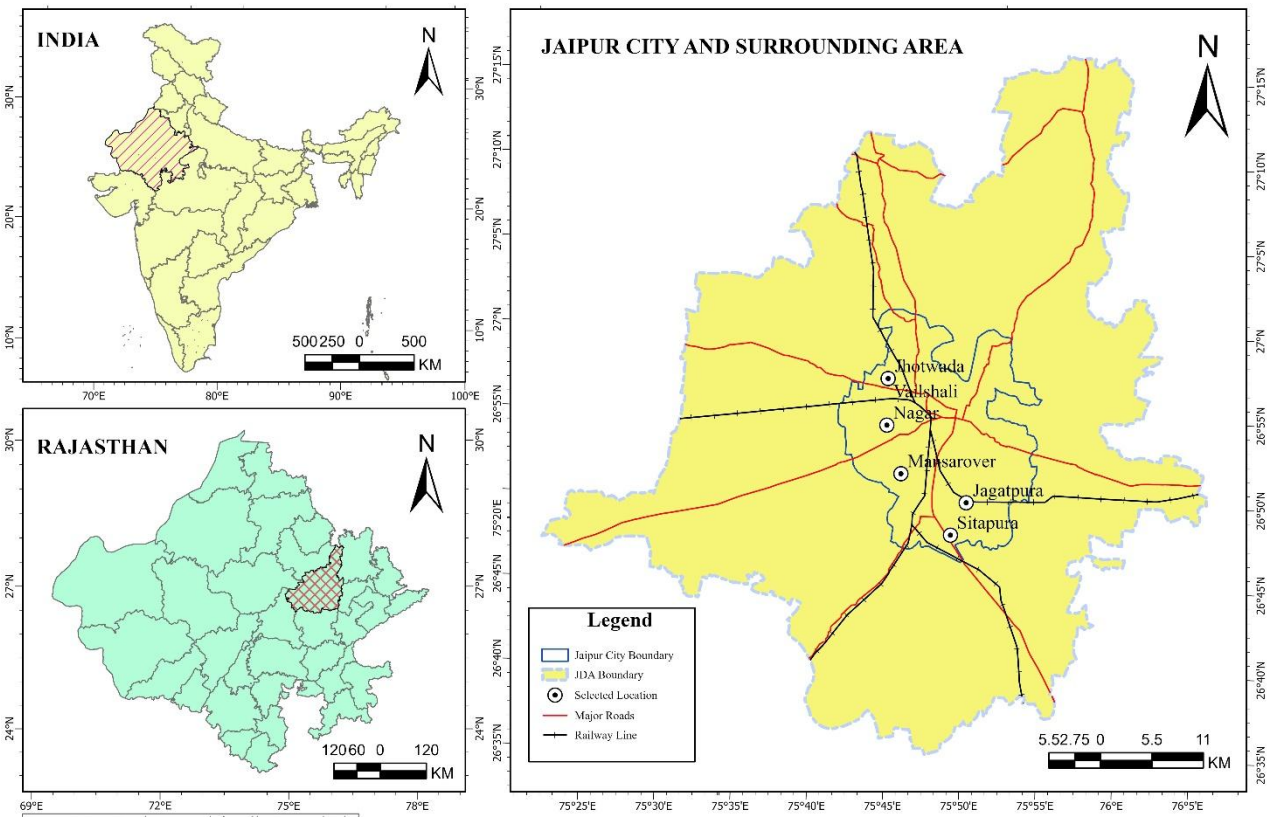

Figure 1: Location and extent of the Jaipur study area, Rajasthan, India. The study area corresponds to the Jaipur Development Authority (JDA) planning jurisdiction. Selected major urban localities are shown solely for geographical orientation and do not represent sampling sites, respondent residences or a spatial sampling frame.
*Source: Prepared by the authors. Administrative boundaries from Survey of India; study area boundary, Jaipur Development Authority planning jurisdiction (JDA Act 1982).

Participants and eligibility

Respondents were eligible if they were aged 18 years or above and resident within the Jaipur study area. Respondents reporting residence outside the study area were excluded, since combining populations served by different health administrations would weaken interpretation of city-level findings. The survey file contained 391 valid records. Of these, 42 reported residence outside the study area and were excluded, giving a final analytical sample of 349. All 349 had a recorded age of 18 years or above. No duplicate records were identified.

Sampling and data collection

This study aimed to identify the pattern and location of knowledge gaps across a diverse urban population rather than to estimate a single city-wide prevalence figure, an objective for which purposive sampling is the methodologically appropriate choice. Participants were therefore recruited at geographically distributed public venues and through online networks, to ensure breadth across localities, age groups and socioeconomic backgrounds, consistent with the established methodology of community-based knowledge surveys in comparable settings. A single bilingual (English and Hindi) questionnaire, implemented in Google Forms, was administered in two modes: face-to-face administration by trained investigators at public venues across the city, principally Jawahar Kala Kendra, Smriti Van, City Park Mansarovar, Central Park and Nehru Bal Udyan; and an online link circulated through social networks. Of the 349 respondents analysed, 197 (56.4%) completed the questionnaire online and 152 (43.6%) were surveyed face to face.

Survey questions and how correct answers were defined

The questionnaire recorded age, locality of residence, one item on whether the respondent, a household member or a member of their social circle had been bitten by a dog in the preceding year, and ten factual knowledge items each with a single correct answer. For analysis the items were grouped into five domains reflecting the sequence an exposed person faces: general awareness and severity; transmission and risk; dog-bite response; PEP; and prevention and control.

Correct responses were defined against current authoritative guidance.[1,13] Two items warrant explanation. The item on the number of injections was keyed to “four or five” because the intramuscular regimens used in India comprise four or five doses depending on the schedule followed, whereas the fourteen-dose option corresponds to the nerve-tissue vaccine long discontinued.[13] The item on how soon the vaccine acts was keyed to “within 7 days”, the option closest to the established position that virus-neutralising antibody becomes detectable approximately 7 to 10 days after the first dose and peaks later.[1] This item should therefore be understood as testing whether respondents recognise that protection is not immediate, rather than as testing precise immunological timing, and it is reported on that basis throughout.

Rabies knowledge index

All ten factual items were included in the index; none was excluded, so the index requires no judgement about which facts matter more. Scoring was binary, with a correct response scoring 1 and any other response, including an explicit “don't know”, scoring 0, on the reasoning that a respondent who does not know the correct action cannot take it. Items were unweighted, giving a range of 0 to 10. The scoring key was verified against the scores generated by the survey platform rather than assumed, and the two agreed in 390 of 391 records (99.7%).

Respondents were classified as having poor (0-4), moderate (5-7) or good (8-10) knowledge. These boundaries were informed by the observed score distribution and approximate the empirical tertile boundaries, which fell at scores of 5 and 7, while preserving interpretable whole-number ranges. Because the index is a discrete ten-point score, whole-number boundaries cannot divide the sample into equal thirds, and the resulting groups are not equal in size; the categories are presented as an interpretive aid rather than as statistically defined tertiles.

Internal consistency, assessed by the Kuder-Richardson formula 20, was 0.50. This value indicates limited internal consistency across a heterogeneous set of knowledge items, and the index is therefore interpreted as a descriptive composite rather than as a unidimensional psychometric scale. The question-wise findings accordingly remain the primary analytical focus.

Statistical analysis

Respondent characteristics and item-level responses were summarised as frequencies and percentages, with correct, incorrect and 'don't know' responses reported separately for each knowledge item and valid denominators stated wherever responses were missing. The knowledge index was described by mean, standard deviation, median, range and category distribution. Two substantive comparisons were made: knowledge by prior dog-bite exposure and knowledge by age group. A sensitivity analysis examined whether mode of administration was associated with knowledge. The Mann-Whitney U test was used for two-group comparisons, the Kruskal-Wallis test for more than two groups, the chi-square test for categorical cross-tabulation and Spearman's rank correlation for the age gradient. Analysis was performed in Python 3 using SciPy. The study is reported in accordance with the STROBE statement for cross-sectional studies.[14]

Ethical considerations

Participation was voluntary. All participants were informed of the purpose of the study and gave verbal informed consent before the questionnaire was administered. Only adults aged 18 years and above were included. Analysis was conducted on a de-identified extract and no identifying information appears in this manuscript or in any Table or Figure.

RESULTS

Respondent characteristics

The final sample comprised 349 adult residents of the Jaipur study area (Table 1). Mean age was 37.8 years (SD 14.0, median 35, range 18-74), with respondents aged 18-29 forming the largest group (37.0%). One hundred and twelve respondents (32.1%) reported a dog bite in their household or social circle during the preceding year. Just over half the sample (56.4%) completed the questionnaire online and 43.6% were surveyed face to face at public venues.

Question-wise knowledge and misconceptions

Correct-response rates across the ten items ranged from 99.4% to 26.5%, with the weakest scores consistently on the treatment-specific items (Table 2 and Figure 2).

Knowledge was highest on general aspects of the disease and on the immediate institutional response, with correct responses above 80% for attending a health facility after a bite, for preventability with timely treatment, and for mass dog vaccination as the most effective protection. It fell to between 42% and 67% across transmission, wound management and the vaccine course.

Within that lower band, two patterns are not visible from correct-response rates alone. Wound management was misdirected rather than absent: 29.5% would apply antiseptic and a dressing before washing, and 6.9% would apply turmeric and chilli. Transmission was misunderstood in both directions, with 35.5% believing that only dogs transmit rabies and 21.5% that all animals do, including non-mammals.

Two items stand out as the most consequential. Only 37.8% knew that rabies cannot be cured once symptoms appear, while a larger proportion (43.8%) believed that a hospital could still cure it, making the incorrect belief more prevalent than the correct one. Only 26.5% knew that vaccine-induced protection is not immediate, and 38.9% were unable to say when it begins. "Don't know" responses clustered in these two items and in vaccine eligibility, but were absent for the general-awareness items (Figure 2).

Table 1: Characteristics of surveyed respondents (n=349).

Characteristics	N	Percentage (%)
Age group (in years)[a]		
18-29	129	37.0
30-44	104	29.8
45-59	85	24.4
60 and above	31	8.9
Dog bite in household or social circle, past year		
Yes	112	32.1
No	237	67.9
Mode of administration		
Online	197	56.4
Face to face at public venue	152	43.6
Locality of residence		
Specific locality named	314	90.0
Recorded only as “Jaipur”	35	10.0

*[a]Mean age 37.8 years (SD 14.0); median 35; range 18-74 years. All respondents were aged 18 years or above and resident in the Jaipur study area. Source: Authors analysis of primary survey data, 2025-2026.

Table 2: Question-wise rabies knowledge by domain (n=349).

Knowledge items	Valid (N)[a]	Correct (%)[b]	Incorrect (%)	Don't know (%)[c]	Most frequent incorrect response (%)
General awareness and severity					
Rabies is preventable if treated in time	349	89.1	7.2	3.7	Bite always causes rabies (4.3)
No cure once symptoms appear	349	37.8	47.6	14.6	Hospital can cure it (43.8)
Transmission and risk					
Risk from bite or scratch by a rabid dog	349	67.0	33.0	-	Any dog bite (31.2)
All mammals can transmit rabies	349	42.1	57.9	-	Only dogs (35.5)

Knowledge items	Valid (N)[a]	Correct (%)[b]	Incorrect (%)	Don't know (%)[c]	Most frequent incorrect response (%)
Dog-bite response					
Wash wound with running water and soap	349	61.9	38.1	-	Antiseptic and dressing (29.5)
Attend hospital or dispensary	343	99.4	0.6	-	-
Post-exposure prophylaxis					
Course requires four or five injections	347	57.3	32.6	10.1	Fourteen injections (23.6)
Protection is not immediate[d]	347	26.5	34.6	38.9	Protection is instant (26.2)
Vaccine is indicated for everyone	349	47.9	19.5	32.7	Not if diabetic or medicated (10.3)
Prevention and control					
Mass dog vaccination protects people best	349	80.8	19.2	-	Vaccinate all people (9.7)

*a-Valid n differs between items where a small number of responses were not recorded; all percentages are of valid responses. b-Percentages are rounded to one decimal place and may not sum to exactly 100. c-"Don't know" was offered as an explicit response option for five items only; cells showing "-" indicate items for which it was not available. d-This item tests recognition that vaccine-induced protection is not immediate, rather than precise immunological timing. Source: Authors analysis of primary survey data, 2025-2026.

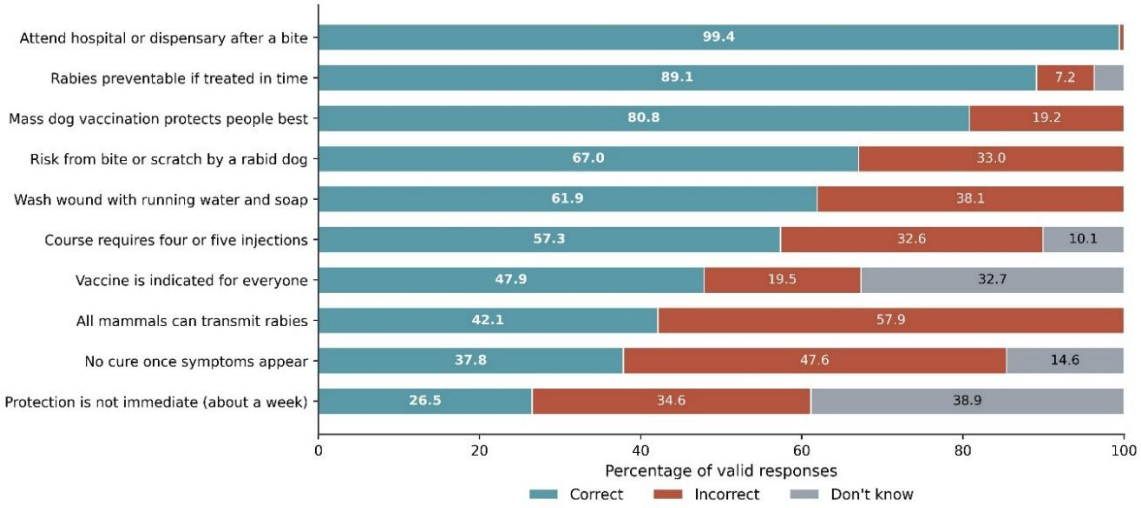

Figure 2: Question-wise distribution of correct, incorrect and "don't know" responses for the ten knowledge items, ordered by percentage correct (n=349; valid n=343-349 by item). "Don't know" was offered as an explicit option for five items only.

*Source: Authors analysis of primary survey data, 2025-2026.

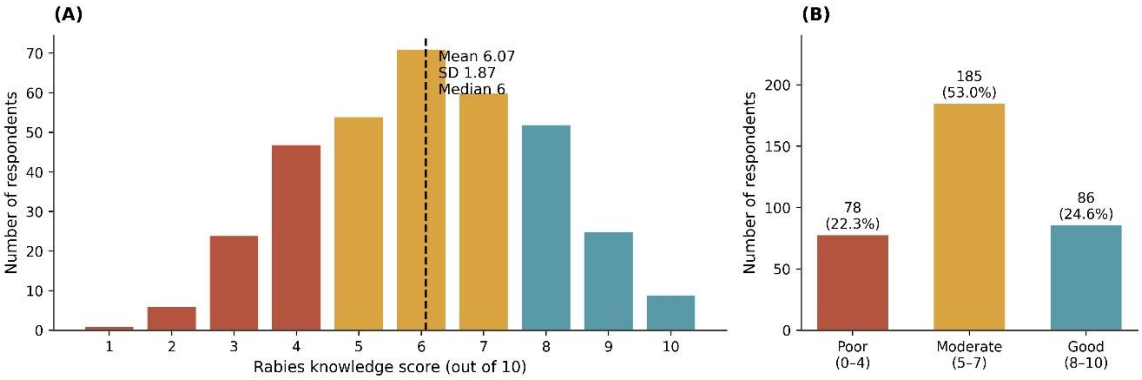

Figure 3 (A and B): Rabies knowledge index among surveyed respondents (n=349): (A) distribution of index scores out of ten, with the sample mean indicated by the dashed line; (B) number and percentage of respondents in each knowledge category.

*Source: Authors analysis of primary survey data, 2025-2026.

Rabies knowledge index

The mean index score was 6.07 of 10 (SD 1.87, median 6, range 1-10), with a unimodal distribution centred slightly above the scale midpoint (Figure 3). Seventy-eight respondents (22.3%) fell in the poor category, 185 (53.0%) in the moderate category and 86 (24.6%) in the good category. Read alone, the mean would suggest a moderately informed population; the question-wise results indicate that it averages high scores on general items with low scores on treatment-related items within the same respondents, and it is therefore reported as a descriptive summary rather than as a measure of preparedness (Figure 3).

Comparisons

Respondents reporting a dog bite in the household or social circle scored higher than those without (mean 6.53 versus 5.86; Mann-Whitney p=0.003), a pattern consistent across knowledge categories (chi-square 9.75, df 2, p=0.008; Table 3). This association most plausibly reflects that contact with the health system following a bite, or conversation with someone who has undergone PEP, transfers knowledge, though the cross-sectional design cannot establish the direction, and the exposure item includes family and social-circle bites rather than personal experience alone.

Table 3: Knowledge index by dog-bite exposure, age group and mode of administration.

Groups	N	Mean score (0-10)	SD	Test*
Dog bite in household or social circle				
Yes	112	6.53	1.72	Mann-Whitney
No	237	5.86	1.90	p=0.003
Age group (in years)				
18-29	129	5.80	1.87	Kruskal–Wallis H=7.55,
30-44	104	6.04	1.83	df 3, p=0.056;
45-59	85	6.49	1.85	Spearman rho=0.161,
60 and above	31	6.19	1.90	p=0.003
Mode of administration (sensitivity analysis)				
Online	197	6.37	1.87	Mann-Whitney
Face to face at public venue	152	5.70	1.81	p=0.001
All respondents	349	6.07	1.87	-

*All associations are cross-sectional and are not interpreted causally. Knowledge categories: poor 0-4, moderate 5-7, good 8-10. Source: Authors analysis of primary survey data, 2025-2026.

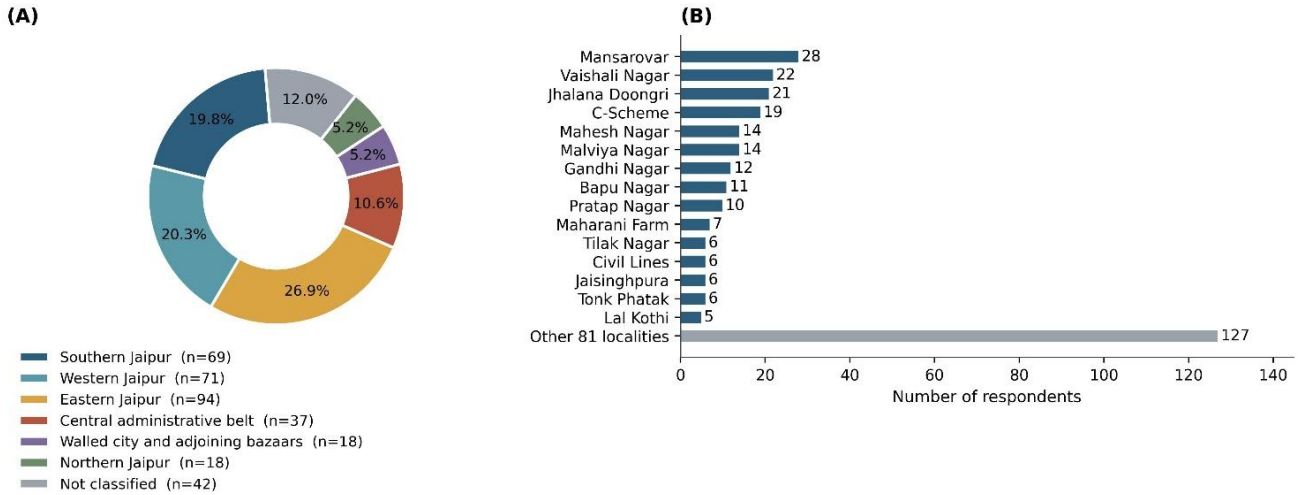

Figure 4 (A and B): Distribution of surveyed respondents across the Jaipur study area (n=349): (A) proportion of respondents by broad geographical zone, with zones assigned from the established position of each reported locality relative to the walled city and principal arterial roads, and respondents whose locality could not be placed confidently or who reported only "Jaipur" shown as unclassified; (B) the fifteen most frequently reported localities, with all remaining localities combined.

*Source: Authors analysis of primary survey data, 2025-2026.

Knowledge rose modestly with age (Spearman rho=0.161, p=0.003). Mean scores increased from 5.80 in the 18-29 age group to 6.49 in the 45-59 group, then fell slightly to 6.19 among those aged 60 and above,

suggesting accumulated experience rather than a simple age effect. The difference between age groups did not reach conventional significance when tested categorically (Kruskal-Wallis H=7.55, df 3, p=0.056).

Respondents who completed the questionnaire online scored higher than those surveyed face to face (mean 6.37, n=197, versus 5.70, n=152; Mann-Whitney p=0.001). This difference reflects the characteristics of who was reached by each mode rather than a property of the population, and is discussed as a sampling consideration in the limitations.

Distribution of respondents across the study area

Of 349 respondents, 314 (90.0%) named a specific locality of residence, of whom 307 could be placed within a recognised Jaipur locality; the remaining seven named localities that could not be reliably located. Thirty-five respondents (10.0%) recorded only "Jaipur" without a specific locality. Together, these 42 respondents form the unclassified group in the geographical analysis.

Localities were grouped into broad geographical zones based on their established position relative to the walled city and principal arterial roads. Classified respondents were distributed across eastern (26.9%), western (20.3%) and southern (19.8%) Jaipur, with smaller contributions from the central administrative belt (10.6%), the walled city and adjoining bazaars (5.2%) and northern Jaipur (5.2%), with 12.0% unclassified (Figure 4A). The fifteen most frequently reported localities and the distribution across all 96 localities are shown in Figure 4B.

This geographical spread across six zones of the city is a methodological strength: it demonstrates that the survey drew from diverse residential settings rather than a single neighbourhood or catchment, which supports the breadth of the item-level findings. Because no locality was sampled in known proportion to its population, the distribution is not interpreted as a representative map of the city, and knowledge scores are not disaggregated by locality or zone.

DISCUSSION

The central finding of this study is not that rabies knowledge is poor in Jaipur, but that it is selectively poor in a way that directly matters for survival. Almost every respondent knew to attend a health facility after a bite and nine in ten knew that rabies is preventable with timely treatment. These general facts are widely held. What is not widely held is the procedural knowledge that determines whether treatment is completed: whether the disease is curable after symptoms begin, how long protection takes to develop, and how many doses the course requires.

The curability finding is the most important result in this paper. More respondents believed that a hospital could still cure rabies after symptoms had begun (43.8%) than knew that it could not (37.8%), the incorrect belief was the majority position. This directly removes the logical basis for urgency. A person who believes that treatment will still be available if symptoms later appear has a rational basis for stopping a course of injections once the wound has healed and nothing has happened. When set alongside the finding that two-thirds either believed protection to be immediate or did not know when it develops, this supplies a coherent explanation for why almost half of Indians who begin PEP do not finish it.[3] These are not abstract deficits. They are specific beliefs that a single clear message at the point of first injection could correct.

This study's contribution is to show precisely where in the knowledge sequence the failure occurs, rather than simply reporting that awareness is mixed. By analysing all ten items separately, the study reveals that correct responses collapse from 99.4% on where to go after a bite to 26.5% on when protection begins - a decline that occurs specifically at the point where knowledge must translate into sustained action. Earlier community surveys from India and elsewhere documented that general awareness exceeds specific knowledge, but did not locate the failure at item level.[5,8,9] The present study does, and the location matters: it is the treatment pathway, not the disease itself, that people in Jaipur do not understand.

A direct comparison with the only previous Jaipur study deepens this finding. Among anti-rabies clinic attendees people who had already been bitten and had already reached a health facility approximately a quarter knew that rabies is not curable and about 39% knew that animals other than dogs can transmit it.[10] In this community sample, the corresponding figures were 37.8% and 42.1%. The general adult population was no less informed than people who had undergone the clinical encounter. This is the clearest evidence that the clinical encounter is not currently being used to transfer the information that matters most.

The associations with dog-bite exposure and age establish something important. Knowledge was higher among those with a dog bite in the household or social circle, and rose modestly with age. Critically, gaps were not concentrated in any age group or exposure category they were present throughout sample at similar levels. This is a positive finding for programme design: the problem is not a specific audience requiring targeted identification but a specific content gap requiring universal communication.

One result is strongly encouraging. Four in five respondents identified vaccinating dogs owned and free-roaming as the most effective way of protecting people from rabies, and only 4.3% favoured removing dogs from the community. Public understanding in this sample is already aligned with the established epidemiological position on canine vaccination.[1] Vaccination-based

programmes in Jaipur would be building on a foundation of public support, not working against it.

The geographical spread of the sample is a strength. Respondents came from 96 localities across six zones of the city from the walled city and the central administrative belt to the planned colonies of the south and west. This means the item-level findings were obtained from a genuinely diverse urban population rather than a single neighbourhood or facility catchment, which supports their relevance to the city as a whole.

Public health implications

The findings identify three messages that awareness programming should state explicitly. First, that rabies cannot be cured once symptoms appear communicating only that rabies is preventable leaves open the possibility, in many minds, that treatment remains effective at any stage. Second, that vaccine protection takes time to develop and the full course must be completed - these are the facts that determine whether a person returns for the third and fourth dose. Third, that mammals other than dogs transmit rabies - a third of respondents believed only dogs can, which means exposures involving cats, monkeys or other animals may go unrecognised. All three messages can be delivered in under a minute at the point of first injection, which is the moment of greatest motivation and the setting where the right audience is always present.

Strengths and limitations

This study has four concrete strengths. It is the first community-based rabies knowledge survey in Jaipur; the only previous study recruited 107 clinic attendees who had already been bitten, leaving the knowledge of the general adult population, the people whose decisions after a bite determine survival unmeasured until now.[10] The scoring key was verified empirically against platform-generated scores across all 391 records, achieving 99.7% agreement, which means every percentage reported here reflects what the questionnaire actually measured rather than what the authors assumed it measured. Responses were separated into correct, incorrect and "don't know" for each item individually, enabling identification of specific misconceptions rather than a single low score, the level of detail that makes findings actionable. Finally, the sample was drawn from 96 localities across six geographical zones of the city, from the walled core to the outer planned colonies, which gives the findings breadth across genuinely diverse urban settings.

Three limitations affect interpretation and should be read alongside the findings. Sampling was purposive, and respondents who completed the questionnaire online scored higher than those surveyed face to face (6.37 versus 5.70), so the overall mean describes this sample rather than all adult residents of Jaipur. The questionnaire collected no measure of education, occupation or income, which prevents identification of the socioeconomic subgroups most in need of targeted communication, a gap that matters given evidence from comparable Indian cities that socioeconomic position predicts rabies knowledge.[9] And because the design is cross-sectional, the associations between knowledge, dog-bite exposure and age describe patterns in the data rather than causes. None of these three constraints affects the item-level findings the proportions who held each correct and incorrect belief because those are direct frequency counts from a defined adult sample and do not depend on representativeness, covariate adjustment or causal inference.

CONCLUSION

Rabies knowledge among adult residents of Jaipur was selectively rather than uniformly deficient. Awareness of the disease and of the need to seek care after a bite was close to universal, whereas understanding of what treatment can achieve, and of the point beyond which it cannot, was considerably weaker. The most consequential finding is that the belief that rabies remains curable after symptom onset was more common in this sample than the correct understanding that it is not.

The constraint on rabies prevention in this population therefore lies in the precision of what is understood rather than in the visibility of the disease. Because the gaps were defined by topic and were not concentrated in any age group or exposure category, broadening general awareness activity alone is unlikely to close them. Three facts were missing across the entire surveyed population: that rabies cannot be cured once symptoms begin, that vaccine protection is not immediate, and that the full course must be completed. Each is a single sentence. The point at which PEP is first administered is the moment when the right person is present, the right question is live, and the right information can be delivered.

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REFERENCES

1. World Health Organization. WHO expert consultation on rabies: third report. WHO Technical Report Series No. 1012. Geneva: World Health Organization; 2018. Available at: https://iris.who.int/handle/10665/272364. Accessed on 28 August 2026.
2. Hampson K, Coudeville L, Lembo T, Sambo M, Kieffer A, Attlan M, et al. Estimating the global burden of endemic canine rabies. PLoS Negl Trop Dis. 2015;9(4):e0003709.
3. Thangaraj JWV, Kumar MS, Kumar CPG, Sabarinathan R, Kumar VS, Bhatnagar T, et al. Estimates of the burden of human rabies deaths and animal bites in India, 2022-23: a community-based cross-sectional survey and probability decision-tree

modelling study. Lancet Infect Dis. 2024;25(1):126-34.
4. Sudarshan MK, Madhusudana SN, Mahendra BJ, Rao NSN, Ashwath Narayana DH, Abdul Rahman S, et al. Assessing the burden of human rabies in India: results of a national multi-center epidemiological survey. Int J Infect Dis. 2007;11(1):29-35.
5. Sambo M, Lembo T, Cleaveland S, Ferguson HM, Sikana L, Simon C, et al. Knowledge, attitudes and practices (KAP) about rabies prevention and control: a community survey in Tanzania. PLoS Negl Trop Dis. 2014;8(12):e3310.
6. Tripathy R, Satapathy S, Karmee N. Assessment of knowledge, attitude and practice regarding rabies and its prevention among construction workers: a cross-sectional study in Berhampur, Odisha. Int J Res Med Sci. 2017;5(9):3971-5.
7. Singh T, Mahajan S, Dahiya N. A cross-sectional study of awareness and practices regarding animal bites in rural community, North India. J Family Med Prim Care. 2020;9(6):2751-7.
8. Tiwari HK, O'Dea M, Robertson ID, Vanak AT. Knowledge, attitudes and practices (KAP) towards rabies and free-roaming dogs (FRD) in Shirsuphal village in western India: a community based cross-sectional study. PLoS Negl Trop Dis. 2019;13(1):e0007120.
9. Tiwari HK, O'Dea M, Robertson ID, Vanak AT. Knowledge, attitudes and practices (KAP) towards rabies and free roaming dogs (FRD) in Panchkula district of north India: a cross-sectional study of urban residents. PLoS Negl Trop Dis. 2019;13(4):e0007384.
10. Kapoor P, Baig VN, Kacker S, Sharma M, Sharma M. A cross-sectional study of knowledge regarding rabies among attendees of anti-rabies clinic of a teaching hospital, Jaipur. J Family Med Prim Care. 2019;8(1):194-8.
11. Office of the Registrar General and Census Commissioner, India. Census of India 2011: Primary Census Abstract, Rajasthan. New Delhi: Ministry of Home Affairs, Government of India; 2011. Available at: https://censusindia.gov.in. Accessed on 28 August 2026.
12. Local Self Government Department, Government of Rajasthan. Notification dated 18 October 2019 constituting Nagar Nigam Jaipur Heritage and Nagar Nigam Jaipur Greater under sections 3, 6 and 10 of the Rajasthan Municipalities Act, 2009. Rajasthan Gazette. 2019.
13. National Centre for Disease Control, Directorate General of Health Services, Ministry of Health and Family Welfare, Government of India. National guidelines on rabies prophylaxis. New Delhi: NCDC; 2015. Available at: https://clinicalestablishments.mohfw.gov.in/sites/default/files/standard-treatment-guidelines/238.pdf. Accessed on 28 August 2026.
14. von Elm E, Altman DG, Egger M, Pocock SJ, Gøtzsche PC, Vandenbroucke JP. The Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) statement: guidelines for reporting observational studies. Lancet. 2007;370(9596):1453-7.

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