

Veterinary Care Challenges for Stray Animals in Bangladesh: Awareness, Logistics, and Policy Solutions

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Abstract

This study investigates the key challenges in providing veterinary care for stray animals in Bangladesh, using a mixed-methods approach. Data were collected through qualitative interviews with veterinarians, caregivers, and NGO representatives in Dhaka ($n=13$), and quantitative surveys from urban, suburban, and rural areas across the country ($n=100$). The findings reveal critical barriers, including low public awareness of zoonotic health risks, logistical difficulties in capturing and transporting animals, and financial constraints faced by caregivers. Additionally, weak policy enforcement and gaps in collaboration between the government and NGOs were identified as significant obstacles to effective stray animal management. The study highlights the need for targeted public awareness campaigns, mobile veterinary services, and stronger policy implementation to improve both public health and animal welfare outcomes. Practical recommendations are provided for policymakers, NGOs, and veterinarians to address the stray animal crisis across Bangladesh.

Keywords: Veterinary care, stray animals, public awareness, policy enforcement, logistical barriers, animal welfare, Bangladesh, NGO collaboration, zoonotic diseases, One Health.

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Introduction

Stray animal populations in developing countries like Bangladesh pose significant challenges to public health, animal welfare, and veterinary care. The uncontrolled spread of zoonotic diseases, particularly rabies, represents a serious public health threat, especially among low-income communities with limited access to healthcare and veterinary services (Seimenis, 2012). Bangladesh faces a high prevalence of free-roaming dogs and cats, which increases the risk of rabies transmission in densely populated urban areas, such as Dhaka, where the issue is especially acute (Hossain et al., 2013). Despite these risks, critical gaps in infrastructure and resource allocation hinder efforts to manage stray populations and prevent disease spread across the country.

Low public awareness of the health risks associated with stray animals further limits the effectiveness of disease control measures. While the concept of *zooeyia*—the positive health impact of human-animal interactions—has gained some recognition, traditional attitudes and low awareness continue to impede progress in animal welfare (Kamal et al., 2023). Although pet ownership has been linked to psychological benefits like reduced loneliness, evidence of broader health improvements in urban contexts remains limited (A. Islam & Towell, 2013). Stray animals are frequently viewed as nuisances rather than companions, which complicates efforts to enhance their welfare and reduce associated public health risks.

A significant challenge is the inadequate veterinary infrastructure in Bangladesh. The country's veterinary services are predominantly oriented toward livestock care, leaving minimal resources for stray animal care (Lam et al., 2019). This creates large service gaps, especially in urban centers where the demand for veterinary care often surpasses available facilities. Additionally, a shortage of veterinarians trained to care for stray animals compounds this issue, as most professionals are focused on livestock (M. A. Islam, 2015). This lack of specialized training constrains the capacity to meet the growing needs of stray animal care in both urban and rural areas.

Policy and enforcement gaps further exacerbate these challenges throughout Bangladesh. While animal welfare laws exist, weak enforcement, particularly in urban centers like Dhaka, limits their impact. Ineffective sterilization programs and inconsistent government support have hindered efforts to manage stray populations (Chaudhari, 2016). Additionally, policies for rabies control and stray management are often underfunded and poorly implemented, leading to incomplete initiatives (Tenzin et al., 2015). Addressing these gaps requires both policy reform and stronger partnerships between government agencies and non-governmental organizations (NGOs) to improve enforcement and ensure better resource allocation.

This study aims to analyze the key challenges faced by caregivers, veterinarians, and NGOs in providing veterinary care for stray animals across Bangladesh, with a focus on urban centers like Dhaka. It explores strategies for overcoming these challenges, such as improving public awareness, addressing logistical and financial barriers, and understanding the role of socio-cultural and religious beliefs in shaping attitudes towards stray animal care.

Additionally, the study evaluates the policy measures required to support caregivers and examines how collaboration between government agencies and NGOs can strengthen veterinary services for stray animals throughout the country.

Methodology

This study used a mixed-methods approach, integrating quantitative survey data with qualitative insights from semi-structured interviews to explore the challenges of providing veterinary care for stray animals across Bangladesh. This approach provided a broad overview of public awareness and attitudes, along with detailed insights into logistical, financial, and socio-cultural challenges, especially in urban settings like Dhaka.

Participants and Data Collection

Quantitative Data: A survey was distributed via social media platforms, targeting respondents from urban, suburban, and rural areas across Bangladesh. A total of 131 responses were initially collected, but 31 were excluded due to inconsistencies, resulting in 100 responses for analysis. The survey included 20 questions covering topics such as awareness of zoonotic health risks and attitudes toward stray animal care. This broader dataset helped capture general trends and perceptions in stray animal management across diverse regions.

Qualitative Data: Semi-structured interviews were conducted with 13 stakeholders based in Dhaka, selected through purposive and snowball sampling to ensure diverse perspectives. The participants included one veterinarian, two NGO representatives, and ten residents. The interviews provided in-depth insights into challenges in veterinary care, community attitudes, and operational barriers in an urban context. Interviews were transcribed for detailed analysis.

Data Analysis

Qualitative Analysis: Interview data were analyzed using thematic analysis with ATLAS.ti software, identifying key themes such as logistical barriers, financial constraints, and socio-cultural influences. Coding was reviewed by multiple researchers to ensure consistency and accuracy in identifying core themes.

Quantitative Analysis: Survey data were analyzed using descriptive statistics in Google Sheets, focusing on frequencies and percentages to identify patterns in awareness and attitudes toward stray animal care. This quantitative analysis complemented the qualitative findings by providing a broader context on public perceptions and regional differences.

Ethical Considerations

The study followed the ethical guidelines outlined by the American Psychological Association (2017). Informed consent was obtained from all participants, who were assured of confidentiality and their right to withdraw from the study at any time. Data were securely stored to protect participant privacy throughout the research process.

Findings

The study identified several critical challenges in providing veterinary care for stray animals in Dhaka. These findings, drawn from both qualitative interviews with veterinarians, caregivers, and NGO representatives, and quantitative survey data, are presented under key thematic areas.

1. Public Awareness and Health Risks

The study identified a significant gap in public awareness regarding the health risks associated with untreated stray animals, especially zoonotic diseases like rabies. Survey data revealed that only 31% of respondents had a high understanding of these risks, while 49% exhibited moderate awareness and 20% had low awareness. This knowledge gap undermines the effectiveness of public health initiatives aimed at controlling disease spread throughout Bangladesh.

Chart 1: Awareness Levels of Zoonotic Disease Risks from Stray Animals

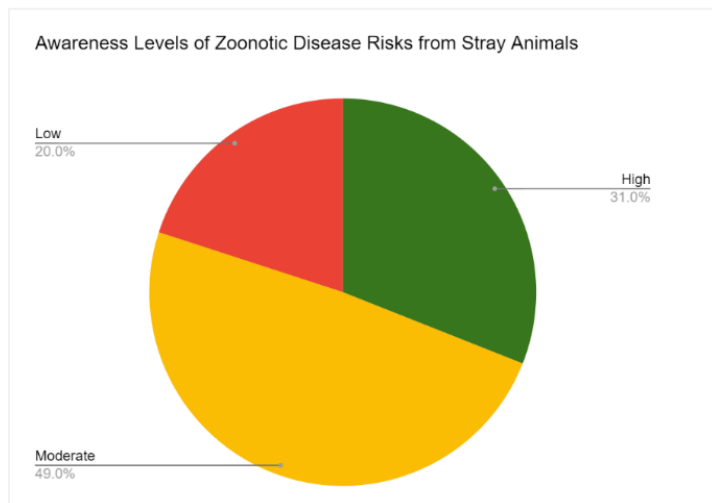


Chart 1: Respondents' levels of awareness about the health risks associated with untreated stray animals.

Qualitative interviews reinforced these findings, with caregivers and veterinarians consistently emphasizing the public's limited understanding of health risks. One veterinarian highlighted, “Many people don’t realize that untreated stray animals can transmit diseases like rabies to humans and other animals. This lack of knowledge is a serious issue.” Caregivers similarly reported that many individuals overlook the need for veterinary care even when stray animals show visible signs of illness.

Variations in Awareness by Demographics

The analysis further indicated that awareness levels varied by education and location. Respondents with higher education, such as a bachelor’s degree or above, showed greater awareness (42%), compared to those with a high school diploma or less (24%). Geographic variations were also evident, with urban respondents demonstrating higher awareness levels than those in suburban and rural areas. This disparity likely results from better access to information and public health campaigns in urban centers.

Chart 2: Public Awareness of Health Risks by Education Level

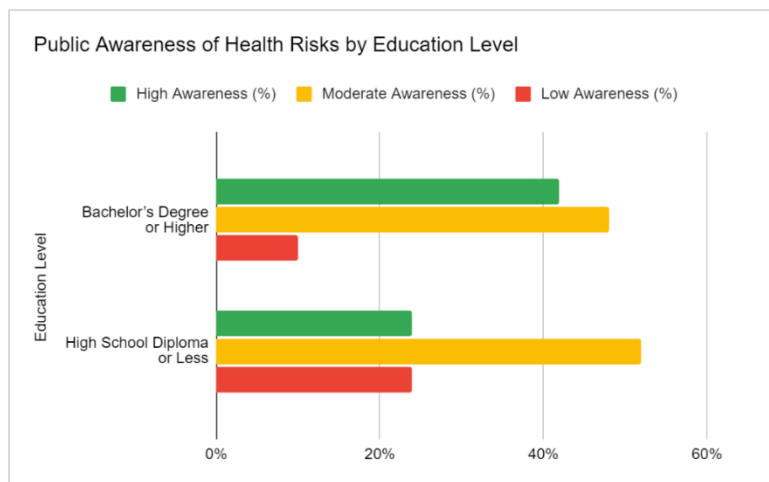


Chart 2: Awareness of health risks associated with stray animals, categorized by education level.

Interviews suggested that residents in less urbanized areas often lack exposure to targeted health messaging, which may contribute to lower awareness levels in these regions.

Cultural and Religious Beliefs

Cultural and religious beliefs play a notable role in influencing respondents' attitudes toward stray animal care. The survey found that 38% of respondents felt their beliefs influenced their decision to engage with stray animals, with some perceiving these animals as undesirable to interact with. One NGO representative stated, “There are certain

perceptions in some communities that stray animals are associated with negative outcomes, which may deter individuals from providing assistance.”

Table 1: Influence of Cultural and Religious Beliefs on Attitudes Toward Stray Animals

| Influence of Beliefs on Attitudes | Agree (%) | Neutral (%) | Disagree (%) |
|--|-----------|-------------|--------------|
| Beliefs affect willingness to engage in stray care | 38% | 40% | 22% |
| Beliefs should not prevent care for stray animals | 62% | 23% | 15% |

Table 1: The influence of cultural and religious beliefs on respondents' attitudes towards stray animal care.

Despite these cultural considerations, 62% of respondents agreed that cultural or religious views should not prevent the provision of care to stray animals. Several interviewees suggested that aligning public health messaging with religious teachings emphasizing compassion for animals could foster increased community engagement, particularly within the context of Islamic traditions prevalent in Bangladesh.

2. Logistical Challenges

The study identified significant logistical barriers to providing veterinary care for stray animals across Bangladesh, with challenges particularly acute in urban centers like Dhaka. Survey data showed that 68% of respondents identified transportation as a major issue, while 47% pointed to difficulties in safely capturing stray animals. These logistical hurdles often delay access to veterinary services, exacerbating the problem of untreated strays.

Table 2: Key Logistical Barriers to Veterinary Care

| Logistical Issue | Count | Percentage |
|----------------------------------|-------|------------|
| Lack of transportation | 68 | 68% |
| Difficulty in capturing animals | 47 | 47% |
| Inadequate veterinary facilities | 56 | 56% |

Table 2: Respondents' identification of primary logistical challenges in providing veterinary care for stray animals.

Interviews with caregivers and veterinarians in Dhaka highlighted the lack of transport vehicles and proper equipment as key obstacles. One caregiver remarked, “Even if we know an animal needs help, getting it to the clinic is nearly impossible without transportation or the proper equipment.” These logistical challenges are particularly critical for injured animals, where delays in transportation can have serious health consequences.

The absence of specialized capture equipment further complicates care. Many respondents noted that improvised tools are often ineffective, especially with aggressive or fearful animals. A veterinarian pointed out, “Without proper tools, capturing an injured stray can be dangerous—for both the animal and the person.”

Geographic Disparities in Access to Services

Logistical challenges were not limited to Dhaka but were particularly severe in rural and suburban areas, where 80% of respondents cited transportation as a major barrier, compared to 50% in urban areas. The lack of nearby veterinary facilities in these regions adds to the challenge. A caregiver from a rural area shared, “Reaching a clinic takes hours, and without transport, we sometimes have no choice but to let the animals suffer.”

Chart 3: Regional Variations in Logistical Challenges

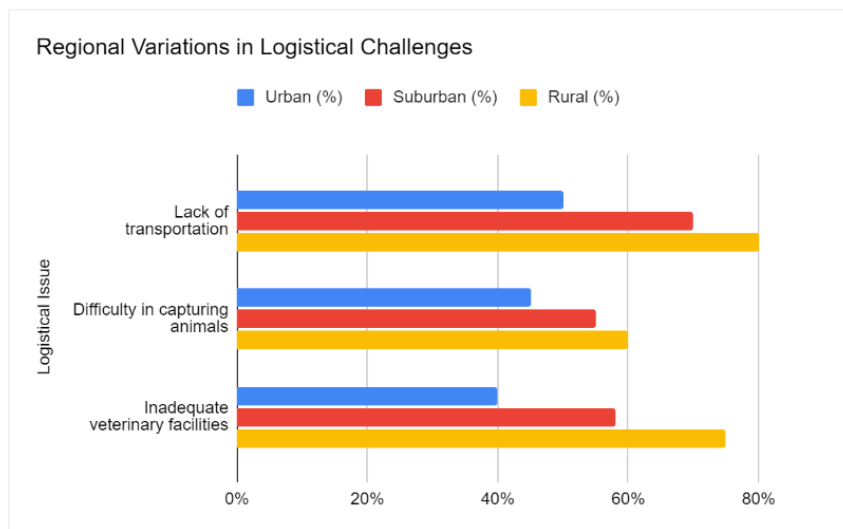


Chart 3: A comparison of transportation and facility challenges across different geographic regions.

These logistical hurdles, especially pronounced in less urbanized areas, leave many stray animals without timely care, leading to higher mortality rates and prolonged suffering. The study underscores the need for targeted interventions, such as mobile veterinary units, to improve access to care and support for caregivers across different regions of Bangladesh.

3. Financial Constraints

Financial barriers are a significant challenge in providing veterinary care for stray animals across Bangladesh. Survey data showed that 45% of respondents identified the high cost of veterinary services as a major obstacle, while 38% highlighted the lack of government subsidies as a critical limitation. These financial challenges hinder caregivers' ability to access ongoing treatment, particularly for chronic conditions requiring regular care.

Table 3: Financial Barriers to Veterinary Care

| Financial Barrier | Count | Percentage |
|----------------------------------|-------|------------|
| High cost of veterinary services | 45 | 45% |
| Lack of government subsidies | 38 | 38% |
| Difficulty in raising funds | 32 | 32% |

Table 3: Respondents' identification of financial challenges in providing veterinary care for stray animals

Caregivers interviewed emphasized the burden of covering veterinary expenses without external support. One caregiver shared, “We often have to decide which animal we can afford to treat, which means leaving others without the help they need.” This challenge is especially acute for those managing multiple animals or dealing with chronic health issues.

The absence of government subsidies exacerbates this burden, with many caregivers relying on personal funds or community donations. Qualitative interviews reinforced the need for structured financial support, such as government aid or partnerships with NGOs, to reduce these burdens. This finding aligns with previous studies in low-resource settings, which emphasize that financial support is key to improving access to animal care (Islam, 2015; Hossain et al., 2013).

Regional Variations in Financial Constraints

The study found notable regional disparities in financial challenges. Caregivers in rural areas (60%) and suburban regions (50%) reported more difficulty affording veterinary care compared to their urban counterparts (40%). Rural caregivers cited the scarcity of affordable services and long travel distances to clinics as compounding factors. One rural caregiver remarked, “We have to travel far for affordable care, and even then, the costs are beyond what many of us can manage.”

Chart 4: Regional Variations in Financial Barriers

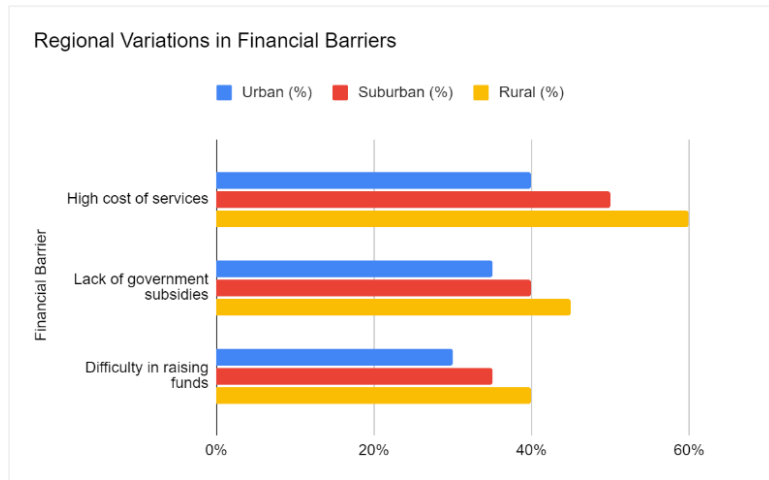


Chart 4: Comparison of financial challenges faced by caregivers across different geographic regions

In interviews, both caregivers and veterinarians highlighted the need for sustainable funding models, such as government subsidies or collaborations with international NGOs, to ensure more consistent access to care. The high costs of medications and emergency treatments were cited as particularly burdensome, often pushing caregivers to rely on informal networks or local donations for support.

The financial strain on caregivers directly impacts the quality of care provided to stray animals, leading to delays in treatment and worsening conditions for many animals. The study suggests that implementing financial interventions, such as subsidies or voucher programs, could alleviate the burden on caregivers and improve access to veterinary care across Bangladesh, particularly in underserved regions.

4. Inadequate Veterinary Infrastructure

The study highlighted significant limitations in the availability and suitability of veterinary facilities for stray animals across Bangladesh. A key issue is the scarcity of clinics equipped to treat stray animals, as most facilities are designed primarily for livestock care. Survey data indicated that 56% of respondents perceived local veterinary facilities as inadequate for stray animal care, aligning with qualitative insights from interviews.

Table 4: Perception of Veterinary Facility Adequacy

| Perception of Facility Adequacy | Count | Percentage |
|---------------------------------|-------|------------|
| Adequate | 44 | 44% |
| Inadequate | 56 | 56% |

Table 4: Respondents' views on the adequacy of local veterinary facilities for treating stray animals.

Interviews with veterinarians and NGO representatives emphasized that many clinics lack essential resources, such as diagnostic tools and expertise specifically for treating stray animals. One veterinarian noted, “Most clinics are set up for livestock, but treating a stray animal requires different resources and a specialized approach, which we often cannot provide.” This limitation means that even when caregivers can bring strays to a clinic, they may not receive the necessary care.

Geographic Disparities in Access to Services

Geographic disparities further exacerbate the issue of inadequate veterinary infrastructure. Participants from rural and suburban areas reported more limited access to veterinary care compared to those in urban regions. For example, 75% of rural respondents described their local clinics as poorly equipped, compared to 40% in urban areas. This gap underscores the need for targeted improvements in veterinary infrastructure, especially outside Dhaka.

Table 5: Regional Disparities in Veterinary Facility Adequacy

| Region | Adequate (%) | Inadequate (%) |
|----------|--------------|----------------|
| Urban | 60% | 40% |
| Suburban | 42% | 58% |
| Rural | 25% | 75% |

Table 5: Comparison of perceived adequacy of veterinary facilities across urban, suburban, and rural regions.

Caregivers from suburban and rural areas frequently reported challenges in accessing care due to the long distances to the nearest clinic and the lack of specialized services for stray animals. One caregiver from a rural area shared, “The nearest clinic is miles away, and even when we get there, they say they can't treat stray dogs properly. It feels like there's no point in trying.”

The study findings suggest that the lack of specialized facilities and trained personnel for stray animal care contributes to delays in treatment and increased suffering among stray populations. Addressing these gaps requires investment in veterinary infrastructure, particularly in under-served regions. Potential solutions include expanding mobile veterinary units and enhancing training programs to equip veterinarians with the skills needed to care for stray animals effectively.

5. Policy Gaps and Enforcement

The study identified critical gaps in the enforcement of animal welfare policies across Bangladesh, particularly affecting the management of stray animals. While the Animal Welfare Act of 2019 establishes a legal framework for humane treatment, its implementation remains inconsistent. Survey data showed that 64% of respondents were unaware of any active government initiatives or programs addressing stray animal welfare, underscoring a disconnect between policy creation and public awareness.

Table 6: Awareness and Perception of Government Policies on Animal Welfare

| Awareness of Policies | Count | Percentage |
|---|-------|------------|
| Unaware of policies | 64 | 64% |
| Aware but perceive enforcement as weak | 31 | 31% |
| Aware and perceive enforcement as effective | 5 | 5% |

Table 6: Respondents' awareness of and attitudes toward the enforcement of animal welfare policies.

Interviews with veterinarians, caregivers, and NGO representatives reinforced these findings, highlighting the lack of practical enforcement mechanisms. One NGO representative stated, “The laws are there, but there’s no consistent oversight to ensure they are actually followed. It’s like the policies exist only on paper.”

Challenges in Policy Enforcement

The lack of a dedicated enforcement body further complicates policy implementation. Unlike countries with specialized animal welfare boards, Bangladesh lacks a centralized authority to monitor compliance, which hinders effective execution of policies like mass sterilization and vaccination programs. This sentiment was echoed in interviews, with one veterinarian suggesting, “There’s a need for a dedicated veterinary board that can monitor and ensure compliance with animal welfare standards.”

Funding constraints and poor inter-agency coordination also contribute to weak enforcement. Despite the provisions of the Animal Welfare Act, programs for mass sterilization and vaccination remain underfunded, resulting in limited reach and inconsistent application. Research by Tenzin et al. (2015) supports these observations, emphasizing that sustained funding and coordination are crucial for effective population control efforts.

Regional Disparities in Policy Awareness

The study found notable regional disparities in policy awareness. Survey data indicated that 85% of respondents in rural areas were unaware of government animal welfare initiatives, compared to 65% in urban areas. This difference suggests that rural regions are particularly underserved in terms of outreach and policy implementation.

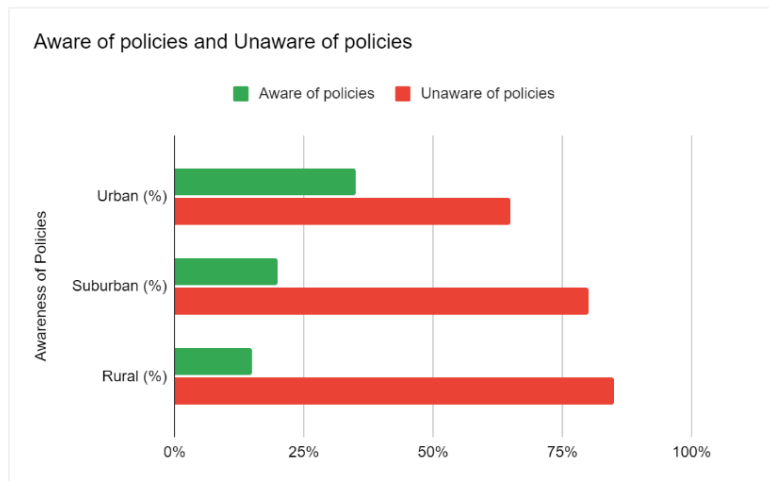
Chart 5: Awareness of Animal Welfare Policies by Region

Chart 5: Comparison of policy awareness among respondents from different geographic regions.

Participants from rural areas expressed frustration over the lack of visible government support, which they believed contributed to the uneven enforcement of sterilization and vaccination programs. One rural caregiver commented, “It feels like these policies don’t reach us. We hear about laws, but we never see them in action.”

Implications for Policy Improvement

The findings underscore that while legislative frameworks like the Animal Welfare Act are crucial, their impact is limited by implementation challenges. Addressing these gaps will require targeted improvements, such as creating a centralized enforcement body and increasing funding for existing programs. A One Health approach, integrating human, animal, and environmental health, could further align animal welfare policies with broader public health goals, benefiting both human and animal populations across Bangladesh.

Discussion

This study explored the challenges faced by caregivers, veterinarians, and NGOs in providing veterinary care for stray animals in Bangladesh. Key barriers identified include low public awareness, logistical difficulties, financial constraints, and gaps in policy enforcement. These challenges affect both animal welfare and public health, particularly in regions with high stray populations, elevating the risk of zoonotic diseases like rabies.

Public Awareness and Health Risks

A substantial gap exists in public awareness regarding health risks posed by stray animals, especially zoonotic diseases like rabies. Limited awareness hinders the effectiveness of public health campaigns aimed at disease control. Seimenis (2012) highlights that low-income populations, particularly in urban areas, are more vulnerable due to restricted access to health education and veterinary services. While this issue is acute in Dhaka, similar gaps are likely prevalent in other densely populated regions, underscoring the need for nationwide campaigns. Culturally tailored approaches, such as those proposed by Kamal et al. (2023), can foster community engagement by promoting the positive health impacts of human-animal interactions (*zooeyia*). Expanding these campaigns beyond Dhaka could reduce health risks and improve community attitudes toward stray animals across the country.

Logistical Challenges

Logistical barriers, such as challenges in capturing and transporting stray animals, emerged as significant obstacles, with 68% of survey respondents identifying transportation issues. While urban areas like Dhaka face these challenges acutely, similar difficulties are present in other urbanizing regions. Veterinary services often focus on livestock, leaving stray animals underserved (Lam et al., 2019). Mobile veterinary units, shown to be effective in low-resource settings Tenzin et al. (2015), could alleviate these burdens by offering on-site care, facilitating mass sterilization, and vaccination efforts, thereby promoting humane population control throughout Bangladesh.

Socio-Cultural and Religious Beliefs

Socio-cultural and religious beliefs can significantly shape attitudes toward stray animals. In some communities, beliefs about the cleanliness of stray animals may discourage individuals from seeking veterinary care for them. Previous studies, such as Kamal et al. (2023), suggest that such traditional beliefs can hinder the success of animal welfare programs. However, religious teachings that promote compassion, including those found in Islamic traditions, may serve as valuable tools for fostering positive attitudes toward stray animal welfare. Integrating these values into culturally sensitive public health campaigns could help increase community support for animal welfare efforts in both urban and rural areas of Bangladesh. Other cultural and ethical frameworks that prioritize kindness to animals could also be explored to ensure inclusivity and broad community engagement.

Financial Constraints

Financial barriers are a major issue, with 45% of respondents citing the high cost of veterinary services as a key obstacle. This burden is especially significant in low-income areas, where caregivers struggle to provide ongoing care. Similar challenges have been reported in other low-resource settings (M. A. Islam, 2015). Addressing these financial constraints through government subsidies and partnerships with NGOs, as suggested by Hossain et al. (2013), could

reduce the burden on caregivers. Initial efforts could start in urban areas and expand to rural regions to ensure more equitable access to veterinary care across Bangladesh.

Policy Enforcement

Weak enforcement of animal welfare policies impedes effective stray animal management. Although the Animal Welfare Act, 2019 (2019) provides a framework for humane treatment, inconsistent implementation remains a challenge. This study found that 64% of respondents were unaware of active government policies, pointing to a disconnect between policy creation and public awareness. Limited funding and weak stakeholder coordination further restrict the effectiveness of sterilization and vaccination programs (Tenzin et al., 2015). Strengthening policy enforcement through dedicated oversight bodies and enhancing collaboration among stakeholders could lead to better outcomes. A One Health approach, integrating human, animal, and environmental health, could further align these efforts with public health goals and reduce disease risks.

Collaboration Between Government and NGOs

Limited collaboration between government agencies and NGOs complicates efforts to improve stray animal welfare. Fragmented initiatives result in inefficient resource allocation. Literature emphasizes the importance of public-private partnerships in overcoming these barriers (Tenzin et al., 2015). Findings suggest that combining NGO expertise with government resources could improve stray animal management. While promising results have been seen in Dhaka, extending this collaborative approach to other regions could help ensure that veterinary care reaches underserved areas across Bangladesh.

Broader Implications and Future Directions

The findings of this study underscore the need for a coordinated, multi-sectoral approach to managing stray animal populations in Bangladesh. By addressing low public awareness, logistical barriers, financial constraints, and policy enforcement gaps through targeted public health campaigns, mobile veterinary units, and strong collaboration between government agencies and NGOs, these challenges can be tackled more effectively. Although this study focuses on Dhaka, similar challenges exist nationwide. Thus, the proposed solutions could be scaled to improve animal welfare and public health throughout Bangladesh.

Recommendations

To enhance veterinary care for stray animals in Bangladesh, the following strategies address gaps in public awareness, logistical challenges, financial constraints, and policy enforcement while promoting collaboration among government bodies, NGOs, and communities.

1. **Increase Public Awareness:** Public awareness of the health risks of untreated stray animals is low, with only 31% of respondents understanding these risks. Initiatives should focus on zoonotic diseases such as rabies, crafting culturally sensitive messages aligned with social and religious values, and engaging community leaders, religious figures, and local influencers to foster a community-driven approach (Kamal et al., 2023; Seimenis, 2012).
2. **Deploy Mobile Veterinary Units:** Mobile units can address logistical challenges, cited by 68% of respondents, by providing on-site care directly in areas with high stray populations, reducing transportation burdens. They also support emergency and preventive care, enabling rapid treatment for injured animals and facilitating mass sterilization and vaccination (Lam et al., 2019; Tenzin et al., 2015).
3. **Financial Support and Partnerships:** Financial constraints hinder access to veterinary care, as noted by 45% of respondents. Solutions include providing subsidies and vouchers to reduce treatment costs for caregivers and NGOs, and building public-private partnerships to engage private sector and international NGOs in funding veterinary services and infrastructure (Hossain et al., 2013; M. A. Islam, 2015).
4. **Strengthen Policy Enforcement and Update Legislation:** Improving awareness and enforcement of the Animal Welfare Act, 2019 (2019) is crucial. This includes securing funds for consistent sterilization and vaccination, establishing a dedicated agency to oversee compliance, and increasing penalties for violations (Tenzin et al., 2015). Updating the Act to align with international standards, clarifying key terms like "stray animal" and "cruelty," and introducing stricter penalties for repeat offenders will further improve compliance.
5. **Government-NGO Collaboration:** Better coordination between government bodies and NGOs is needed to optimize resources and avoid disjointed efforts. Joint task forces should be formed to combine NGO expertise with government resources, share veterinary supplies, and hold regular consultations to improve strategy implementation (Seimenis, 2012).
6. **Monitoring and Evaluation:** Structured monitoring is essential to assess the impact of these initiatives. Key performance indicators (KPIs) should be developed to track public awareness, sterilization coverage, and policy enforcement. Quarterly reviews with stakeholders can help refine strategies based on progress and changing needs.

These recommendations will help enhance stray animal care in Bangladesh by focusing on public awareness, logistical solutions, financial support, policy enforcement, and collaboration. Improved veterinary services and strengthened policy measures will contribute to better public health and animal welfare in both urban and rural settings.

Conclusion

This study explored the challenges of providing veterinary care for stray animals in Bangladesh, with insights drawn from Dhaka. Key barriers include low public awareness of zoonotic diseases, logistical difficulties, financial

constraints, and weak policy enforcement. Many residents remain unaware of the health risks posed by untreated stray animals, while caregivers struggle with limited resources and inadequate support.

Addressing these challenges requires a coordinated, multi-sectoral approach. Culturally tailored awareness campaigns can enhance understanding of zoonotic risks and humane animal management. Mobile veterinary units can improve access to care in underserved urban and rural areas, and sustainable funding models can reduce financial barriers for caregivers.

Strengthening policy enforcement and fostering government-NGO collaboration are critical for effective management. Establishing dedicated monitoring bodies, ensuring consistent implementation of sterilization programs, and involving communities can bridge gaps between policy and practice, leading to better control of stray populations.

The recommendations provide practical solutions that can be adapted across Bangladesh, benefiting both urban and rural areas. Implementing these measures will improve public health and animal welfare, contributing to a safer environment for all. Continued research is essential to refine these strategies for long-term success in diverse socio-cultural contexts.

Limitations and Future Research

This study has several limitations. Although the qualitative interviews focused on stakeholders in Dhaka, the survey data included responses from various regions, providing a broader perspective that enhances the study's relevance across Bangladesh. However, the relatively small sample size, with 13 interview participants and 100 survey respondents, may limit the generalizability of the findings. The short interview durations, ranging from 5 to 15 minutes, may have restricted the depth of insights on complex topics such as policy enforcement and cultural beliefs.

Future research should aim to address these limitations by including a larger and more diverse sample from different regions of Bangladesh. Longitudinal studies could assess the long-term effects of public awareness campaigns and policy interventions on stray animal management. Additionally, further investigation into collaboration models between government and NGOs is recommended to better address logistical and financial challenges in stray animal care.

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Declaration of Interest

The authors declare no conflicts of interest in relation to this study. The research was conducted independently, with no external funding or influence that could have affected the study's findings, interpretation, or conclusions.

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