

# The Role of Community-based Rabies Education in Promoting Preventive Health Behaviors in Techiman: A Case Study on Rabies Sensitization

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## Abstract

**Introduction:** Rabies is a lethal but preventable viral disease impacting the central nervous systems of mammals, including humans. It is primarily transmitted through the saliva of infected animals when it bites or scratches healthy animals. In Techiman, Ghana, due to high incidences of dog bites and the presence of stray dogs.

**Case presentation:** We present this article exploring the impact of community-based rabies education programs on promoting preventive health behaviors in Techiman. Through school programs, community meetings and media campaigns.

**Conclusion:** These educational initiatives aim to increase awareness, encourage responsible pet ownership, and ensure timely medical attention following potential rabies exposure.

**Keywords:** Techiman • Rabies • Health behaviors • Community-based education • Mass vaccination • Sensitization • Public health

## Introduction

Rabies is a deadly viral disease that affects mammals, including humans [1]. It is primarily transmitted through the saliva of infected animals [2,3], most commonly through bites [1-4]. Once symptoms appear, rabies is almost always fatal [1-3]. However, rabies is entirely preventable through vaccination [5] and other primary prevention measures. Despite being preventable through vaccination and timely medical intervention, rabies continues to claim lives, particularly in areas with high incidences of dog bites and stray dog populations. In Techiman, a town in the Bono East Region of Ghana, rabies remains a pressing public health issue. Effective prevention and control of rabies require a multifaceted approach, combining medical interventions with robust community-based education programs. This study focuses on the Rabies Sensitization program's role in fostering preventive health behaviours in Techiman.

### Rabies sensitization program overview

The Rabies Sensitization program was initiated in Techiman by the

Public Health Emergency Committee on Zoonosis with the Veterinary Service Department (VSD) and Municipal Health Directorate as the lead Department. Other One Health Team members like the Ghana Education Service, the Assembly, and other Partners were also included [6]. The Team focusing on Rabies was formed in July 2022 after a stray dog bite about ten dogs in a community called Jamestown. The stray dog was later killed by the community members and the head was submitted to Disease Investigation Farm and Regional Veterinary Laboratory (DIF/RVL) to assess it. DIF/RVL processed and forwarded the brain tissue to the Kumasi Centre for Collaborative Research in Tropical Medicine (KCCR) which proved positive. The manager at DIF/RVL informed the Disease Control Department of the GHS to help in the contact tracing. With the help of the Disease Control Officer in Charge, ten of the dogs were seen and observed by the VSD for the mandated two weeks, before the end of the two weeks more than half of the dogs died. The remaining dogs were ordered to be killed by the Veterinary officer in charge. The brain tissues were submitted to Kumasi KCCR and only two proved to be negative. The Municipal Health Director then called for an emergency meeting to find a way forward to avoid the possible outbreak in humans which led to the development of Community-Based Rabies Education. The aim was to address the rabies threat through community engagement and education.

The program's primary objectives were to:

- **Increase awareness:** Educate the public about rabies, its transmission, symptoms, and prevention.
- **Promote vaccination:** Encourage pet owners to vaccinate their animals.
- **Improve response to exposure:** Inform the community about immediate actions to take following a dog bite or potential rabies exposure.

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The program employed various strategies to reach these goals, including school programs, community meetings, and media campaigns.

## Methodology

The program's methodology involved:

- **School programs:** Integrated into the school extra-curriculum, these sessions educated children on safe interactions with animals and the importance of rabies vaccination.
- **Community meetings:** Utilized local gatherings to disseminate information and foster community discussions on rabies prevention.
- **Media campaigns:** Utilizing local radio stations to spread awareness about rabies and preventive health behaviours.

## Impact on preventive health behaviors

Community-based education initiatives aim to increase knowledge and awareness, leading to more responsible pet ownership, prompts reporting of dog bites, and timely medical attention for those exposed to rabies. In Techiman, these programs have shown varying degrees of success by increasing the reporting of dog bite cases from 65 in 2021 to 86 cases in 2022 according to information from DIF/RVL. Collaboration with GHS, VSD, and non-governmental organizations has been critical in maximizing their reach and impact. Key strategies include involving local leaders, influencers and school children who can effectively communicate the messages to their communities and using local languages and culturally relevant materials to ensure accessibility and reliability.

## Challenges and solutions

Despite progress, sustaining community-based rabies education in Techiman faces several challenges:

- **Limited funding:** Securing financial support is essential for the continuity and expansion of educational programs as the program is on hold.
- **Logistical constraints:** Coordinating efforts among various stakeholders and ensuring the availability of resources were also challenging.
- **Varying literacy levels:** Tailoring educational materials to different literacy levels within the community is vital for effective communication.

To address these challenges, it is important to develop innovative approaches to education, improve stakeholder coordination, and secure sustainable funding sources.

## Conclusion

Community-based rabies education plays a vibrant role in promoting preventive health behaviours in Techiman. By raising awareness, improving knowledge, and encouraging proactive measures, these educational initiatives contribute significantly to the prevention and control of rabies. Continued efforts and collaboration among community members, health authorities, and other stakeholders are essential to sustain and enhance the impact of these programs.

## Conflict of Interest Statement

Following the explicit disclosure requirement of the Journal of Health Education Research and Development, all authors involved in this publication have disclosed the nature of their affiliations. We affirm that this transparency is essential to maintain the integrity and trustworthiness of our research work.

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## Conflict of Interest

The authors declare that they have no conflict of interest.

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