

“Dogs cannot protect you unless you are their friend”

Co-creating contextual rabies sensitization materials

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Abstract

Rabies is a fatal zoonotic disease transmitted to humans through dog bites and scratches. The disease can be effectively controlled by vaccinating 70% of at-risk dog populations. In October 2021, the International Livestock Research Institute, through a BMZ-funded project, rolled out a free rabies vaccination campaign in Machakos County. This county has been identified to have the highest burden of rabies in the country. We, however, noticed sub-optimal community participation, hence low vaccination coverage. One of the cited reasons for low participation in different settings is low awareness levels of zoonotic diseases.

Key informant interviews were held with community members to establish the value of dogs and their understanding of rabies. We analyzed the emerging themes and invited a subset of the recruited key informants for a focus group discussion to interrogate and rank the identified values. We then invited the same participants to a co-creation workshop for them to co-create contextual rabies sensitization and vaccination announcement posters.

Research participants revealed that dogs play tangible and intangible roles in the community. The intangible roles include herding, hunting, and securing their households, livestock, and crops. Intangible roles included keeping dogs as status symbols, societal norms, and for friendship. The discussions led them to realize that the other roles are hinged on establishing friendship. They also developed sensitization materials that were context-specific and aligned with the identified values. Finally, they recommended that community sensitization should precede any vaccination campaign. This will bolster participation and encourage sustainability.

Keywords: Co-creation, Rabies, Sensitization, One Health

INTRODUCTION

Rabies is a viral zoonotic disease caused by *lyssavirus* and transmitted to humans mostly from dog bites or scratches [1]. Domestic dogs are the primary reservoir and source of human infections [2]. Globally, rabies causes 59,000 human deaths annually [3] with approximately 25,000 deaths occurring in Africa [4] accounting for 41% of global deaths. While rabies has been eradicated in most high-income countries, it persists in low and middle-income countries, leading the World Health Organization to classify it as a neglected tropical disease [5].

A 2005 - 2018 review of rabies incidents and mortalities in 28 African countries showed that Kenya reported the highest number of canine rabies cases to the World Organization for Animal Health [6]. Rabies ranks among the top five priority zoonotic diseases in Kenya with health professionals advocating for increased resource allocation for rabies control [7]. In response, the Zoonotic Disease Unit developed a national rabies elimination strategy (2014 – 2030) that aims to eradicate dog-mediated rabies by 2030, with Machakos County designated as one of the pilot counties due to the high rabies burden [8].

Rabies control strategies focus on vaccinating 70% of at-risk dog populations and timely administration of post-exposure prophylaxis (PEP) to dog bite victims [1]. Despite these straightforward control strategies, barriers to rabies elimination exist in different settings. These barriers include resource constraints, limited intersectoral collaboration, and low rabies awareness in communities [1], [9]. Improving rabies awareness and reducing misconceptions may enhance trust and bolster participation in rabies vaccination campaigns as demonstrated in a causal loop model co-created in Burkina Faso [10]. Improved dog owners' knowledge of rabies is strongly associated with the likelihood of vaccinating dogs as witnessed in Kenya and Burkina Faso [11], [12]. Improving community awareness through sensitization has been shown to increase vaccination uptake and bolster participation in Tanzania [13].

The One Health High-Level Expert Panel supports community participation as a fundamental aspect of global health policies and disease control strategies, emphasizing inclusivity, equity, and accessibility [14], [15]. Co-creation encourages community participation in health solutions. It is defined as a collaborative process where community members, researchers, and policymakers unite to address public health challenges by leveraging on community's insights and scientific expertise in designing and delivering health interventions [16]. Co-creation of disease control and health promotion activities may provide an opportunity to shift the dynamics of researchers or healthcare professionals as being the suppliers of knowledge to that of a knowledge broker [17]. Knowledge brokers acknowledge the community's perspectives and stimulate productive interactions, making communities active producers and disseminators of campaign messages [18]. This study first engaged a community within Machakos County to establish the value of dogs to the community and then co-create contextual rabies sensitization materials that speak to these values.

METHODS

This study involved collecting data on the value of dogs to the community, gathering ideas for rabies sensitization materials, and obtaining feedback on the draft materials and research experiences.

Study Site

The International Livestock Research Institute (ILRI) and the Machakos County Government initiated a free rabies vaccination campaign in October 2021 in Machakos County. Vétérinaires Sans Frontières Germany (VSF-Germany) implemented the project by vaccinating community dogs throughout the county. This study, what we refer to as the dog value study, was designed to support the campaign. It was conducted in Mwala sub-county as it coincided with the vaccination schedule. The 2019 census shows that Mwala sub-county has a human population of 181,896 [19]. This semi-arid region primarily relies on rain-fed agriculture where residents cultivate maize, beans, fruits, vegetables, sorghum, and millet. Commonly reared livestock species include goats, sheep, dairy, and beef cattle [20].

Key Informant Interviews (KII)

Community members who brought their dogs for the vaccination campaign were conveniently recruited to the study (Figure 1). Informed consent was obtained from each participant, and a semi-structured interview - lasting approximately five minutes - was conducted (Supplementary material 1). These interviews aimed to identify the value of dogs to the community and their understanding of rabies. The interviews were held over 3 days from 22 – 24 June 2023. Two enumerators were responsible for conducting approximately 34 interviews per day.

Figure 1: Community members presenting their dogs for vaccination (left) and a Key Informant responding to research questions (right)



Data Transcription and Analysis

Recordings from KIIs were transcribed into Microsoft Word. Following a deductive thematic analysis approach, the transcriptions were reviewed, and texts relating to a perceived value or role of dogs were highlighted as a code and summarized into themes in Microsoft Word.

Focus Group Discussion (FGD)

All key informants were assigned unique numbers and 24 members were randomly selected using a random number generator [21]. The twenty-four community members were invited for two gender-segregated FGDs. We presented to them the summarized roles and values of the dogs. Each value was displayed on a sticky note and explained to them. Pairwise ranking [22] was conducted with the dog values ranked from the most important to the least important. At the end of the FGD, the same attendees were shown a rabies educational video produced by the ILRI team [23].

Co-creation workshops

All FGD participants were invited to participate in two co-creation workshops. The first workshop aimed to gather their ideas on ideal rabies sensitization materials and for them to co-create these materials. The second workshop aimed to gather feedback on the draft of the sensitization materials. Informed consent was obtained from participants in the co-creation workshop which included consent to photograph and acknowledge them as co-creators in the publication (see supplemental material 3).

The attendees in the first co-creation workshop were divided into three groups. The research team introduced the rabies topic and reminded the participants about the value of dogs. This workshop had two sessions: ideation and storyboarding sessions. The ideation session aimed to harness the collective creativity of the participants to generate ideas, while the storyboarding session aimed to transform the generated ideas into a visual story [24]. Each group was provided with coloured sticky notes to write the exact words and visuals they envisioned for a rabies vaccination campaign poster. The facilitator encouraged participants to withhold criticism as their peers shared their ideas.

In the storyboarding session, participants were guided on how to transform their ideas into visual storyboards. Each group sketched their storyboards, focusing on the value of dogs in the community, the motivation for vaccinating dogs, and how they feel after their dogs have been vaccinated. The completed storyboards were displayed on the walls for peer reviewing.

Figure 2: Flow diagram of the storyboarding process.



Facilitator introducing ideation and storyboarding sessions.



Community members generating ideas for sensitization materials.



Community members pinning their ideas on



Participants transform their ideas using



A participant sketches a dog during the storyboarding session



Completed storyboards from one group



A visual representation showing desired elements for a rabies poster.



Community members reviewing and critiquing the storyboards.

Photo credit: ILRI/Madeline Wong

Development of draft sensitization materials

The first co-creation workshop revealed the need for two separate products: a rabies vaccination announcement poster and an educational poster. The research team transformed the co-created storyboards into two product drafts. These drafts were then presented to participants during the second co-creation workshop for feedback.

Selection of images to incorporate into the sensitization materials

A strategic decision in our design process was to initially omit images from the draft sensitization materials. This offered participants an opportunity to select appropriate and contextual images. The research team identified images that closely represent the dog values, context, and themes identified in the earlier stages. These images included photos taken during the vaccination campaigns and while some were generated using artificial intelligence (AI) with DALL.E 2. We used specific community context prompts and reference images to guide AI in generating the desired images. An example prompt (which generated picture 1 in Figure 8) was “Generate an image that depicts the bond between individuals and their dogs, emphasizing companionship. The image should be localized to Kenya, Machakos County. The person should wear a yellow T-shirt”.

Participants’ perceptions of the research experience and co-creation processes.

Finally, an exit survey was conducted to gauge participants' experiences throughout the research and co-creation processes. Participants shared key learnings and provided suggestions for future interventions.

RESULTS

Study Participants

A total of 102 key informants, 68 males and 34 females, participated in the study. Of these, 24 participated in subsequent research activities, namely FGD, co-creation workshops, and feedback sessions.

Value of dogs to the community as described by the Key Informants

Interactions with community members revealed that dogs' roles also held significant value to them. Throughout the paper we equated dogs' roles to values and these terms are used interchangeably. The roles were both tangible and intangible. Examples of tangible roles include providing security while intangible roles include provision of friendship and companionship.

Most participants reported keeping dogs primarily for security purposes, to protect their households, livestock, and crops. Dogs alerted them to potential dangers. One informant explained, *"A dog is both a pet and a source of security. It alerts you at night if there is any danger. When it barks, you go out and check. During the day, you can get an emergency travel, and your dog will guard against thieves or invaders. If invaders see that your dog is aggressive, they won't enter your compound. I would be uneasy without a dog since I cannot leave my homestead unattended."* [Respondent 37, Male]

Dogs also protected their livestock and crops from wild predators such as mongoose, squirrels, and predatory birds like hawks and eagles. *"There was a time when I didn't have a dog and the mongoose would eat my chicken while I was asleep since there was no alert."* [Respondent 34, Female]

Other reasons for keeping dogs included hunting and herding, although these practices have diminished as the community has shifted to formal agricultural practices. *"It is mostly about taking care of the homestead now, and less about hunting or chasing away wild animals like cheetahs,"* [Respondent 5, Female]. A few participants reported breeding dogs to sell puppies, while others gave them away to friends and neighbours for free. *"My dog can mate and when the puppies are born, I can sell or give them to my neighbours."* [Respondent 82, Female]

Interestingly, when asked about the possibility of living without a dog, their response shifted from tangible to intangible roles such as friendship, companionship, societal norms, and status symbols. One participant remarked, *"This dog is like one of my kids. I really love it. It has its own house and plate. It welcomes me when I get home,"* while another shared, *"It feels good to have a dog at home. It is not right to stay without a dog because others have them. We view dogs as flowers in a home."* [Respondent 100, Female]

We summarised the roles and values of dogs reported by community members as the following: security, societal norms, status symbols, herding, hunting, pet/friend, livestock and crop protection, breeding to sell puppies or give away to friends and other community members. These roles and values were further explored and ranked in the FGD.

Pairwise ranking scores for the value of dogs from the FGD.

Two separate FGDs were held, one for female participants and another for male participants, each lasting approximately 2 hours. Tables 1 and 2 show the pairwise ranking scores for female and male FGD participants respectively. Female participants stressed the importance of a dog being a friend before it can be useful in any capacity. “*A dog that is not your friend cannot serve you,*” remarked one female participant. This is reflected in the equal ranking of security (home and livestock) roles and the companionship/friendship role by the female group.

Interestingly, although the idea of a dog as a pet and friend ranked below their value for security (of the home, livestock, and crops in that order) among the men; they reiterated that security benefits depend on the foundational relationship of friendship with the dog. “*A dog that is not your friend cannot protect you, your livestock, or your crops,*” a male participant noted.

Table 1: Outcome of the pairwise ranking among female participants

Value of dogs	Value number										Score	Rank
	1	2	3	4	5	6	7	8	9	10		
1. Security		1	1	1	1	1	7	1	1	1	8	1
2. Societal norm			3	4	5	6	7	8	9	2	1	9
3. Herding				3	5	6	7	3	3	3	5	5
4. Hunting					5	6	7	8	9	10	2	8
5. Crop protection						6	7	5	5	5	6	4
6. Livestock protection							6	6	6	6	8	1
7. Pet and Friend								7	7	7	8	1
8. Status symbol									9	8	3	7
9. Source of income through breeding										9	4	6
10. Give away											0	10

Table 2: Outcome of the pairwise ranking among male participants

Value of dogs	Value Number										Score	Rank
	1	2	3	4	5	6	7	8	9	10		
1. Security		1	1	1	1	1	1	1	1	1	9	1
2. Societal norm			2	2	5	6	7	2	2	2	5	5
3. Herding				3	5	6	7	3	3	3	4	6
4. Hunting					5	6	7	8	4	4	2	8
5. Crop protection						6	5	5	5	5	7	3
6. Livestock protection							6	6	6	6	8	2
7. Pet and Friend								7	7	7	6	4
8. Status symbol									8	8	3	7
9. Source of income through breeding										9	1	9
10. Give away											0	10

Co-Creation Workshop

Twenty-four FGD participants attended two co-creation workshops held on July 7 and October 6, 2023.

Community ideas on ideal sensitization materials

Participants expressed a desire for clear, informative, and visually engaging sensitization materials. The rabies announcement poster should include the vaccination campaign's date, time, and venue. Visuals showing veterinarians vaccinating dogs while dog owners restraining their dogs will help build trust and encourage participation. An education poster should raise awareness on rabies symptoms, transmission, prevention strategies and actions to take in the event of a dog bite or scratch.

“We would like to see materials that are clear and self-explanatory,” one participant shared.

The outcome of the storyboarding process

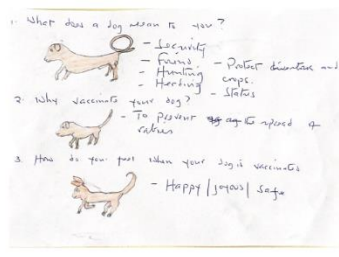
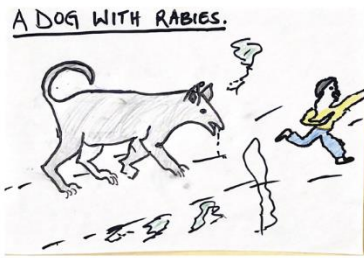
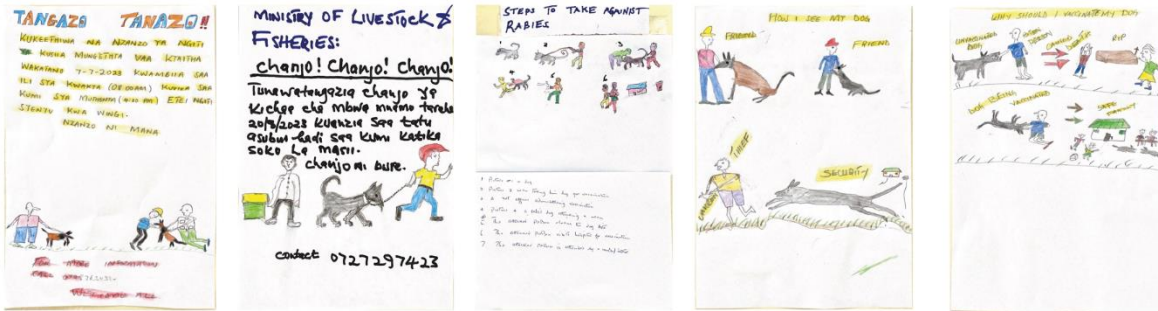
The storyboarding process yielded profound insights into the community's perceptions and values regarding dogs and rabies vaccination, which were instrumental in shaping the sensitization materials. Participants illustrated their views on the roles of dogs in their lives, emphasizing security, companionship, and societal status. These storyboards captured the tangible benefits of owning dogs and highlighted the emotional and social bonds between the community members and their dogs.

Participants also prioritized themes that resonated deeply with them, ensuring that sensitization materials were educational, emotionally and culturally relevant. This approach facilitated deeper engagement with the material.

“Drawing our dogs and seeing them on paper makes it real and important to keep them healthy and vaccinated,” [Female Participant].

“Sketching and discussing our experiences has helped me understand that everyone values their dog differently. This is good because it brings us together and shows us new ways of protecting our community from rabies.” [Male Participant].

Figure 3: Storyboard visuals developed by the participants illustrating their perceptions of dog values, motivations for vaccinating their dogs and the value of the vaccination campaigns. The visuals represent the elements to be highlighted in rabies sensitization materials. They also sketched out designs of rabies vaccination posters.



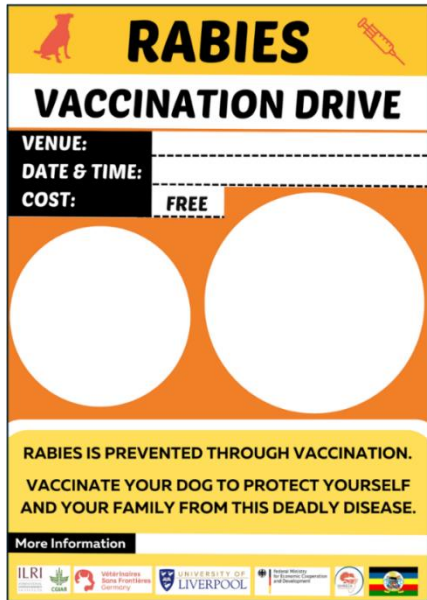
Feedback on the rabies announcement posters

During the second co-creation workshop, three prototypes rabies vaccination announcement posters and one education poster were presented to gather feedback. Participants emphasized the importance of visual clarity, cultural relevance, and simple design of the posters. They reiterated the importance of using bright colours to grab attention, simple messages, and the inclusion of local languages like Kikamba and Kiswahili to reach a wider audience.

“The bright colours speak to us. It’s part of who we are as the Kamba community. Seeing these vibrant colours on the posters makes the message stand out. It draws attention and makes one desire to read and learn more about protecting our dogs and community from rabies,” [Female Respondent].

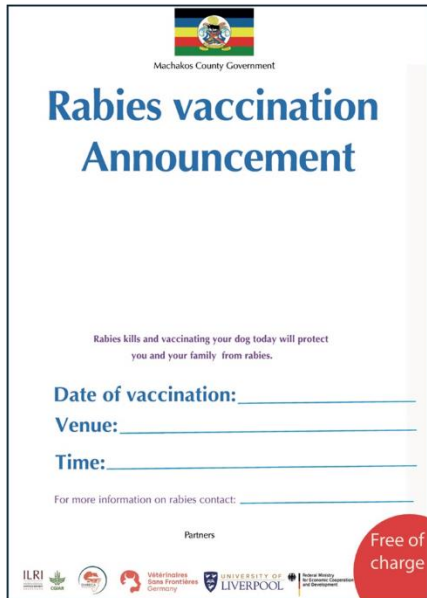
Below are synthesized comments on each draft poster which guided our design modifications

Figure 4: Rabies announcement material - Poster 1



Poster 1's strengths include a bright yellow color and a simple layout that clearly presents essential details such as venue, date, time, and cost. Suggestions for improvement included more language options to reach a wider audience, replacing the "More Information" label with "Contact Information" for clearer guidance, and adding images of a dog owner bringing their dog for vaccination to make the message more relatable and actionable.

Figure 5: Rabies announcement material - Poster 2



Poster 2 has a clear and straightforward design, effectively communicating essential details. However, the lack of a bright colour makes it less visually striking. suggestions for improvement, included increasing the font size to enhance legibility from a distance, removing the word "today" to facilitate better planning by the audience, and adding translations in local languages to broaden its reach and accessibility.

Figure 6: Rabies announcement material - Poster 3



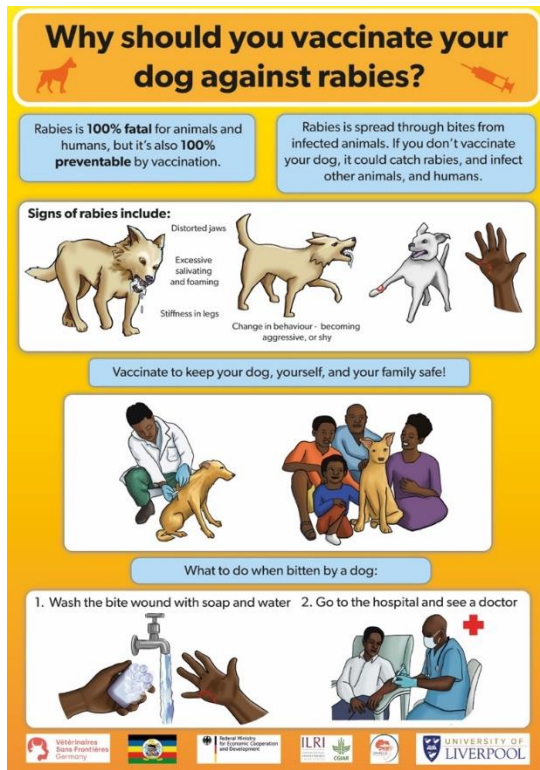
Poster 3 was recognized for its good messaging clarity. To further enhance its effectiveness, it was recommended to switch the blue color to a more vibrant hue to increase visibility, enhance the font size for improved legibility, and include an image of a dog being vaccinated to provide a practical visual cue that enriches the poster's informational value.

Poster 1 was voted as the best announcement poster among the three posters and taken forward for final production. It had a clear layout and bright colours that attract attention. The font size was also legible, and the poster contained essential details such as the date, venue, and vaccination campaign costs.

Feedback on rabies educational poster

The educational poster was praised for its organized layout, use of bright colours, and clear messaging. Suggestions included replacing the image of a tap with a water jug to reflect the local realities in rural settings. They also recommended changing the image of a doctor in a scrub suit to one in a white laboratory coat as they are accustomed to that. Additionally, participants suggested increasing the font size, and including an image of a dog owner restraining the dog while a veterinarian is vaccinating it.

Figure 7: Draft of the rabies educational poster



Images for inclusion in sensitization materials

Participants evaluated various images presented to them for their suitability based on dog values and themes identified in the KIIs and co-creation sessions. Two images were AI-generated while the other four were captured during different periods of the vaccination campaigns.

Figure 8 shows all the images presented to the participants and synthesized comments for each image.

“The images in the sensitization materials should demonstrate proper practices. We would like to see that,” [Male Respondent].

There was a consensus to use pictures 3 and 6 in Figure 8 in the rabies vaccination announcement poster. Picture 3 was favoured for showing the vaccinator with proper personal protective equipment and demonstrating proper dog-handling techniques. Picture 6 illustrates a dog owner actively bringing their dogs to the vaccination site. It also highlighted gender equality and community involvement in rabies control programs.

“Seeing a true representation of our involvement in dog care by highlighting both men and women as active participants, reinforces the message of shared community responsibility,” [Female Respondent].

Figure 8: Images presented and considered for inclusion in the sensitization materials



Picture 1, showed a strong dog-human bond, and the dog's relaxed demeanor and close relationship with its owner. Feedback suggested including the entire person and dog for better context.



Picture 2 showed a healthy, alert dog guarding a homestead. Feedback recommended aligning the dog's breed with the local setting for coherence.



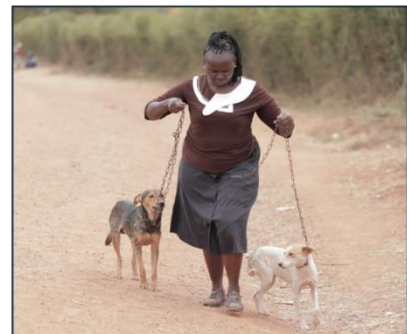
Picture 3 stood out for showing proper personal protective equipment (PPE) and correct handling techniques by the vaccinator.



Picture 4 was noted for the apparent fondness of the boy towards his dog, though concerns were raised about the lack of a cool box and the restraining rope posing a choking hazard.



Picture 5 highlighted gender equality at the vaccination site, but participants recommended including a cool box and ensuring the vaccinator used both hands correctly.



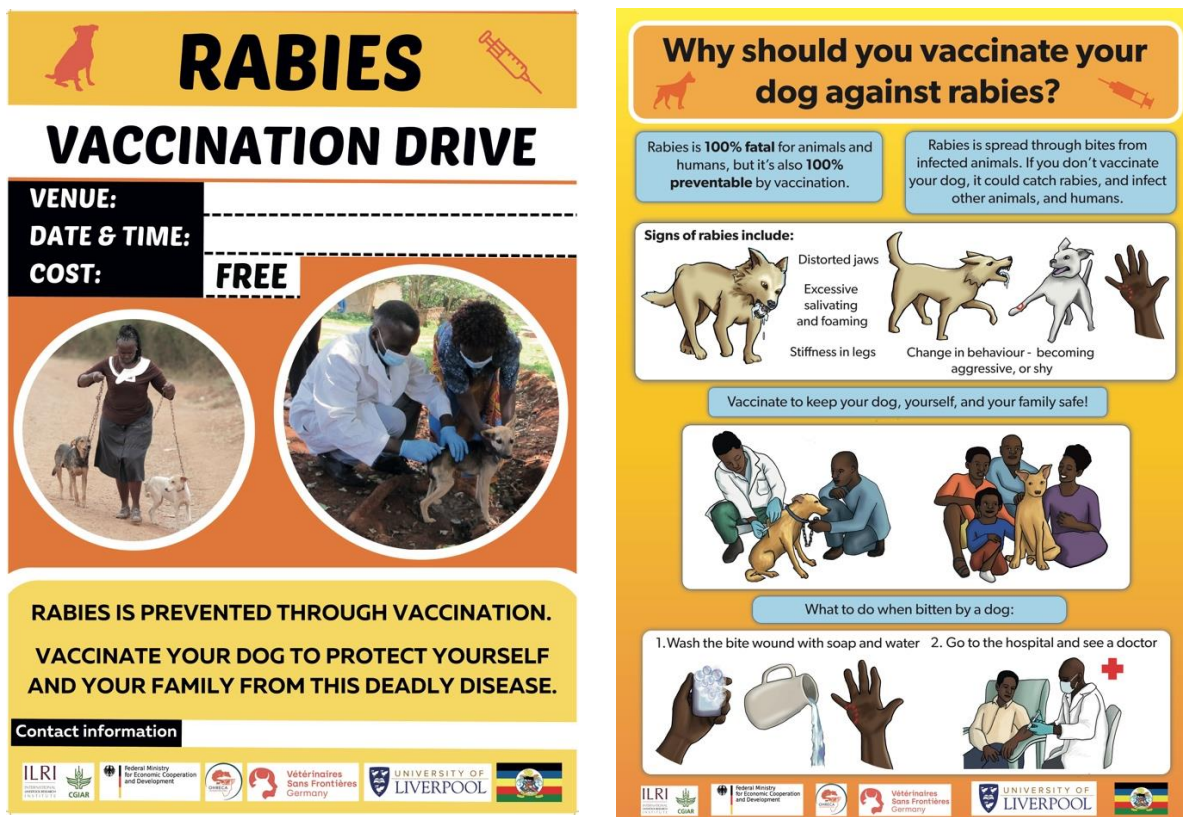
Picture 6 showed a woman with her dogs, hinting at an unclear destination. Participants suggested pairing it with a vaccination site photo to emphasize women's role in dog care.

Final co-created sensitization materials

The final sensitization materials incorporated participants' suggestions, including selected images, simple designs, and clear messages. Recommendations for bright colours and larger fonts were adopted for better visibility and legibility. Although posters with local languages was encouraged, the final products were in English and will be translated at a later date (see Figure 9).

Figure 9: Finalized sensitization materials. Announcement poster (left) and educational poster (right)

Figure 10: Finalized sensitization materials. Announcement poster (left) and educational poster (right)



Participants’ perceptions of the participatory process, key learnings, and future wishes

Twenty-three out of 24 participants engaged in exit interviews, indicating positive reception of the process. Participants viewed the co-creation process primarily as training due to its emphasis on vaccinating dogs against rabies. They indicated that through the process they had learnt what to do in the event of a dog bite.

“I have learned about the importance of vaccinating dogs against rabies and taking bite victims to the hospital after a dog bite,” [Respondent 12, Female].

“I have learned that when bitten by a dog, one should wash the bite wound with soap and water before seeing the doctor. You should not apply onions on the bite wound as we have been doing. I have also learned that vaccinating your dog against rabies is important.” [Respondent 6, Male].

Research participants mentioned that local animal health authorities should sensitize the community on rabies for better turn out in vaccination campaigns.

“Continue sharing information about rabies with the community. Use media and distribute posters in schools, community meetings, and relevant gatherings.” [Respondent 8, Female]

Regarding the co-creation process, participants felt their opinions were respected and considered

by their peers.

“I felt respected, listened to, and my opinions valued,” [Respondent 1, Male].

DISCUSSION

This study employed a co-creation process, leveraging community insights to develop contextual rabies sensitization materials. The research team has been actively involved in rabies vaccination campaigns for community dogs in Machakos County and recognized the need for relevant sensitization materials. Community members showed significant interest in participating in rabies control programs. The co-created materials were tailored to the community and incorporated messages and images that emphasized the value of dogs and the importance of rabies control.

One Health advocates often stress collaboration between human and animal health sectors in rabies control [1]. Engaging communities with contextual interventions may foster trust and drive behaviour change [25] which is critical for sustainability. Sustained control efforts are essential for diseases like rabies, where ongoing control is required to adequately control or eliminate the disease [26]. Peru faced barriers to dog vaccinations during a rabies outbreak, including vaccination campaigns, lack of awareness of rabies, and ongoing vaccination campaigns [9]. Similarly, the lack of rabies educational programs was a hindrance to achieving 70% vaccination coverage in Laikipia county, Kenya [12].

Our study participants shared that the co-creation process allowed them to reflect on the value of their dogs and the importance of vaccinating them against rabies. They suggested disseminating key messages to other community members and it is our hope that the process of co-creation has created a cohort of community members with the information and agency to also disseminate the key messages to their peers. These findings resonate with studies in Kenya, Burkina Faso, and Tanzania that established that rabies sensitization increased the likelihood of rabies vaccine uptake [11]–[13]. The effective communication of key messages and planning for vaccination should involve the community and reflect local realities [27].

Another key finding was the desire for clear simple messages in the sensitization materials. This desire has been picked by another study which recommended that health messages should be memorable and actionable to the target audience [28]. Participatory research has been shown to improve study outcomes, data accessibility, and public transparency in environmental health [29]. Our findings support the use of participatory and non-fear-driven approaches which may lead to successful health outcomes.

It is worth noting that community engagement, a bottom-up approach, tends to be more expensive but sustainable than a top-down approach [25], [30]. A study in India on sanitation interventions with limited community involvement during the planning and implementation stages were more likely to fail [31]. Cost-effective analysis is particularly important in resource-limited settings and where health outcomes are desired.

The key limitation of our study is that research participants were selected from community members presenting their dogs at the vaccination sites. They are therefore more likely to reflect the perceptions of those community members already interested and engaged in dog care and rabies control. Future work will emphasise engaging with those community members who are not yet actively engaging with the vaccination campaign to create materials which increase their engagement whilst the vaccination team also work to improve accessibility to the vaccine across the county.

Conclusion

Rabies control interventions often advocate for mass dog vaccinations and the provision of PEP to dog bite victims. We recommend a community engagement approach that raises awareness and co-creates contextual solutions before implementing interventions. This ensures community participation in vaccination campaigns and readiness for outbreak containment through mass dog vaccinations and supports surveillance by reporting incidents to authorities. Equally, health practitioners should communicate risks in a manner that aligns with community values and promotes health. This way they are likely to cooperate and respond to vaccination campaign calls.

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Authors' contributions

Designed the study: Thomas LF., and Bor N.

Recruited and surveyed participants: Bor N., Nzomo P., Chepyatich D., and Njenga G.

Analysed and interpreted the data: Thomas LF., and Bor N.

Designed the rabies poster: Slater A., and Njenga G.

Wrote the draft: Thomas LF., Njenga G., and Bor N.

All authors added their contributions and comments and approved the final version of the manuscript.

Availability of data and materials

Not applicable.

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Conflicts of interest

All authors declared that there are no conflicts of interest.

Ethical approval and participants' consent

The International Livestock Research Institute Institutional Research Ethics Committee (ILRI-IREC 2023-09) and the National Commission for Science, Technology, and Innovation

(NACOSTI/P/23/25371) approved this study. Written consents were sought from all our study participants while those who co-created sensitization materials are co-authors in this paper. This study also received approval from the University of Liverpool Research Ethics Committee reference number 12560.

Consent for publication

Not applicable.

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Appendix: Supplementary Materials

1. KII Guide

- i.) Why did you bring your dog here today?
Prompt: What is rabies? Does it affect humans and if yes, how is it transmitted to humans?
- ii.) How do you feel now your dog has been vaccinated?
- iii.) Why do you own this dog? What are your reasons for owning a dog?
- iv.) What does having this dog mean to you?
- v.) Are there other reasons you think dogs are important to people in this community?
- vi.) How did you hear about the event today?
- vii) When will you next bring your dog for vaccination?

2. Research Experience Guide

- i.) Why did you agree to participate in this research activity?
- ii.) Have you learned anything after participating in this research activity?
- iii.) Do you feel like you were listened to and respected throughout this research activity?
- iv.) Would you like to get involved in more research activities?
- v.) What do you think researchers could do to make this work more relevant to the community?

3. Informed Consent Form

Current research: Co-creation of Rabies sensitization materials with the Machakos County community, acknowledging the value of dogs and their vaccination by the community.

Invitation to participate and description of the project.

We are a team of researchers working from the International Livestock Research Institute (ILRI), Kenya, and the University of Liverpool, United Kingdom. We are inviting you to participate in co-creation workshop where we will work jointly to develop rabies sensitization materials. These materials will then be used to inform dog owners in Machakos county and beyond on how to take care of dogs and prevent dog-mediated rabies.

Description of study process

You have been part of our research activities from the recently held FGD and today we will spend the day looking at the data obtained from community members (in an anonymized format) describing the roles dogs play in this community, their value to community members and reasons why people may or may not vaccinate their dogs against rabies. During the day we will use these data to create materials (posters, advertisements and slogans) that will be used to sensitize the community about rabies and the importance of vaccinating their dogs. These materials will be used to improve the coverage of rabies vaccination and disseminate rabies prevention messages.

We would like to emphasize that your participation is voluntary. If you consent and then later decide that you would like to withdraw, you are free to do so at any point. Feel free to ask questions if anything is not clear. You are welcome to ask us to go over any aspect of this form again before you decide whether to participate.

Your role in creating these materials will be acknowledged through inclusion of your name on posters, reports and published papers. The inclusion of your names as an active member of this research team is entirely voluntary and you may indicate that you do not want us to use your name on these materials. We will also use group photos and images created in the sensitization materials.

Finally, we will reach out to you to gather feedback on your experience on KII or FGD and the cocreation workshop processes.

Authorization

I confirm that I have read (or someone has read to me) this form, and I have understood the purposes of the research, what my participation will involve. Please indicate below your level of consent and participation in these statements:

Do you agree to participate in the co-creation workshop? Yes No

Do you agree that your name and images be used in the sensitization materials? Yes No

Do you agree that information provided be used in reports and publications? Yes No

Do you agree to be acknowledged research publications? Yes No

Do you agree to be contacted for feedback on your experiences on KII or FGD and the co-creation workshop processes? Yes No

Name of participant:

Signature/thumb print: **Date:**

Contact information:

Name of investigator:

Signature: **Date**

Investigators Contact:

If you have any concerns about the way that the research has been conducted and would like to speak to an independent member of the Institutional Research Ethics Committee, please contact: ILRI IREC Secretariat Tel: +254 20 422 3887 | Mobile: +254 711 033 887

If you have any questions regarding this research, please contact our research coordinator through Mobile: +254 727 297 423