©Ibadan Journal of the Social Sciences
Special Edition
Volume 23, No. 2, 2025
DOI: 10.36108/ijss/5202.32.0201

Navigating the Challenges of Conducting Ethnographic Research on Zoonotic Diseases Transmission in a Livestock Market in Ibadan, Oyo State, Nigeria

Adeponle Olayode Adeoye[1], Olufunke Adegoke[2] and Ayodele Samuel Jegede[3]
[1,2,3]*Department of Sociology, University of Ibadan, Ibadan, Nigeria*

Zoonotic diseases constitute a major risk to the global public health. Livestock markets have been identified as one of the major hotspots of zoonotic diseases transmission. Ethnography of human-animal coexistence in such markets has been identified as a crucial research methodology that can provide deeper insights into how transmission occur in such spaces. However, little has been documented on the challenges of conducting ethnography in such a highly social and culturally sensitive environment. The objective of this paper is to provide insights into the challenges of conducting ethnographic study on zoonotic transmission in a livestock market in Nigeria, and how the challenges were navigated. The paper leverages a six-month ethnographic fieldwork experience on the social organisation of Akinyele livestock market, and zoonotic transmission in Ibadan, Nigeria. The challenges encountered during the research were jotted in a field note and narratively analysed. Gaining trust of the market actors was highly challenging at the early phase of the research as some market actors perceived the researcher to be a government spy, or social media content creator who would reveal market practices to the public. Market actors were also reluctant to discuss zoonotic diseases at first. These challenges were eventually navigated through social skills such as patience, persistence, informal conversations with market actors to build relationship and trust, leveraging on influence of key market actors, as well as learning about the trade from the market actors and not just to collect data. The paper concludes that while ethnography of human-animal coexistence in livestock markets can provide substantial knowledge on zoonotic diseases, trust which is highly essential to the research process and willingness to discuss the study phenomenon among animal dealers can be challenging at the early phase of the research. However, this challenge could be navigated with social skills. The paper recommends that researchers conducting ethnographic research on zoonotic diseases in African livestock markets should prioritize developing social skills to enhance data collection.

Keywords: Social skills, zoonotic diseases, livestock market, ethnography, Nigeria

Introduction

Livestock markets are one of the identified high-risk areas for zoonotic diseases transmission. The World Health Organization (2020) identified live animal markets such as livestock markets as one of the environments of concern where diseases may spread from animals to people due to the large density of humans and animals usually in such markets. The possible origin of some zoonotic diseases outbreaks that have occurred in human history have been traced to such markets. For instance, severe acute respiratory syndrome (SARS) that occurred from 2003-2004 as well as the recent severe acute respiratory syndrome 2 (SARS-COV 2) were traced to live animal markets in Southern China and Hubei Province of China respectively (Webster, 2004; Wu *et al*., 2020).

Africa has been identified as one of the continents with many livestock markets, and zoonotic diseases that can spread from animals to humans (Ahmad et al., 2018; Otu et al., 2021). West and Eastern African countries are particularly the largest traders of livestock species such as cattle, goat and sheep in Africa (Erdaw, 2023), which have been identified as reservoirs of some zoonotic diseases such as Tuberculosis, Anthrax,

Brucellosis, Rift valley disease and Q fever (Rahman et al., 2020). While biomedical science fields are crucial in detecting zoonotic diseases (Opayele et al., 2018; Ukwueze et al., 2020), social science fields such as Sociology and Anthropology are crucial disciplines that can provide in-depth knowledge of social dynamics associated with such diseases through their research methods (Shah, 2020). In Nigeria, studies from the biomedical sciences have reported zoonotic diseases that can spread from animals to humans in livestock markets. For instance, Ayoola et al. (2017) reported bovine tuberculosis in cattle sold in Ibadan livestock market with a prevalence rate of 7% while Opayele et al. (2018) reported rift valley fever infection among livestock handlers and slaughtered animals in the livestock market in Ibadan, Nigeria.

More recently, the crucial role of social scientists in understanding zoonotic pathogens have been emphasized, and they have been onboarded alongside biomedical science professionals to conduct multidisciplinary studies on zoonotic transmission under the framework called One Health, where they have provided crucial insights on some zoonotic infections such as Ebola, and Monkeypox in African countries like Nigeria and Guinea (Woldehanna, & Zimicki, 2015; Adegoke et al. 2025; Mari Saez et al., 2015). Furthermore, they have adopted ethnography as a tool to help understand the social and cultural dynamics that may influence zoonotic diseases transmission which give insight into how humans and animals coexist and the processes through which zoonotic diseases transmission can occur (Mari Saez et al., 2015; Jekins et al., 2024)). While studies have been conducted on zoonotic diseases transmission in animal markets from both biomedical and social sciences (Opayele et al., 2018; Ukwueze et al., 2020; Ayoola et al., 2017; Jekins et al., 2024), little has been documented on the challenges of conducting ethnographic studies on zoonotic diseases transmission in African animal markets.

Methods

The paper leverages an ethnographic six-month fieldwork research experience conducted in *Kara* and *Elewure* livestock markets, Akinyele, Ibadan. The markets were purposively selected due to published scientific research by Opayele et al. (2018) and Ayoola et al. (2017) that has reported zoonotic infections in humans and animals in the markets. The study objectives were to explore the structure of the market and practices that can facilitate zoonotic disease transmission, perception of the transmission, protective measures, and pathways to healthcare utilization for zoonotic infections among the market actors. The target population for the study included livestock handlers such as cattle dealers, goat dealers, butchers and slaughter slab workers in the market. The method of data collection included non-participant observation, key informant interviews (KII), and in-depth interviews (IDI). A total of 5 key informant interviews were conducted with the market leaders, and 42 in-depth interviews were conducted with livestock handlers in the market. A key informant interview guide was developed to facilitate discussion with the market leaders focusing on themes such as the market history, norms, and relationship between the government and the market while an indepth interview guide was developed to facilitate discussion with the livestock handlers in the market on perception of zoonotic diseases transmission in the market, protective measures and pathway to healthcare utilization for zoonotic infections. The study obtained ethical approval from the University of Ibadan Social Sciences and Humanities Research Ethics Committee as well as the informed consent of the market leadership and the study participants. The challenges experienced during the research were jotted in a field note including how they were navigated which informed the themes presented in the result section of this paper.

Results

The result section is organised into three sections which are: description of the market, community entry at the market, and the challenges encountered in conducting ethnographic study on zoonotic diseases in the market.

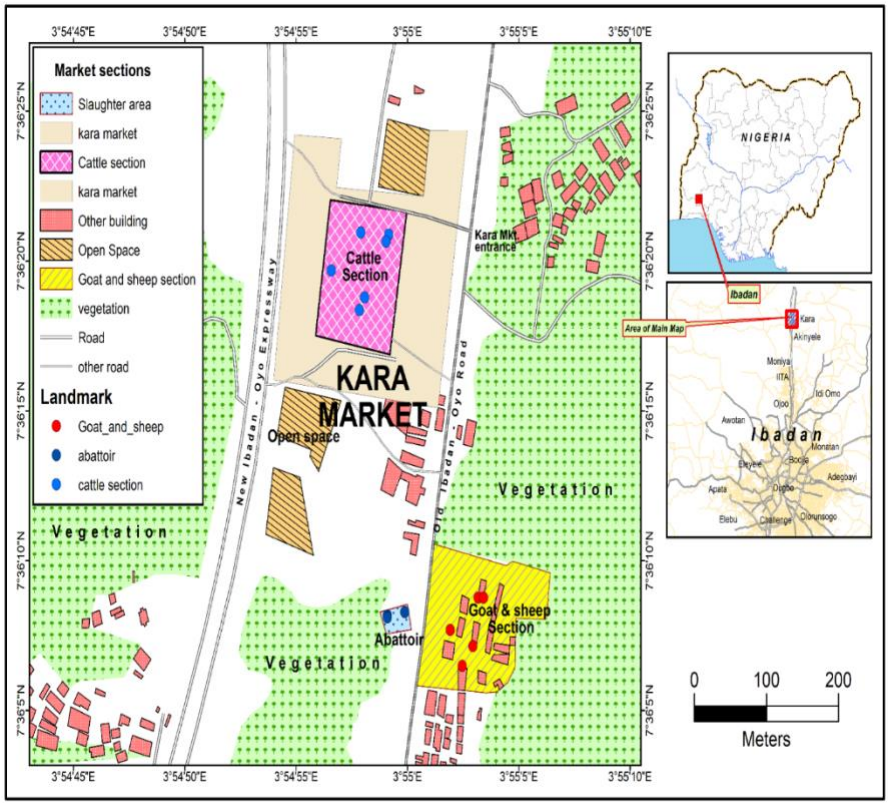
Description of the Market

Akinyele livestock market is located between two peri-urban communities namely Akinyele and Moniya and also maintains a close proximity to a rural community called Onidundun. The market is separated by species of livestock, namely goats and sheep market maintaining its own space from the cattle section. The goat market is locally called "*Elewure"* and cattle section called "*Kara*", both informal organisations are located along the

roadside linking Ibadan to the left and Oyo town to the right. The market is ethnically diverse as it comprises two major ethnic groups, the Yoruba, and Hausa ethnic groups, including nationalities from Chad, and Niger who constitute the minority ethnic group in the market.

The market is an offshoot of other livestock markets that have existed in Ibadan as it was opened in the year 2002 during the administration of former Governor of Oyo State, Late Governor Lam Adesina to serve as the main agricultural livestock hub for Ibadan. The market is structured into three major landscapes, which are animal sheds, open space for animals and the abattoir locally called *iso eran*, *agbo eran*, and *odo eran* respectively. The animal dealers were frequently exposed to animal feaces, urine and vector insects from the animals due to space sharing with the animals under the shed (iso eran) and at the open space for the animals (agbo eran). The open slaughter practice at the abattoir also exposes the butchers and the environment to animal blood frequently.

The map showing the different section of the market is presented in figure 1 below:



Community Entry at the Market

Before the commencement of the study, the researcher visited the market leaders at the cattle, goat and abattoir sections to obtain their consent to conduct the research in the market. They were informed about the research, the mode which the study would take and the time duration were also highlighted. Also, the researcher asked if the market executives would be willing to accept the researcher in the market. The head of the cattle market and that of the abattoir immediately granted approval noting that it was common occurrence for researchers from the University of Ibadan, especially veterinary researchers to come to the market for research. However, the goat and sheep section leader had to seek for the consent of other executives before approval and also requested the researcher to meet the market association during their association meeting which holds every Tuesday. The attendance of market members at the meeting was

low compared to the general population of the market. This implied the absence of some of the animal dealers at the goat and sheep section at the briefing about the study. Similar situation was encountered at the cattle and abattoir sections. The researcher could not meet all the association members because they only meet occasionally, when there are very important issues to discuss. Furthermore, the researcher traverses the market to meet with other market actors such as cattle dealers, goat dealers, and butchers seeking their consent to participate in the study.

Challenges Experienced in Conducting Ethnographic Study on Zoonotic Diseases at the Livestock Market

Three major challenges were encountered during the research which are explained below, including how the researcher navigated the challenges.

1. Gaining the trust of the market actors for participation

Trust is identified as an important social element of ethnographic research that contribute to quality of information that will be garnered and success of the research (Pugh et al., 2023). In the process of meeting the market actors individually, there was the challenge of gaining their trust at the early phase of the research. This challenge manifested in different ways. Some Yoruba ethnic group market actors perceived the researcher to be a government spy who will reveal market information to the government which may lead to the closure of the market. Such market actors made references to previous cases of how animal markets were closed in Ibadan, and even discouraged market participants who indicated interest not to participate. Some other Yoruba animal dealers declined participation due to failed promises of past researchers in the market who promised to bring their social problem to the attention of the government especially in the area of water supply, and road construction in the market.

At the abattoir section, frequent visit of the researcher to the section raised curiosity among the butchers. Some of the butchers who were Yoruba were of the view that the researcher was a social media content creator who would reveal some of the activities of the abattoir to the public on internet. Some of the butchers called the attention of the abattoir leader to review his decision due to the harm that it may cause them. Some other actors in the market also perceived the researcher as benefiting financially from the research due to frequent visit to the market and requested financial inducement before participating in the study.

Trust with Yoruba actors in the market was eventually navigated through the following social skills:

i. **Patience**: The researcher was very much patient to explain the research to the market actors at every time the challenge of trust arose. They were assured many times that the research would not do any harm to them and the goal of the research was not to spy for government but information garnered in the market will be used strictly for academic purpose.
ii. **Persistence**: The researcher was not discouraged by the claims of some market actors. The researcher kept visiting the market frequently to hold conversations with the market actors. In that process, the researcher met some animal dealers who informed the researcher that they have children pursuing postgraduate education which deals mostly with research. As a result, they avail themselves to the researcher for conversation and they also connected the researcher with some other animal dealers and even butchers.
iii. **Informal conversation to build trust**: After the researcher had established relationship with some of the market actors, informal conversation which does not involve formal interviews was used to solidify trust. For instance, the researcher sometimes asks questions like how they develop interest in animal trade, the number of years they have spent trading, and the role the trade has played in their life, how profitable the trade is and if they will be willing to hand over the trade to their children. The traders were eager to discuss this nature of questions which made them become more comfortable with the researcher. These set of market actors were also visited more often as they also provided much more information about the market. Other market actors began to observe the cordial relationship between these market actors and the researcher and they also started showing interest to participate.

2. Reluctance to discuss zoonotic diseases

Some participants were reluctant to discuss zoonotic diseases in the market due to the market norms that prohibits animal dealers in the market from discussing diseases that affect animals in the market with strangers or customers. For instance, one of the dealers at the goat sections aid:

> It is a taboo for animal dealers to discuss health secrets such as diseases that has to do with animals in the market with outsiders or customers. Anyone who does that would not have his secret covered in life just like the way the tail of goats do not cover their buttocks. *(IDI/Goat dealer 003/Male/42/Yoruba)*

To navigate this challenge with other livestock dealers in the market, the researcher showed the willingness to learn about the trade from the market actors and not just to collect data on zoonotic diseases in the market which also helped to further solidify trust and to have in-depth discussions with the market actors on animal health. For instance, at both goat and cattle sections, different breeds of animals were observed. At the goat section there were local goats locally called "*eranibile*" in the market and northern breed called "*eran Hausa.*" At the cattle section, cow breeds such as b*ukkolo*, *budalle* were also identified which also differ by colour. Further questions were asked about the differences in all of these breeds especially immunity and resistance to diseases. Here, the animal dealers spoke extensively on the resistance on each of the breed to diseases. The researcher was able to initiate discussions on zoonotic infections such as how sick animals are managed, perception of zoonotic transmission in the market, and protective practices against animal diseases. At the abattoir section, the researcher also expressed willingness to learn about slaughtering practices especially the religious rites performed before animals are slaughtered. The butchers were eager to enlighten the researcher about these guidelines and why they adopt such slaughtering method.

For instance, the butchers mentioned that animals in the abattoir are slaughtered according to Islamic guidelines which Allah recommends and this is usually strictly adhered to in the market especially that the majority of the market actors are Muslims. The rite involved turning the head of the animal to be slaughtered to Kiblah (the direction that Muslims face while praying) and with special qur'anic recitation. The animal is then slaughtered in one attempt with a very sharp knife that immediately take life out of the animal. This is done to ensure that the animal feels little or no pain in the process. The process of the slaughtering is further described in the interview excerpt below:

> Animals must be slaughtered with empathy. God instructed man not only to take charge but also to care for these animals which informs how we slaughter them in this abattoir and in Islam generally. The left belly of the animal to be slaughtered is placed on the ground and the head turned to Kiblah which is the direction we face when we are praying in the mosque. We then cover their eyes with the ears. The knife must be very sharp to ensure that the animals dies once it is slaughtered. This ensures that the animal feels no pain. (*IDI/Animal butcher 003/Male/45 years/Yoruba)*

While the butchers described the process of slaughtering, the researcher-initiated discussions on zoonotic diseases where the butchers attested to the fact that diseases can be contracted from animals in the market especially through contact with blood from the animals. However, the butchers did not believe in the use of personal protective equipment such as hand gloves and nose mask as they describe them as mere fashion that is only adopted by butchers that want to look unique. They instead mentioned that their long-term experience with animals has provided them with the knowledge of animals to avoid for slaughter. For instance, they mentioned that the appearance of some parts of animals such as eye, skin, or tongue could serve as hint whether an animal is healthy or not and if such animals should be slaughtered or not. In the case where the animal is perceived not healthy, such an animal will not be slaughtered to ensure that blood from the animals do not transmit diseases to people in the market. However, where it is mandatory for a sick animal to be slaughtered and discarded, it is usually done in a nearby forest in the market and supervised by an animal health inspector in the market. At the end of the discussion which initially

was held informally, they invited the researcher to the abattoir early in the morning to have practical experience of how animal slaughtering is done in the market. Having participated in the early morning slaughtering of animals for some days in the market, the researcher requested if he could take pictures of the slaughtering methods and they consented, so far, their faces are not shown in the picture due to the fear of being posted on social media.

3. Difficulty in generating information and practices of the Hausa and Fulani ethnic groups in the livestock market

Among the Hausa and Fulani ethnic groups in the market, despite meeting their leaders at the beginning of the research and obtaining their consent to conduct the research among their members, most of them declined participation even when they were informed that the researcher had received an approval from their leaders. Some of them claimed that they were busy with their trade while some mentioned that since the researcher had met and discussed with the Sarkin (Head of Hausas and Fulanis), they have nothing to say again. This challenge was discussed with the Yoruba livestock dealers whom the researcher had established relationship with, and they made it known that the Hausa and Fulani believe in the supreme leadership of their Sarkin and may be cautious with their utterances not to contradict that of their leader. Secondly, it was mentioned that the market had history of ethnic conflict between Hausas, Fulanis and Yorubas and therefore may be hesitant to participate because the researcher was Yoruba. This was because they might believe that the Yorubas in the market were planning something against them.

To navigate this challenge, some Yoruba dealers in the market helped the researcher to identify Hausa and Fulani livestock dealers whom they have established close business relationship with, to facilitate close rapport since they would be acting as intermediary. Through this arrangement, the opinions of Hausa and Fulanis livestock actors were captured in the market. The individuals identified were also able to speak Yoruba as they mentioned they have been trading for over twenty years in Ibadan.

Discussion

The objective of this paper was to identify and discuss the challenges associated with conducting ethnographic research on zoonotic transmission in a livestock market, especially that such contexts have been identified as hotspots of zoonotic diseases. Social science scholars have noted that trust is an essential social element that contributes to the success of ethnographic research and that can also impact the quality of information garnered in such studies (Pugh et al., 2023). Difficulty in gaining trust of the market actors for participation was one of the challenges encountered in the research. For instance, Yoruba actors in the market were concerned with the fact that their market practices maybe exposed to government or revealed on social media. Also, that the researcher might be gaining financially from the research. Nevertheless, social skills such as patience, persistence, using informal conversation to build rapport were vital in navigating the challenge of gaining trust in the market as they were employed to ensure trust with Yoruba market actors.

Similarly, Zulu et al. (2023) noted that establishing trust with livestock keepers in zoonotic diseases research can be challenging especially that livestock hold economic, social and cultural significance in Africa, and therefore mentioned that trust can be achieved with such actors through respect for community preferences, and clearly explaining the research procedures to such actors. Furthermore, Hamal (2020) also documented based on ethnographic research among secondary school students in Nepal that trust in ethnographic research can be challenging but also averred the importance of patience and persistence in ethnographic research.

Reluctance of the market actors to discuss zoonotic diseases was also another challenge experienced in the market. This was associated with the social norm of the market that prohibits discussing animal diseases with strangers in the market or customers. This norm maybe as a result of the fear of economic impact that such act may put on their business as it may confer stigma on the market. Studies conducted on practices in African informal markets have also reported existence of strong norms guiding the conduct of market actors (Asante 2020; Davies, 2022). However, this was navigated as the researcher presented himself as someone who was just not interested in collecting data on zoonotic diseases in the market but learning

about the trade, and market practices which made the market actors comfortable and gave the opportunity to introduce other sensitive topics like perception of zoonotic transmission, protective measures and case transmission of zoonotic diseases in the market. Scholars have also noted that qualitative research on sensitive health topics requires flexibility and innovation to approach (Pinto et al., 2023).

Furthermore, another challenge encountered was the difficulty in generating information from Hausa and Fulani livestock dealers in the market due to cultural factors. For instance, Hausa and Fulani livestock dealers approached in the market declined participation, referring the researcher to their ethnic leaders as the only source of official information even when they were told that the researcher had received an approval from their ethnic leaders. It was further mentioned by Yoruba market actors that the Hausa and Fulani ethnic groups accord high respect to their leaders, and usually avoid situations where they release information that contradict that of their leaders. Similarly, scholars have observed that data collection in African communities is often affected by cultural norms (Folayan, 2025). However, this challenge was navigated through the input of Yoruba market actors by acting as intermediaries between the researcher and some key Hausa and Fulani livestock dealers in the market whom they have established long term relationship with. This suggests that local market actors can serve as vital agents in navigating the problems encountered in conducting ethnographic studies on zoonotic diseases in livestock markets where cultural diversity and values may impact the success of the research.

Conclusion and Recommendation

The paper concludes that while ethnographic studies are crucial in providing substantial knowledge on zoonotic diseases in animal markets, trust which is highly essential to the research process and willingness to discuss the topic among animal dealers can be challenging at the early phase of the research but could be navigated with social skills such as patience, persistence, informal conversation to build trust, and willingness to learn from market actors, and not just to collect data on zoonotic diseases. Ethnographers should also consider the market actors as vital agents that can help to mitigate cultural challenges encountered in such research. The paper recommends that researchers conducting ethnographic research on zoonotic diseases in African livestock markets should prioritize developing social skills to enhance data collection. Key market actors should also be identified during the community entry process and be engaged in navigating the problems encountered while conducting the research.

References

Adegoke, O., Schmidt-Sane, M., Kunnuji, M., Abbas, S., Lawanson, A., Jegede, A., & MacGregor, H. (2025). Diagnosis, treatment, and management of Mpox in urban informal settlements in southwestern Nigeria: an ethnographic approach. *BMC Public Health*, 25(1), 115.

Ahmad, I., Kudi, C. A., Abdulkadir, A. I., Saidu, S. N. A., Chafe, U. M., & Abdulmalik, Z. (2018). Survey of bovine tuberculosis in Nigerian beef cattle. *Open veterinary journal*, 8(4), 463–470. Retrieved 9th August 2023 from https://doi.org/10.4314/ovj.v8i4.18.

Ayoola, M. C., Akinseye, V. O., Cadmus, E., Awosanya, E., Popoola, O. A., Akinyemi, O. O., Perrett, L., Taylor, A., Stack, J., Moriyon, I., & Cadmus, S. I. (2017). Prevalence of Bovine Brucellosis in Slaughtered Cattle and Barriers to better Protection of Abattoir Workers in Ibadan, South-Western Nigeria. *The Pan African medical journal*, 28, 68. https://doi.org/10.11604/pamj.2017.28.68.10925.

Asante, A. L. (2020). Urban Governance in Ghana: The participation of traders in their development of Kotokura Market in Cape Coast. *African Geographical Review*. https://doi.org/10.1080/19376812.2020.1726193.

Davies J., Bleeking, J., Hannah, C., Hannah, C., Zimmer, A., Joshi, N., & Anderson A. (2022). Governance of traditional markets and rural-urban food systems in Sub-Saharan Africa. *Habitat International*. 102620. https://doi.org/10.1016/j.habitatint.2022.1062620.

Erdaw, M. M. (2023). Contribution, prospects and trends of livestock production in sub-Saharan Africa: a review. *International Journal of Agricultural Sustainability*, 2(1), 2247776.

Foláyan, M. O., Arowolo, O., Mohebbi, S. Z., & Khami, M. R. (2025). A qualitative study on cultural sensitivity during survey fieldwork for early childhood caries in Ile-Ife, Nigeria: bridging the gap between culture and science. *BMC Research Notes*, 18(1), 347.

Hamal, S. (2020). Trust in ethnography: Narrating the difficulties, rewards and dilemmas of entry, engagement and exit (3Es) in the research field. *Dhaulagiri Journal of Sociology and Anthropology*, 14, 97-105.

Jenkins, J., Lawundeh, W., Hanson, T., & Brown, H. (2024). Human-animal entanglements in bushmeat trading in Sierra Leone: An ethnographic assessment of a potential zoonotic interface. *Plos one*, 19(3), e0298929.

Marí Saéz, A., Weiss, S., Nowak, K., Lapeyre, V., Zimmermann, F., Düx, A., & Leendertz, F. H. (2015). Investigating the zoonotic origin of the West African Ebola epidemic. *EMBO molecular medicine*, 7(1), 17-23.

Opayele, A. V. G. N., Odaibo, G. N., & Olaleye, O. D. (2018). Rift valley fever virus infection among livestock handlers in Ibadan, Nigeria. *Journal of Immunoassay and Immunochemistry,* 39(6), 609-621.

Otu, A., Effa, E., Meseko, C., Cadmus, S., Ochu, C., Athingo, R., & Naminsango, E. (2021). Africa Needs to Prioritize One Health Approaches that Focus on the Environment, Animal Health and Human Health. *Nature Medicine,* 27, 943–946. https://doi.org/10.1038/s41591-021-01375-w.

Pugh, A. J., & Mosseri, S. (2023). Trust-building vs. just trust me: reflexivity and resonance in ethnography. *Frontiers in Sociology*, 8, 1069305.

Pinto, C., Geraghty, A. W., Pagnini, F., Yardley, L., & Dennison, L. (2023). How do people with MND and caregivers experience a digital mental health intervention? A qualitative study. *Frontiers in Psychiatry*, 14, 1083196.

Rahman, M. T., Sobur, M. A., Islam, M. S., Levy, S., Hossain, M. J., El Zowalaty, M. E., Rahman, A. T., & H. M. (2020). Zoonotic diseases: etiology, impact, and control. *Microorganisms,* 8(9), 1405.

Shah, H. (2020). Global problems need social science. *Nature*, 577(7790), 295-296.

Ukwueze, K. O., Ishola, O. O., Dairo, M. D., Awosanya, E. J., & Cadmus, S. I. (2020). Seroprevalence of brucellosis and associated factors among livestock slaughtered in Oko-Oba Abattoir, Lagos State, Southwestern Nigeria. *The Pan African medical journal,* 36, 53.

Woldehanna, S., & S. Zimicki (2015). An Expanded one health model: integrating social science and one health to inform study of the human-animal interface. Social Science and Medicine, 129(2), 87-95.

Wu, Y. C., Chen, C. S., & Chan, Y. J. (2020). The outbreak of covid-19: an overview. *Journal of the Chinese Medical Association,* 83(3), 217–220.

Webster, R. G. (2004). Wet markets– a continuing source of severe acute respiratory syndrome and influenza*? Lancet,* 363, 234–236.

World Health Organisation (2020). Zoonoses. Retrieved April 2023 from https://www.who.int/news-room/fact-sheets/detail/zoonoses\.

Zulu, V. C., Syakalima, M., & Ali, J. (2023). Ethical dimensions of zoonotic disease research: Perspectives of traditional livestock keepers in Zambia. *Wellcome Open Research*, 7, 201.