

Understanding the menace of venomous snakes, the awareness, and perceptions of available treatment options in a changing climate.



Nnadi Emmanuel Ebuka BMS, MSc.
University of Hertfordshire/Swansea University, United Kingdom
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Introduction & Aim

Snakebite is a serious public health disease and one of the most important venom-induced diseases occurring in many regions of the world. Estimated 81-95% of global snakebites occurs in the developing world, affecting mainly farmers. In some parts of Nigeria, the incident rate is often as high as 497 per 100, 000 population per annum, with fatality rate of about 20-100% depending on snake species and the availability of snake antivenom. Evidently, climate change influences seasonal distribution and behaviours of these snakes and could potentially influence their venom compositions. In northern Nigeria, there is little evidence regarding farmers' knowledge of venomous snakes, and their awareness and perceptions of available treatment options.

Aims/Objectives: To assess farmers' knowledge of venomous snakes, and their awareness and perceptions of available snakebite treatment options in northern Nigeria.

Methodology

Method: Qualitative research method was adopted using interpretive phenomenological analysis (IPA) approach.

Sampling:

- A purposive sample of 16 farmers representing 11 tribes and 3 states
- Data were collected using pictures of commonest venomous snakes, and a semi-structured audio-recorded interview.

Analysis:

- Data were transcribed and analysed using thematic analysis.

Ethics approval was gained.



Figure 1. (a) Research location. (b) Commonest venomous snake species in northern Nigeria

Results & Discussion

'You know our people {}. You know. {} I will sort the consent of my elder brothers or whoever that is with me [explaining what happens in deciding the choice of treatment of snakebite]. Sometimes they do say we take them [snakebite victim] to the native doctors; and sometimes we take them to the hospital like this one. And so that has been a problem with us, discussing and debating on how to take the patient' (P8, para 11)

'And if it bites, the place will rot, will get rotten {} ... At the spot. It will begin to rot and some people if it bites them, they will cut off the place [mostly the limbs] immediately with a knife so that it will prevent the poison from spreading round the other side' (P4, para 98)

'This number three in our native locality [referring to Gabon viper], if you are moving with dog, it will fight you more than when you are alone. We call it lpwang. Yes, immediately when it discover that you are together with dog. It will at least try to fight even you or the dog' (P1, para 75 & 79)



Mean snake identification score: 60%.
87.5% (n=14) identified over 87% of the commonest venomous snakes.



Participants previously bitten snake: 12.5% (2).
Participants with relatives previously bitten by snake: 100% (16)



There is an overall knowledge of venomous snakes and awareness of different treatment options among the farmers.



Socioeconomic and cultural factors emerged as the main determinants of snakebite treatment option.



The participants showed significant understanding of the seasonal changes in the behaviours of snakes and how weather conditions influence the prevalence of bites.

Conclusion

- ❖ Snakebite constitutes a major public health threat to rural communities in northern Nigeria with the impact mostly felt by subsistent farmers.
- ❖ The qualitative research adopted in this research has provided a deeper understanding of the objectives.
- ❖ However, the implementation of measures that could improve the quality of life of these farmers is paramount.
- ❖ To achieve this, there is need for collaboration among the caregivers, the farmers and the policy makers to provide effective solutions.
- ❖ More importantly, each of the stakeholders implicated in snakebite accident and or management should be properly educated on the knowledge of venomous snake identification, measures to strengthen systems and implement programmes that encourage safe snakebite preventive and treatment practices

Implications for Public Health and Health Promotion

These findings are essential in guiding policy makers and public health practitioners in designing effective and specific public health and health promotion programmes that could help improve the care-seeking behaviours of snakebite victims and reduce the incidence of snakebite in northern Nigeria.

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