

Assessing Healthcare Workers' Knowledge, Practices, and Attitudes towards Snakebite Management: Implications for Public Health in Hoima regional Referral Hospital, Hoima District

Mumbere Derick

Faculty of Clinical Medicine and Dentistry Kampala International University, Uganda.

ABSTRACT

The purpose of this study was to evaluate the knowledge, attitudes, and behaviours of healthcare professionals working in the surgical ward and accident and emergency departments of Hoima Regional Referral Hospital in the Hoima District regarding the management of snakebite. A closed, structured interviewing technique was used to gather data. With an average experience of 0–4 years, the majority of health workers may have inadequate expertise of snakebite management techniques. As much as 76% of medical professionals could identify a snakebite. More than half (54.7%) were aware of the use of tourniquets as a first aid treatment for snakebite. 78.6% of respondents had received training on how to handle a snakebite victim from a school. The study discovered that 42 healthcare professionals who were knowledgeable in managing snakebite cases have also handled cases of snakebite. Nonetheless, 9.75% of medical professionals had given snakebite antivenom in more than an hour, and 71% had never given snakebite antivenom. When treating snakebite victims, the majority of medical professionals did not follow any defined protocols, which could have resulted in technical mistakes. In addition, 69% of medical professionals had never recommended a snakebite patient to a herbalist. Again 42 healthcare professionals had always treated snakebite with symptomatic measures like steroids and cold compresses. The majority of healthcare professionals employed non-pharmacological methods, with movement restriction accounting for 34.4%. Only 11.9% of health professionals are ignorant that snake bites represent a health risk. Most handle every occurrence of snakebite, treat them as emergencies, and start treatment right away. Many healthcare professionals, however, are unaware of the significance of early medical care access and the requirement for appropriate treatment. The survey also showed that 19.0% of victims had been directed to traditional herbalists by health professionals, and 23% of them think they can treat snake bites. The results present a troubling picture and should elicit necessary action from all concerned.

Keywords: Snake bite, antivenom, Hospital, Health care Professionals, herbalists

INTRODUCTION

Snakebite is an injury caused by the bite of a snake, especially a venomous snake. Snake bite management is the process of giving care to a person who has been bitten by a snake to prevent him or her from getting complications. Globally, 5.4 million people are bitten by snakes annually; of these, 138, 000 people (2.6%) die, and 435,000–580,000 sustain amputations and other permanent disabilities, with the majority of these events occurring in Sub-Saharan Africa and Asia [1]. In Africa, 30% of snakebites are managed by health facilities, and their mode of management largely depends on a health worker as an individual because little attention has been given to snake bite management and their standard guidelines [1,2] Iliyasu et al., and Kipanyula and Kimaro [3,4] established two areas that need to be addressed to improve snakebite care in Africa, which were largely improving access to antivenom as well as capacity building of health workers with much-needed knowledge and lacking skills. In sub-Saharan Africa, it is estimated that more than 70 % of snakebite cases are not reported or documented because many of the victims do not seek treatment in public and other formal health facilities. However, even among those who seek health care from health facilities, a 15 % fatality rate is reported due to a lack of clear and standard snake envenomation management approaches. As a result of these challenges in snakebite management, 32,000 deaths occur in this region due to snakebites alone [5]. In East Africa, only 4% of health workers manage snakebites appropriately, whereas most patients are poorly managed based on traditional interventions by modern professional health workers due to knowledge gaps [6]. In Uganda, the incidence of snakebites in the general population remains high at 72 per 100,000 and 101 bites per 100,000 people in districts surrounding forests and national parks like Gulu, Kasese, and Rubirizi, among others [7]. Despite the high incidence, there are limited health workers with training in the management of snakebites [7]. This is in addition to other problems in snakebite management, like limited antivenom [5]. In 2018, Uganda integrated snakebite envenoming into the country's NTD programme. Successful management of snakebites requires correct knowledge of management [5]. Snakebites have remained neglected as a public health issue, and only recently have they started to receive global advocacy and policy attention. Therefore, there is a need to study the abilities of

health workers in snakebite management in high-risk areas, especially those near forests and rivers [1]. Hoima Regional Referral Hospital, being near an oil mining site and Lake Albert, makes it easy to receive high numbers of snakebite patients from these high-risk areas. Worldwide, the burden of envenomation due to snakebite is imprecisely estimated. However, the mathematical model estimates of global cases range from 420,000 to 2682500 annually [8]. In sub-Saharan Africa, the number of persons treated in health centres for snakebite envenomation is estimated at 315,000 cases per year, with more than 9000 amputations and 7,000 deaths [8]. It has been shown that 92% of health workers in Uganda can't treat snakebites despite being professionals [9]. This is alarming because despite not knowing how to manage snakebites, they still receive high numbers of snakebite victims. The Annual International Snakebite Awareness Day (ISBAD) has been celebrated since 2018 to publicise best practices in snakebite management. Additionally, materials related to snakebite management, including dos and don'ts for snakebite victims, were developed and widely disseminated WHO [10]. Despite all the efforts above, outcomes still do not seem to be better, as more than 85% of snakebite victims still get serious complications like paralysis and amputations, and others die due to gaps in treatment practices [5]. In 2020, 25 cases of snakebite were admitted to the Hoima Regional Referral Hospital. 4 (16%) died and 2 (8%) healed with complications like osteomyelitis. The mortality rate of 20% is very high compared to the global mortality rate of 15%, according to the WHO [9], if patients are managed well. This implies that gaps still exist in the management given to these patients, which prompted the researcher to carry out this research study. The study was designed to assess the knowledge, attitudes, and practices on snakebite management among health workers in the surgical ward and accident and emergency departments of Hoima Regional Referral Hospital, Hoima District.

METHODOLOGY

Study Design

This study adopted a cross-sectional study design using a quantitative research approach. The cross-sectional study design was used because it is more reliable and objective, and it also saves time and money since it considers snapshot sampling of available health workers.

Area of Study

The study was conducted at the Hoima Regional Referral Hospital in the Hoima district. It is a government hospital located along the Kampala-Fort Portal Highway in Hoima City with a capacity of 223 inpatient beds, offering nursing care to all specialities, including internal medicine, surgical care, obstetric and gynaecological care, critical care, emergency care, paediatric and neonatal care, among others. The facility is also one of the hospitals neighbouring the petro-oil mining site and Lake Albert areas, which have been highlighted as having a high rate of snakebites, the area was chosen based on its HMIS, which revealed a high rate of snake bites with poor management outcomes.

Study Population and Rationale

The study involved all health workers offering care to patients in the surgical ward and accident and emergency departments of Hoima Regional Referral Hospital-Hoima District. These were selected because they are the ones that are involved in daily care for patients, more so for snakebites; hence, they have detailed information regarding their knowledge and what they do while they are treating patients with snakebites.

Inclusion Criteria

The study involved all healthy workers offering care to patients in surgical wards and accident and emergency departments at Hoima Regional Referral Hospital who have consented willingly to participate in this research.

Exclusion Criteria

The study excluded health workers not in the surgical ward and accident and emergency departments of Hoima Regional Referral Hospital, but health workers in the surgical ward and accident and emergency departments who health workers in the surgical ward and accident and emergency departments who have not consented. And those who were on leave during the period.

Sample Size Determination

Sample size was determined using the Sloven (1962) formula with a precision of +/- 5% and a confidence level of 95%. The formula is given by the expression below.

$$n = \frac{N}{1 + NE^2}$$

Where;

n = number of respondents.

N = target population; N = 50 (number of health workers in the surgical ward and accident and emergency departments at Hoima Regional Referral Hospital, Hoima District).

E = level of precision; E = 0.05

Therefore;

$$n = 50 / 1 + 50(0.05)^2$$

n = 44; therefore, 44 health workers will be considered.

Sampling Procedure and Rationale

A convenient sampling method was used where health workers were assessed based on their availability and willingness to participate in the research study. The researcher moved to these two different departments of the facility, explained the

purpose of the study to participants and obtained consent from those willing to participate. This was done until the desired sample size was achieved.

Independent Variables

Knowledge of snakebite management Practices for snake bite management Attitude towards snakebite management

Dependent Variables

Snakebite management

Data Collection Method

Using a closed and structured interview method, questionnaires was developed in English because all health workers in the surgical ward and accident and emergency departments at Hoima Regional Referral Hospital are expected to know English. The questionnaires included open and closed ended questions on demographic characteristics, knowledge, and practices for snakebite management.

Data Collection Procedures

The researcher got an introductory letter from the Faculty of Clinical Medicine and Dentistry Research and Ethics Committee, which he presented to the hospital director's office at Hoima Regional Referral Hospital, seeking approval to carry out the study from the facility to the heads of department and finally to health workers. The researcher introduced himself to the participants and explained to them the purpose of the research. Consent forms were given out and signed by willing participants. Questionnaires were given to respondents to fill out as self-administered questionnaires to avoid bias in the researchers' presence. After participants have fully answered all the questionnaires, they were withdrawn by the researcher and kept for data analysis.

Data Management and Data Analysis

The filled-out questionnaires were checked for completeness and validity before leaving the data collection area. They were packed in water-proof clear bags and transported to the storage area, where they were stored in a cupboard and locked with a padlock and the key kept by the researcher. Data were then picked up for analysis and stored on the computer, and the soft copy password-protected to avoid access by unauthorised people.

Data Analysis

Data analysis was done with the help of the computer application SPSS version 20.1, and quantified data graphically presented in tables and figures.

Quality Control

Quality control was achieved by pre-testing the data collection tool (a questionnaire). Pre-testing the questionnaires was conducted on five health workers in the surgical ward of Kampala International University Teaching Hospital (KIU-TH) to check for clarity and validity of questions. Any errors or ambiguities realised was handled immediately to ensure a quality standard questionnaire that is specific in terms of the question directory to avoid leaving some questions unanswered.

Ethical Considerations

Permission was sought from the Research and Ethics Committee of Kampala International University regarding the faculty of clinical medicine and dentistry, and an introductory letter issued. This was used to introduce the researcher to the hospital director of Hoima Regional Referral Hospital for approval to carry out the research study from the facility to the heads of departments and finally to health workers. Health workers offering health care to patients in Hoima Regional Referral Hospital were included in the study upon giving their consent to participate after a thorough explanation by the researcher on the purpose. The researcher informed the participants that they have the right to withdraw from the study if they felt uncomfortable during the study. Participants were assured of maximum confidentiality and were informed that there was no hidden intention behind the study but only for research purposes. Participants were informed that there was no risks or benefits involved in this research study.

RESULTS

Demographic Data

Table1: Shows the demographic factors of the study population (n=44)

Sample Characteristic		Frequency(f)	Percentage (%)
Sex	Male	14	31.8
	Female	30	68.2
Designation	Nurses	32	72.7
	Clinician/doctor	12	27.3
Qualification	Certificate	26	59.1
	Diploma and above	18	40.1
Years of experience in the medical field	0-4years	20	45.4
	5-9years	14	31.8
	10-14years	10	22.7

Findings of this study revealed that most 30 (68.2%) of the respondents were female, whereas 14 (31.8%) were male. The majority of the respondents, 32 (72.7%), were nurses, compared to 12 (27.3%) who were clinicians and doctors. Research findings from the study found that the majority (59.1%) of the respondents were certificate holders, while 18 (40.1%) had at least a diploma or a degree. Findings also revealed that most 20 (45.4%) health workers had experience of 0–4 years, whereas the least 10 (22.7%) had 10–14 years of experience in offering health care to patients.

Knowledge of Snake Bites Management (n=44)

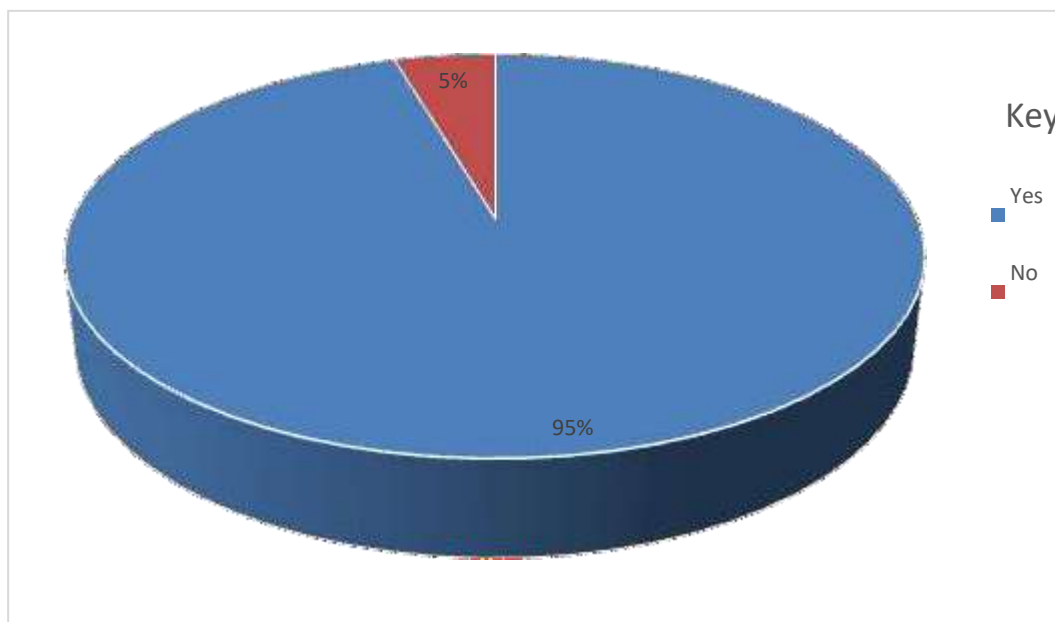


Figure1: Shows Awareness of Snake Bite Management

Findings revealed majority 42(95%) of health workers that had heard about snakebite management and the least 2(5%) who did not know snakebite management.

Table 2 showing knowledge of signs, first aid management, and danger signs monitored for snakebite victim, source of information. (n=42)

Character	Variable	Frequency (f)	Percentage (%)
Signs of snakebite	Signs of fangsbite	32	76.2
	Unstable vital signs	20	47.6
	Bleeding	15	35.7
	Sudden loss of consciousness	18	42.8
Firstaid	Tourniquet the wound	23	54.7
interventions	Wound irrigation	20	47.6
	Black stone application	6	14.3
	Lower the bitten part below the heart	15	35.7
Danger signsmonitored insnakebite	Vomiting	8	19.0
	Shock	26	61.9
	Cardiac arrhythmias	12	28.6
Learnt snakebitemanagement from	Traditional folk tales	2	4.7
	Reading textbooks	6	14.3
	CMEs	1	2.4
	In health training school	33	78.6

Asked Those Who Were Aware of Snakebite Management

The study revealed that most 32 (76% of health workers) knew the sign of snake fangs for snakebite identification, whereas the least 15 (35.7%) knew bleeding as a snakebite sign. The study also found more than half (54.7%) knew applying a tourniquet as a first aid measure for snakebite, whereas a few (14.3%) knew applying Blackstone as a first aid measure for snakebite management. It was also revealed that most 26 (61.9%) of health workers knew shock as a danger sign that should be monitored while managing a victim of snakebite, and the least 8 (18%) mentioned vomiting as a danger sign during the management of snakebite victims. It was also revealed that more than three-quarters (78.6%) had learned snakebite management from training schools, and a few (2.4%) had learned snakebite management through continuous medical education for professionals.

(n=42)

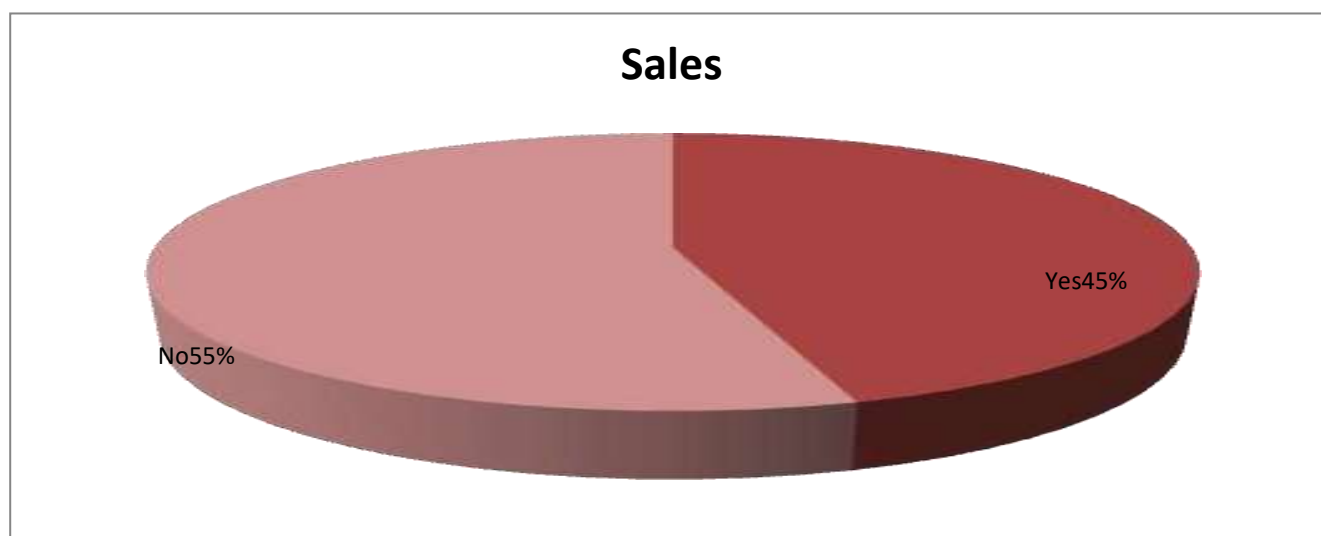


Figure 2: Showing whether a health worker knew how snakebite antivenin is administered

Findings revealed most 23(55%) of health workers that did not know how to administer snakebite antivenin and only a few 19(45%) who knew how to administer antivenin for snakebites.

(n=19)

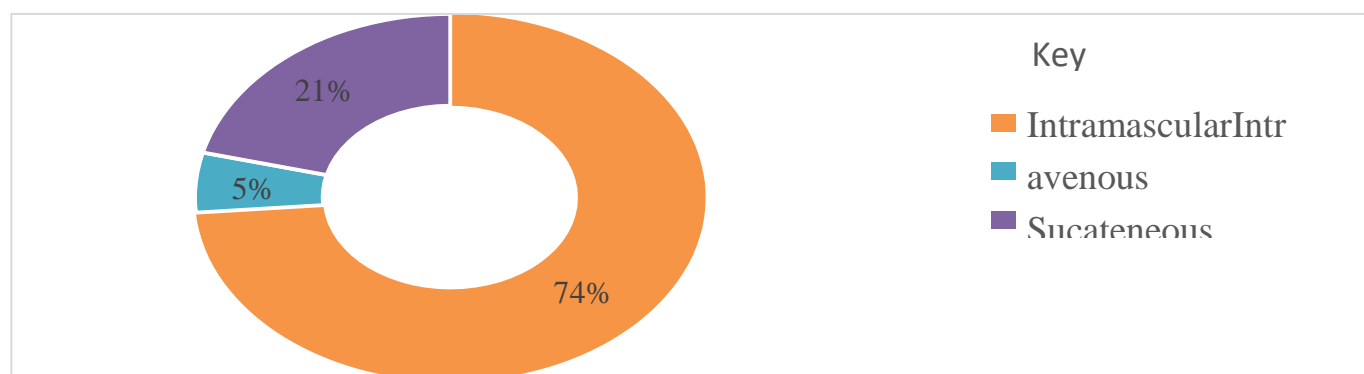


Figure 3: Shows method of antivenom administration

Asked from only those who reported that they knew how to administer snakebite antivenin

The study revealed most 14(74%) of those who knew administration of antivenom to be given intramuscular and a few 1(5%) reported that it could be given intravenous.

Practices on Snakebite Management (n=42)

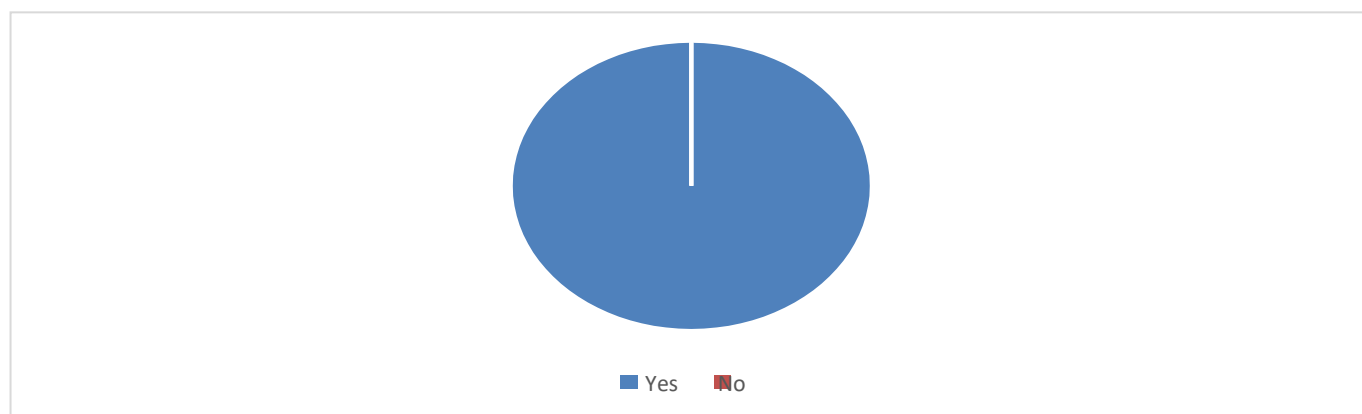


Figure 4: Shows whether health worker ever managed a snakebite victim

All 42(100%) of health workers who knew snakebites had ever managed them in their practice.
(n=42)

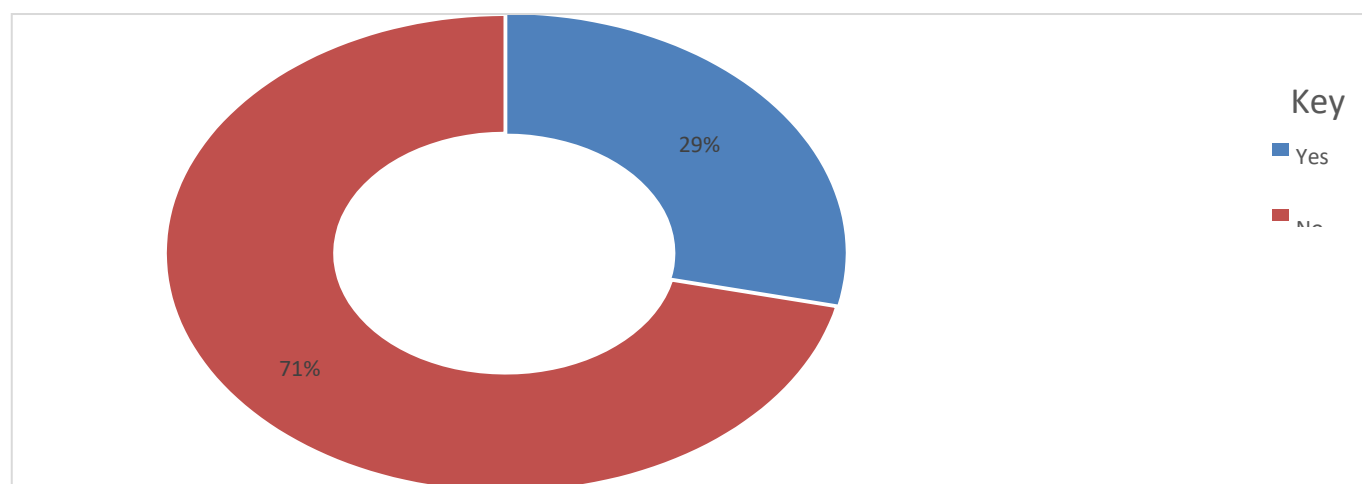


Figure 5: Shows the health workers that had ever administered snake venom anti-venom

Findings revealed that most 30(71%) of health workers had never administered snakebite antivenom and only a few 12(29%) had ever administered snakebite antivenom to snake bite victims.

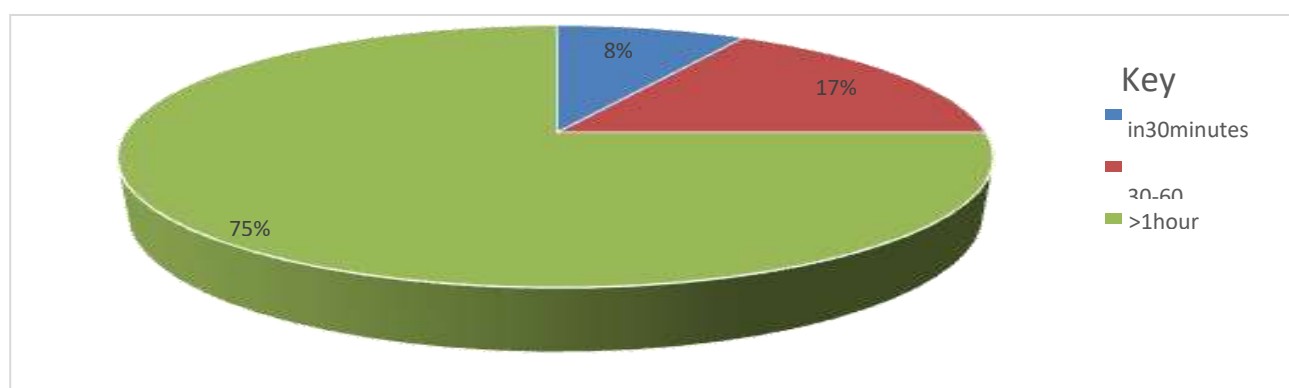


Figure 6: Asked only those who had ever administered snakebite anti-venom

From the figure above, the study revealed three quarters 9(75%) of those health workers who had ever administered snakebite antivenin in more than 1 hour to a snakebite victim and only a few 1(8%) administered antivenom in less than 30 minutes.

Table 3: Shows other means of how health workers managed snakebites (n=42)

Character	Variable	Frequency(f)	Percentage (%)
Follow any standard guide lines to treat snakebites	Yes	2	4.8
	No	40	95.2
Ever referred a snakebite victim to a herbalist	Yes	13	31
	No	29	69.0
Use symptomatic approaches	Yes	42	100
In managing snakebite victims	No	00	00
Ever used non-pharmacological approaches to treat snakebites	Yes	36	85.7
	No	6	14.3

The study revealed that most 40 (95.2%) of health workers reported not using any standard guidelines, whereas the least 2 (4.8%) of health workers reported using a standard guideline. It was also found that most 29 (69%) of health workers had never referred any snakebite patient to herbalists, but others, 13 (31%), had ever referred a snakebite victim to a herbalist or traditional healer. It was also revealed that all 42 (100%) had ever managed snakebite using a symptomatic approach. The study also reported that most 36 (85.7%) of the health workers had ever used non-pharmacological approaches in treating a snakebite victim, whereas a few (6 (14.3%) never used non-pharmacological approaches for snakebite management.

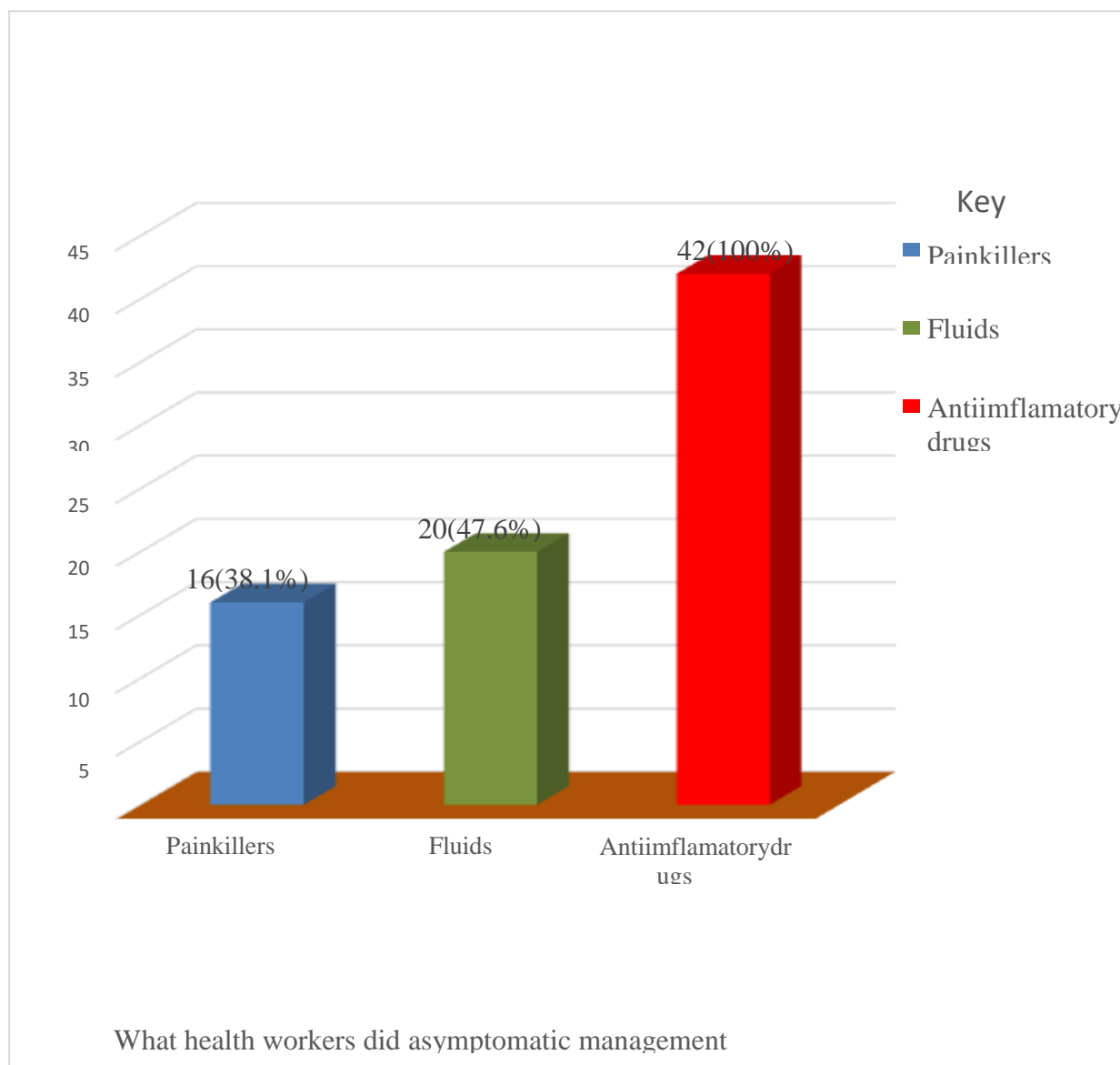


Figure 7: Asked for those who used symptomatic approaches

The study revealed all 42(100%) of health workers gave anti-inflammatory drug as the symptomatic approach in snake bite management whereas the least 16(38.1%) gave pain killers.

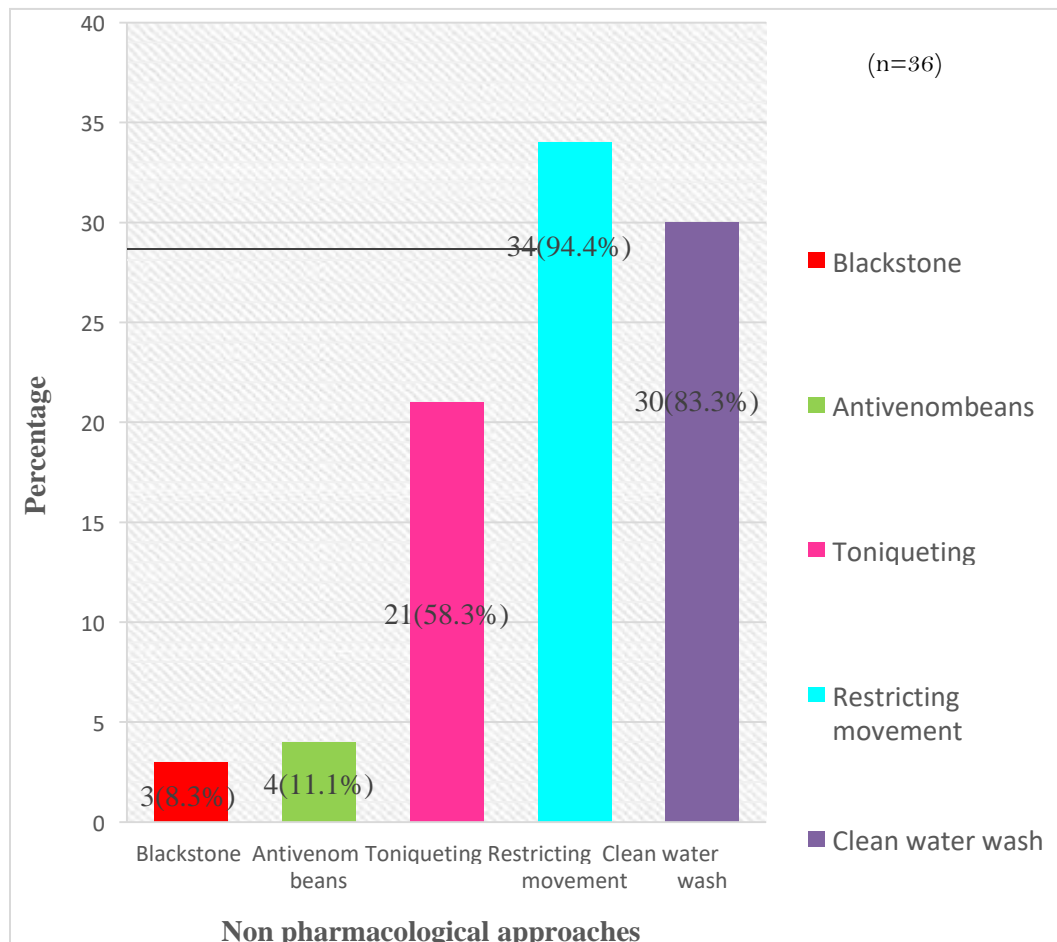


Figure 8: Asked from only those that had ever used non pharmacological management.

Findings of the research study revealed most 36(94.4%) of health workers that restricted movements as non-pharmacological approach to snakebite whereas the least 3(8.3%) had ever used traditional Blackstone for snakebite management.

Attitude On Snake Bite Management

Table 4: shows attitudes of health workers on the management of snakebites (for only those who participated in this study). (n = 42)

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Character	Variables	Frequency (42)	Percentages (%)
Is snakebite a health hazard	Yes	37	88.1
	No	5	11.9
Whether all snakebites are treated	Yes	34	80.95
	No	4	9.5
Do all snakebites considered as emergencies	Yes	35	83.3
	No	7	16.7
When to initiate treatment in snakebite case	immediately	40	95.2
	After 20 minutes	2	4.8
	Anytime	00	00
Whether traditional healers/herbalists can treat snakebites with herbs	Yes	10	23.8
	No	32	76.2
Have you ever referred a snakebite case to Traditional healer/herbalist?	Yes	8	19.0
	No	34	80.9

The table above shows that 37 (88.1%) of health workers knew that a snake bite was a health hazard, 5 (11.9%) didn't know that snake bites were a health hazard, 34 (80.95%) treated every case of a snake bite, and 4 (9.5%) didn't treat every snake bite case, 35 (83.3%) of health workers consider snake bites an emergency, but 7 (16.7%) don't consider snake bites an emergency. 40 (95%) of health workers initiate treatment of snake bites immediately after receiving the patient, and 2 (4.8%) initiate treatment after 20 minutes. 10 (23%) of health workers believe that traditional herbalists can treat snake bites, and 32 (76.2%) don't agree that traditional herbalists can treat snake bites. 8 (19.0%) of health workers have ever referred snake bite victims to traditional healers or herbalists, while 34 (80.9%) have never referred snake bite victims to

DISCUSSION

Demographic Data

The findings of this study revealed that 30 (68.2%) of the respondents were female, of which 32 (72.7%) were nurses, and the majority (26 (59.1%)) of the respondents were certificate holders. This could be because nurses comprise a larger percentage of healthcare providers. Although these also undergo training in health care, their training, especially in Uganda, is largely at the auxiliary level, hence their knowledge of snakebite management is also likely to be low. These findings disagree with those of [11] in Lao, which revealed more doctors with higher knowledge compared to other health workers. Findings also revealed that most 20 (45.4%) of health workers had experience of 0–4 years. This could be due to this being a private facility; hence, some health workers leave it in search of greener pastures since most private facilities in Uganda do not offer permanent contracts that are pensionable, unlike government employees. These are likely to have fewer encounters with snakebites, hence their limited experience, which could affect their knowledge as well as their snakebite management practices. These findings are contrary to those of [12], who found more knowledge and good practices on snakebite management based on more experience of the health worker.

Knowledge of Snakebite Management

Findings revealed a majority of 42 (95%) of health workers had heard about snakebite management. This could be through training schools as well as medical training for professionals, seeing that the facility is near an oil mining site and Lake Albert. In addition, most people around are peasant farmers, so these facilities are usually targeted to train health workers in such scenarios. This could increase their knowledge of management. These findings are contrary to those of [11], which revealed that less than 25% of healthcare givers knew the management of snakebites. The study revealed that 76% of health workers knew the signs of snake fangs for snakebite identification. This could be because this is the most obvious sign apart from the history of the patient and could still be the best confirmatory evidence of the injury, which could lead to an appropriate diagnosis. These findings are contrary to those of [13] in Palestine nurses, which revealed only 38% were able to identify snakebite or not based on bite pattern. The study further disagrees with [14] in Kolkata, which revealed that only 42% of health workers were able to identify signs of snakebite [14]. The study also found more than half (54.7%) knew applying a tourniquet as a first aid measure for snakebite. This could be through experience gained through dealing with local snakebite victims; however, this could prove inefficient in helping these victims. These findings are contrary to those of [15], where health workers knew and irrigated snakebite wounds with water. They further disagree with those of Subedi et al., [16], where good first aid management, including the removal of tight tourniquets, was found. It was also revealed that most 26 (61.9%) of health workers knew shock was a danger sign that should be monitored while managing a victim of snakebite. This could be because they know that the toxins of snake venoms cause circulatory collapse, resulting in shock, especially in venomous and severe cases; hence, they should be able to help these victims timely. It was also revealed that more than three-quarters (78.6%) had learned snakebite management from training schools. This could be due to this being among what health professionals are exposed to in their first aid training in most of the health care training curriculum. These findings agree with those of [17] in Bhutan, who found 92% of those who had learned it from curricular books during their professional training. Findings revealed that most 23 (55%) of health workers did not know how to administer snakebite antivenin; however, of those who knew how to administer these drugs, 14 (74% of those who knew administration of antivenom to be given intramuscularly) This could be because these drugs are not commonly available in most health care settings in Uganda, hence health workers are not exposed to them. This could result in poor techniques for administering these drugs due to limited exposure to them. These findings agree with those of [18], who revealed that Ugandan health workers did not know how to administer antivenin. They are also similar to those of [12] in Nigeria, who reported 56.4% of health workers without knowledge of antiserum administration, Findings disagree with those of [11], who revealed that 85% of health workers who administer antivenin snake correctly use the intravenous route. However, they could be in line with those of [19], whose incorrect route of antivenin administration includes intra-dermal and intramuscular routes, which are associated with delayed responses.

Practices in Snakebite Management

All 42 (100%) of health workers who knew snakebites had ever managed them in their practice. This could indicate that these cases are common to these health workers, especially those living near oil mining areas and Lake Albert, and hence they are likely to know how to manage snakebites. These findings differ from those of [7], which revealed that in 29 facilities in Uganda, most health workers could not manage snakebites. Findings revealed that most 30 (71%) of health workers had never administered snakebite antivenom; however, of those that had ever administered snakebite antivenin, three-quarters (9.75%) had administered snakebites antivenin in more than 1 hour to snakebite victims. This could be due to the snakebite antiserum not being readily available in most settings; hence, health workers take a long to look for it in

more advanced settings. These findings agree with those of [20], who reported that only 19.3% of health workers had ever administered an antivenin. They further agree with those of [7], who found that anti-venom is not available in most hospitals, hence health workers' inability to manage snakebites with it. The findings are also similar to those of [8], who found that 78% of health workers in Cameroon did not administer snake antivenin. The study revealed that most 40 (95.2%) of health workers reported not using any standard guidelines while treating snakebite victims. This could be because these guidelines are scanty in most settings, and it could lead to more technical errors among those managing snakebites since there is no guided protocol. These findings are similar to those of [7] and Health Action International (HAI) [5], which revealed health facilities in Uganda without snakebite management guidelines to help health workers. It was also found out that most 29 (69%) of health workers had never referred any snakebite patient to herbalists. This could be because, being health-trained professionals, they possibly understand the implications this could have on the health of the patient, hence the reason why they do not refer patients to non-health professionals. These findings are contrary to those of [19] in Sri Lanka, who noted health workers who referred snakebite victims to traditional herbalists to use herbal medication. They also disagree with those of [21] in India, where health workers referred patients to traditionalists for practices like Blackstone use. It was also revealed that all 42 (100%) had ever managed snakebite using a symptomatic approach, where it was reported that they gave anti-inflammatory. This could be due to the knowledge gained in training and could help the patient by preventing inflammatory cascades caused by snake venom. These findings agree with those of other researchers which revealed most health workers treat patients with other symptomatic approaches like steroids and cold compresses rather than antivenin [20, 22, 23]. The study also reported that most 36 (85.7%) of the health workers had ever used non-pharmacological approaches in treating a snakebite victim. Of those who used non-pharmacological treatments for snakebites, 34 (94.4%) restricted movements as a non-pharmacological approach to snakebites. This could be from their understanding of the effects of movements and blood circulation; hence, doing this could help victims' chances of fast venom spreading be limited, allowing time to treat the patient with anti-venom if available. These findings are similar to those of [17], who also observed the use of non-pharmacological approaches for snakebite management. However, contrary to other studies, irrational approaches like the use of black stone [21], the use of herbal applications [21] and [24] were not found among these health workers.

Attitude Towards Snake Bite Management

The study revealed that 37 (88.1%) of health workers knew that snake bites were a health concern; this could be through their medical training at school or exposure to these cases as they were managing them; however, 5 (11.9%) don't know that snake bites are a health concern; most likely it is the knowledge gap or they were not taught about snake bites, and this can contribute to complications or death in case a snake bite victim finds such a health worker alone at the department. The study also revealed that 34 (80.95%) of health workers treat every case of snake bites, 35 (83.3%) of health workers consider snake bites an emergency, and 40 (95%) of health workers initiate treatment of snake bites immediately after receiving patients. These findings correspond to WHO Snake Bite Management 2022, which states that early access to medical care after a snake bite in a health facility that has personnel trained and capable of diagnosing snake bites is essential. Health workers in health facilities should treat all snake bite victims as emergencies and initiate treatment without delay, as the clinical outcome improvement of a snake bite victim is much more than access to safe anti-venom. However, few of the health workers don't understand this, and this contributes to the complications some patients get, like osteomyelitis and amputations of the leg, which would have been prevented with early initiation of treatment and giving the required medication. The study revealed that 10 (23%) of health workers believe that traditional herbalists can treat snake bites, and 8 (19.0%) of health workers have ever referred snake bite victims to traditional healers or herbalists. The findings correspond to [22], which revealed that in India, it is estimated that there are more than 200,000 venomous snakes. Among these, 35,000–50,000 are fatal. The estimates are arbitrary, as the majority of deaths are unprotected. Most of the snake bites occur in rural areas, and victims are taken to traditional healers where herbs are used, and the outcome of treatment is always not good. This practice is not good, as most snake bite victims treated with herbs end up with complications. However, the majority of health workers don't have that mentality.

CONCLUSION

The knowledge on snakebites management as well as snakebites management practices were all fair. Although health workers knew how to identify snakebite through the signs of fangs as well as danger signs for snakebite patients, they lacked knowledge on the administration of snakebite antiserum as well as appropriate first aid management; instead, they knew tourniquets, which could not be very effective. Health workers also irrigated the site of the snakebite, administered anti-inflammatory drugs, and encouraged the victim not to move. However, most had not administered antivenin, and those that had administered snakebite antivenin had done it when it was too late, >1 hour. The attitude of health workers towards snake bite management was generally fair since the majority of them knew that snake bites are a health concern,

and most health workers treat every case and initiate appropriate treatment as early as possible. In addition, most health workers don't think traditional herbalists can treat snake bites with herbs and have never referred any snake bite victims to traditional herbalists.

Recommendation

It is recommended that health workers at Hoima Regional Referral Hospital ensure that they avoid ineffective first aid interventions like the application of tourniquets to snakebite victims as well as administering snakebite antivenin timely to increase the chances of survival for these victims. The management of Hoima Regional Referral Hospital to ensure that they train their health workers on snakebite management to improve their knowledge, attitude, and skills in managing snakebite victims. Also, the government of Uganda to ensure training of health workers, especially those from areas neighboring forests, about snakebite management to improve their skills. The government can also support these facilities with necessary supplies like antivenin drugs to ensure timely interventions in case victims are bitten by these snakes and come to health workers for help.

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