



## Knowledge, attitude, and practices of traditional healers towards Ebola Virus Disease in affected communities, Uganda, September 2022

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### Summary

**Background:** Traditional healers (TH) often serve as initial healthcare providers in Uganda. During September to November 2022, 164 Sudan virus disease cases were registered in Uganda. We assessed knowledge, attitudes, and practices (KAP) of TH regarding Ebola Virus Disease (EBOD) among affected communities in Mubende and Kassanda Districts.

**Methods:** We surveyed TH in Mubende and Kassanda Districts during April–May 2023. We randomly sampled 62 TH registered with an official association and used snowballing to identify 103 additional unregistered TH. We assessed socio demographics; knowledge of EBOD symptoms and transmission; attitudes towards using recommended IPC measures and referral of suspected EBOD patients; and IPC practices during management of suspected EBOD patients. We scored participants' responses as "1" (correct) or "0" (incorrect); adequate knowledge was  $\geq 8/16$ , positive attitude was  $\geq 4/8$ , and good practices was  $\geq 11/21$ . Logistic regression was used to identify factors associated with KAP.

**Results:** Among 165 respondents, 57% were male; mean age was 53 years. In total, 62% had adequate knowledge, 40% had a positive attitude, and 4% had good practices. Having formal education (aOR=7.6, 95%CI: 3.6–11.8) and being registered with a TH association (aOR=3.4, 95%CI: 1.5–9.5) were associated with adequate knowledge. Being aged <40 years (aOR=3.8, 95%CI: 1.2–16.3) and female (aOR=4.3, 95%CI: 1.3–12.7) were associated with good practices. Having formal education (aOR=3.0, 95%CI: 2.7–8.8) and being aged <40 years (aOR=4.5, 95%CI: 1.3–15.6) were associated with a positive attitude.

**Conclusion:** Practices of TH interviewed in Kassanda and Mubende put them at risk for EBOD during an outbreak. Younger, female THes were more likely to have good practices and those with formal education were more likely to have good knowledge and a positive attitude. Structured training programs by Ministry of Health to address specific knowledge and practice gaps among TH could facilitate EBOD control.



## Introduction

Despite their lack of official affiliation with certified medical services, traditional healers are often the first and last place where people in many epidemic-prone countries, including Uganda, seek care [1, 2]. During Ebola virus disease (EVD) outbreaks, seeking care from traditional healers is highly risky for both the patient and the healer; however, it has been observed in previous Ebola virus outbreaks and was widely reported during the 2022 Uganda Sudan ebolavirus outbreak [3]. Patients who consult traditional healers may not only delay their own proper medical management [4], but also put healers at risk as the healers lack proper protective equipment. In previous outbreaks, traditional healers have both frequently contracted the disease themselves as well as passing it to other patients [5].

However, rather than demonizing traditional healers as agents of propagation of communicable diseases and ignoring their role in the health seeking process, there may be value in harnessing their popularity and turning them into potential collaborators and providers of health education, early detection, and notification of health authorities in the context of epidemic outbreaks [6] [7]. In Uganda, the critical role of traditional healers has been incorporated in surveillance for diseases like HIV and Kaposi's sarcoma [8]. Despite the common assumptions regarding the engagement of traditional healers in patient care for EVD in Uganda, there are limited data on their knowledge, attitudes, and practices (KAP) around EVD.

To improve the prevention of Ebola, patient management and mitigation of further risk of transmission, there is need to understand the role of traditional healers, their knowledge, attitudes and beliefs about the disease, their practices regarding patient care, and their relationships with the formal health care system. This would provide critical information about their practices and influencing factors, identify the communication and referral processes for traditional healers regarding Ebola virus disease, identify their needs as part of the lay health care system, and how to involve them better in the prevention and control of Ebola virus disease. The goal of this study was therefore, to describe Knowledge, attitude and practices of traditional healers in relation to Ebola Virus Disease in an epidemic-prone country. We described the knowledge, attitude and practices among traditional healers on Ebola Virus Disease and associated factors in affected communities in Uganda, September 2022

## Methods

We conducted a cross-sectional study in April 2023 employing quantitative methods of data collection. We sampled traditional healers from 2 districts (Mubende and Kassanda). The two districts were the most affected by the latest SVD outbreak in September 2022 [9]. We interviewed traditional healers aged  $\geq 18$  years that were residing in Mubende and Kassanda six months before the SVD outbreak.

We estimated the sample size for the study using the Kish leslie formula[10] for cross sectional studies. We estimated that 49% of respondents would answer 'Yes' [11] to the



question “do you believe that Ebola exists in Uganda?” and calculated a sample size of 150 participants from the 2 districts. To cover for non-response, we added 10% of the calculated sample and got a total sample size of 165 traditional healers. We used the probability proportionate to size method to estimate the total number of traditional healers to be contributed by each district. Out of the 400 traditional healers Mubende District had, we sampled a proportion of 21% and got 85 participants while Kassanda with a population of 350 traditional healers, a proportion of 32% was got yielding 80 participants.

We collected data regarding overall KAP of traditional healers towards EBOD using an adapted standardized questionnaire developed in Liberia by World Health Organization (WHO), Johns Hopkins Center for Communication Programs (CCP), and US Centers for Disease Control and Prevention (CDC) during the 2015 West Africa EVD outbreak [12]. We designed the questionnaire in Kobo collect software version 2022.3.6., and imported it to STATA version 14 software for analysis. Variables considered for knowledge included: causes of EBOD, source of information, symptoms, risk awareness, infection prevention and control (IPC), and treatment / management. Variables considered for practices included: IPC practices, symptoms of Ebola patients, data and records, and referral processes. For attitudes, we considered Ebola treatment, IPC, and treatment of other health conditions. Each question was scored “1” for a correct response and “0” for an incorrect response, adequate knowledge score was  $\geq 8$ , positive attitude was  $\geq 4$ , and good practices score was  $\geq 11$ . These scores were later summed up in each of the categories and percentages were calculated.

To get a general description of the characteristic of the traditional healers, we carried out descriptive analysis using means, standard deviation, and percentages. Categorical variables (sex, religion, marital status, occupation, education level, traditional healer type, registration status) were summarized into frequencies and proportions and displayed using bar graphs. To identify the factors associated with knowledge, attitudes, and practices among traditional healers, we summarized the outcome of each component of KAP in a binary scale that is to say knowledge as knowledgeable / not knowledgeable, attitudes as positive / negative, and practices as adequate / inadequate. We used logistic regression analysis to determine the association between the dependent variables (that is knowledge, attitude, and practices) and the independent variables.

We conducted this KAP survey in response to a public health emergency and as such was determined to be non-research. The MoH authorized this survey and the office of the Center for Global Health, US Center for Diseases Control and Prevention determined that this activity was not human subject research and with its primary intent being for public health practice or disease control. This activity was reviewed by CDC



and was conducted consistent with applicable federal law and CDC policy. §§See e.g., 45 C.F.R. part 46, 21 C.F.R. part 56; 42 U.S.C. §241(d); 5 U.S.C. §552a; 44 U.S.C. §3501 et seq.

We obtained permission to conduct the survey from the district health authorities of Mubende and Kassanda. Permission was also obtained from the office of the Resident District Commissioner. We obtained written informed consent from all the respondents. Participants were assured that their participation was voluntary and that there would be no negative consequences for declining or withdrawing from the study (none declined or withdrew). Data collected did not contain any individual personal identifiers and information was stored in password-protected computers, which were inaccessible by anyone outside the investigation team.

## Results

### **Socio-demographic characteristics of traditional healers during a study to assess the knowledge, attitudes and practices regarding Ebola Virus disease, Uganda, May – April 2023**

A total of 180 traditional herbalists were identified in the Kassanda and Mubende districts between 1<sup>st</sup> April to 31<sup>st</sup> May 2023. Of these, 15 were not staying in the study area six months before the SVD outbreak and hence not eligible for the study. A total of 165 traditional healers whether registered (37.6) or not with an association consented to participate in the study and these were analyzed for knowledge, attitude and practices regarding Ebola Virus Disease. Men represented (57%) traditional healers from the two districts where the study was carried out. The average age of traditional healers was 53 (SD = 15.7) ranging from 27 -100 years and 70% of them were of Christians; 74% of the traditional healers were married or living with a spouse. Most traditional healers had a primary education level in (53.1%) and had as primary activity the practice of farming (75%) (Table 1).



**Table 1: Socio-demographic characteristics of traditional healers during a study to assess the knowledge, attitudes and practices regarding Ebola Virus disease, Uganda, May – April 2023**

Variable	Frequency	Percentage
<b>Age (years)</b>		
20 -30	9	5.4
31 – 40	34	20.6
41 – 50	39	23.6
≥51	83	50.3
<b>Sex</b>		
Male	94	57.0
Female	71	43.0
<b>Religion</b>		
Christian	115	70.1
Moslem	35	21.3
Traditional believer	9	4.9
Other	6	3.6
<b>Marital status</b>		
Divorced / Separated	13	7.9
Married / Living together	122	73.8
Single / Never been married	10	6.1
Widow / widower	20	12.2
<b>Education Level</b>		
Never gone to school	35	21.3
Primary	88	53.1
Secondary	39	23.8
Tertiary	3	1.8
<b>Where TH skill was acquired</b>		
Called by the spirit	67	40.6
Learnt from a senior	74	44.8



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Trained in an institute	18	10.9
Other	6	3.7
<b>Primary Occupation</b>		
Farming	124	75
Traditional healer	22	13.4
Business	9	5.5
Casual Laborer	10	4.3
<b>TH -type</b>		
Bone-setter	22	13.4
Herbalist	54	32.9
Traditional birth attendant	30	18.3
Spiritualist	59	35.7
<b>Registered</b>		
No	88	53.3
Yes	62	37.6
I don't know	15	9.1
<b>Reason for no registration</b>		
Ignorant about registration	29	46.8
Lack of funds	21	33.9
Not interested	6	9.7
New	6	9.7
<b>Mentor other THs</b>		
No	100	60.6
Yes	65	39.4

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### **Knowledge of traditional healers regarding Ebola Virus disease, Uganda, May – April 2023**

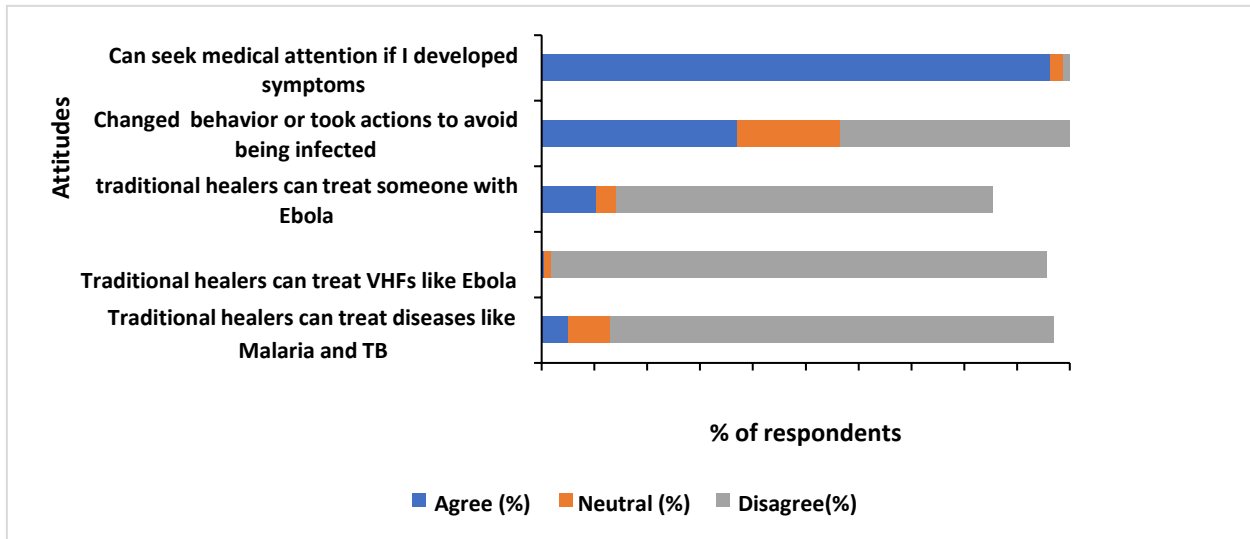
In response to theme 1 (knowledge of the cause of Ebola), 98% (162) of traditional healers were knowledgeable, while 83% (137) correctly answered theme 2 (symptoms of Ebola). In response to theme 3 (knowledge of sources of health information as needed), 90% (n=148) of traditional healers were knowledgeable. Theme 4 (Knowledge of the recent Ebola outbreak in the country) revealed that 80% (132) were knowledgeable. In response to theme 5 "Perceived to be at risk of getting Ebola during the outbreak), only 30% (n=50) answered correctly, and theme 6 (Ebola Virus disease infection methods), 71% (117) traditional healers were knowledgeable.

### **Practices of traditional healers regarding Ebola Virus disease, Uganda, May – April 2023**

We found 96% (158) had inadequate practice regarding proper infection control and prevention practices including handwashing, use of personal protective gears and use of disinfectants, 76% (110) were not able to recognize symptoms of concern with a patient that could suggest Ebola. A total of 25% (41) of the traditional healers were keeping treatment records for their patients. We found 70% (115) of the traditional healers were referring patients to health facilities.

### **Attitudes of traditional healers regarding Ebola Virus Disease, Uganda, May – April 2023**

The attitudinal responses of traditional healers about EVD such as in response to a question regarding seeking medical attention if they developed EVD symptoms, 96% (158) of the traditional healers agreed to this whereas 44% (73) disagreed that they adapted new practices to avoid being infected with EVD. In response to another question "traditional healers can treat VHFs like Ebola, 71% (117) of traditional healers disagreed, similarly 84% (137) of the traditional healers disagreed with being able to treat other infectious diseases like TB (Figure 1)



**Figure 1: Attitude of traditional healers regarding Ebola Virus Disease, Uganda, May – April 2023**

### **Factors associated with knowledge, attitude and practices of traditional healers regarding Ebola Virus Disease, Uganda, May – April 2023**

#### ***Factors associated with knowledge of traditional healers regarding Ebola Virus Disease***

In the unadjusted analysis, sex, registration status with an association and education level were associated with being knowledgeable of EVD. Following adjusting, two factors were identified as significantly associated to being knowledgeable of EVD. Having primary level of education increased the odds of being knowledgeable by 2.5 times (aOR=2.50, 95% CI: 2.0 – 8.6 among the traditional healers compared to those who had never gone to school. Similarly having secondary level of education had 8 times the odds (aOR=7.61, 95% CI: 3.6 – 11.8 of being knowledgeable compared to those who had never gone to school. Indicating that the higher the education level the higher the odds of being knowledgeable of EVD. Traditional healers that were registered with an association had 3 times (aOR=3.0, 95%CI: 1.5-9.5) higher odds of being knowledgeable on EVD compared to those who were not registered with any associations (Table 2).





**Table 2: Factors associated with Knowledge of traditional healers regarding Ebola Virus disease, Uganda, May – April 2023**

Variable	OR	95% CI	aOR	95% CI
Age	1.23	0.2 – 5.2	1.15	0.5 – 3.6
<b>Sex</b>				
Female	Ref		Ref	
Male	0.29	0.2 – 0.8	0.16	0.1 – 3.5
<b>Marital status</b>				
Single	Ref		Ref	
Married	1.90	0.02 - 4.7	2.4	0.6 – 3.5
<b>Religion</b>				
Christian	Ref		Ref	
Moslem	0.99	0.48 - 2.5	0.26	0.23 - 2.1
Traditional believer	0.78	0.12 - 3.7	0.47	0.20 - 1.5
Other	1.01	0.93 - 2.1	1.23	0.45 - 5.0
<b>Education level</b>				
Never gone to school	Ref		Ref	
Primary	1.36	1.2 – 6.2	2.50	2.0 – 8.6
Secondary and higher	10.5	4.8 – 15.6	7.61	3.6 – 11.8
<b>Registered with an association</b>				
No	Ref		Ref	
Yes	1.28	1.1 – 4.6	3.4	1.5-9.5

**Factors associated with attitudes of traditional healers regarding Ebola Virus Disease**

In the unadjusted analysis, age, sex, and education level were associated with being a positive attitude. Following adjusting, two factors were identified as significantly associated to having positive attitude towards management of EVD. Having primary level of education had 4 times the odds (aOR=3.60, 95% CI: 1.3 – 9.6), of having a positive attitude among the traditional healers compared to those who had never gone to school. Similarly having secondary level of education had 3 times higher odds (aOR=3, 95% CI: 2.7 – 8.8), of a positive attitude compared to those who had never gone to school. Being 20 – 30 years of age had 4.5 times the odds (aOR=4.5, 95% CI: 1.3 – 15.6) of having a positive attitude on EVD compared to those who are 40 years and older (Table 3).



**Table 3: Factors associated with attitudes of traditional healers regarding Ebola Virus disease, Uganda, May – April 2023**

Variable	OR	95%CI	aOR	95%CI
<b>Age</b>				
20-30	3.23	2.7 – 6.0	4.5	1.3 - 15.6
31-40	1.15	0.8 - 8.9	1.8	0.4 – 6.7
>40	Ref		Ref	
<b>Sex</b>				
Male	Ref		Ref	
Female	2.56	1.1 – 5.5	1.23	0.2 – 4.2
<b>Marital status</b>				
Single	Ref		Ref	
Married	1.90	0.8 - 4.4	6.4	0.3 - 9.2
<b>Religion</b>				
Christian	Ref		Ref	
Moslem	1.01	0.5 - 1.1	0.26	0.2 - 2.1
Traditional believer	1.34	0.6 - 1.4	0.47	0.2 -1.5
Other	1.39	0.6 – 1.4	1.23	0.4 - 5.0
<b>Education level</b>				
Never gone to school	Ref		Ref	
Primary	2.54	1.4 - 3.1	3.60	1.3-9.7
Secondary and higher	1.45	0.8 – 2.7	3.00	2.7-8.8
<b>Registered with an association</b>				
No	Ref		Ref	
Yes	2.9	0.1 - 1	1.3	0.2 – 4.3

**Factors associated with good practices of traditional healers regarding Ebola virus disease**

In the unadjusted analysis, age, sex, marital status, being registered with an association and education level were associated with adequate practices. Following adjusting, two factors were identified as significantly associated to having good practices of EVD management. Being 20 – 30 years of age was twice the odds (aOR=2.4, 95% CI:2.0 – 8.1) of having good practices among traditional healers compared to those who were >40 years of age. Similarly, traditional healers aged 31 – 40 years had 4 times odds (aOR=3.8, 95%CI:1.2 – 16.3) of having good practices among traditional healers compared to those who were >40 years of age. Being a female traditional healer was 4 times (aOR=4.3, 95% CI:1.3 – 12.7) the odds of having good practices compared to being a male traditional healer (Table 4).



**Table 4: Factors associated with good practices of traditional healers regarding Ebola Virus disease, Uganda, May – April 2023**

Variable	OR	95%CI	aOR	95%CI
<b>Age</b>				
20-30	2.33	0.7 - 5.4	2.43	2.0-8.1
31-40	1.32	0.4 - 2.9	3.81	1.2-16.3
>40	1		1	
<b>Sex</b>				
Male	1		1	
Female	3.2	2.4 – 8.5	4.3	1.3-12.7
<b>Marital status</b>				
Single	1		1	
Married	0.91	0.1 – 2.3	0.64	0.4 – 3.1
<b>Religion</b>				
Christian	1		1	
Moslem	0.99	0.7 - 5.3	2.34	0.2 – 4.2
Traditional believer	0.78	0.4 - 2.9	0.75	0.5 – 5.1
Other	1.09	0.3 - 2.3	1.01	0.8 – 2.3
<b>Education level</b>				
Never gone to school	1		1	
Primary	2.31	1.2 – 4.3	1.38	0.6 – 5.2
Secondary and higher	3.13	2.7 – 8.3	1.34	0.4 – 3.2
<b>Registered with an association</b>				
No	1		1	
Yes	1.28	1.1 – 4.3	3.4	0.3 – 4.6

## Discussion

Several studies suggest that there is still high utilization of traditional healers' services in most communities [13] [14, 15]. In this study, we described the knowledge, attitudes and practices of traditional healers on Ebola Virus Disease in affected communities in Uganda and the factors associated. It aimed to provide critical information about their practices and influencing factors regarding KAP on Ebola virus disease, and how to involve them better in the prevention and control of Ebola virus disease.

We found that the traditional healers were knowledgeable on Ebola virus disease, the signs and symptoms of EVD and how the infection is spread from person to person, the sources of health information. This might be accredited to the intensive awareness campaigns and risk communication both during and after the outbreaks [13]. These findings are similar to those reported from other settings like west Africa [12] that indicated that traditional healers usually had knowledge about EVD in previous EVD outbreaks [16]. In addition, the communities were reported to have a high level of



knowledge regarding EVD [17]. However, a study in north Africa reported poor knowledge regarding Ebola among the population that included traditional healers in 2017 [18].

The findings reveal a noteworthy level of awareness and understanding among traditional healers regarding various aspects of EVD. In terms of knowledge, an impressive 98% (162) of traditional healers demonstrated knowledge about the cause of Ebola and a good understanding of the clinical presentation of the disease where 83% (137) of the traditional healers were able to correctly identify the symptoms of Ebola. This suggests a high level of awareness among traditional healers regarding the etiology and the clinical presentation of the disease, however traditional healers did not consider themselves to be at high risk of contracting the disease. This might be due to the beliefs in the communities that Ebola is caused by witchcraft or curses which are not infectious [19] and the trust the traditional healers have traditional medicine to cure all ailments [20]. These findings align with similar studies conducted in Sierra Leone. For instance, Kamara et al. (2015) conducted a study in Sierra Leone that reported a high level of knowledge among traditional healers regarding the cause, symptoms, and transmission of Ebola [16]. However, it's notable that a discrepancy emerges when considering the perception of personal risk. In our study, 30% of the traditional healers correctly identified their own vulnerability to contracting Ebola during an outbreak. Misconceptions were also identified, such as the mistaken belief in airborne transmission. In contrast, Conteh et al. (2016) conducted a study in Sierra Leone that revealed inadequate knowledge and practices regarding EVD among traditional healers. And another by Aminu and Jegede (2017) found that traditional healers in Nigeria had a strong grasp of EVD symptoms but lacked comprehensive understanding of its cause, transmission, and prevention. Notably, traditional healers in our study reported using traditional remedies for EVD treatment, potentially putting themselves at risk.

Our study reported that approximately 90% (148) of the traditional healers were knowledgeable about the sources of health information available to them and this suggests that they are aware of where to access reliable information about health-related matters, these findings echo those of a study conducted in Liberia by Soka et al. (2016), which identified the role of traditional healers in educating communities about EVD and providing care to patients. Moreover, approximately 80% (132) of the traditional healers demonstrated awareness of the recent EVD outbreak in Uganda, indicating a reasonable level of consciousness. This parallels the observations of Aminu and Jegede (2017), who noted a similar awareness of recent EVD outbreaks among traditional healers in Nigeria.

Education emerged as a significant factor influencing traditional healers' knowledge of



EVD, mirroring findings from Conteh et al. (2016) in Sierra Leone. That is, 60% of traditional healers with secondary education knew that EVD is a deadly disease, compared to only 30% of traditional healers with no education. The study showed that traditional healers with higher levels of education exhibited better understanding and practices concerning EVD. Several studies emphasize the potential role of traditional medicine in EVD prevention and control. Gbary et al. (2016) emphasized the complementary nature of traditional medicine alongside modern approaches in combating EVD. Camara et al. (2016) stressed the value of training and educating traditional healers about EVD, while Okello et al. (2015) emphasized their role in community education and patient care.

In our study, we found traditional healers who were affiliated with a registered association were knowledgeable about EVD compared to their non-affiliated counterparts. These findings closely align with outcomes from a qualitative investigation conducted by Sesay et al. (2022), which indicated that registered traditional healers exhibited higher levels of familiarity with EVD symptoms, transmission modes, and the importance of early medical intervention. Moreover, a separate study conducted in Nigeria by Gbagba et al. (2022) corroborated our findings, demonstrating that traditional healers affiliated with associations displayed enhanced EVD knowledge, greater adoption of preventive measures, and an increased tendency to refer patients to formal healthcare facilities for treatment. The observed association between traditional healers' affiliation with associations and their heightened EVD awareness is likely attributable to the valuable opportunities these associations provide. These include access to expert insights, knowledge-sharing among peers, and availability of specialized training and resources.

Our study highlights that traditional healers who have received formal education are more likely to exhibit a positive attitude towards EVD management. This inclination is likely rooted in education's capacity to provide traditional healers with the knowledge and skills necessary to grasp the intricacies of EVD and devise effective treatment approaches. Furthermore, education enables them to critically evaluate information from various sources, including traditional beliefs and practices, contributing to a more optimistic perspective on EVD. Our study further described attitudinal responses of traditional healers, 96% (158) of traditional healers expressed willingness to seek medical attention if they exhibited EVD symptoms. Conversely, 44% (73) disagreed with the notion of adopting new practices to prevent EVD infection. These responses are comparable to the mixed attitudes observed among traditional healers in Liberia, as highlighted by Soka et al. (2016) where 80% of the traditional healers agreed that they would seek medical attention if they developed EVD symptoms, but only 32% agreed that they had adapted new practices to avoid being infected with EVD. Our study



revealed a notable finding regarding age groups. Specifically, individuals aged less than 40 years had a positive attitude towards EVD when compared to their older counterparts among traditional healers. This outcome mirrors a parallel investigation conducted in Nigeria by Aina et al. (2022), which similarly identified that younger traditional healers displayed a greater propensity for a positive attitude towards EVD, along with an increased likelihood of adopting preventive measures and referring patients to healthcare facilities for treatment. This might be due to the rigidity of the older traditional healers based on their years of experience in traditional medicine.

Education level significantly impacts EVD management practices among traditional healers. Those with primary education had 3.6 times higher odds, and those with secondary education had 3 times higher odds of practicing good EVD management compared to uneducated counterparts, as per the Logistic Regression model. A study by Sesay et al. in Sierra. (2022) found similar results that traditional healers who had good practices of EVD management were more likely to have received education. They were also more likely to be willing to collaborate with health workers in the prevention and control of EVD. Age is a pivotal determinant of proficient EVD management practices among traditional healers, particularly within the 20 – 30-year bracket. This suggests that female traditional healers within this age range are four times more likely to exhibit adept EVD management practices compared to their male counterparts. Beyond age, gender emerges as a noteworthy influencer in shaping positive EVD management approaches among traditional healers. Our study underlines that female healers tend to manifest superior practices than males. This discrepancy is underpinned by multifaceted dynamics: female traditional healers actively engage with EVD-related information through community involvement and interactions with healthcare professionals. and their proclivity for enhanced communication with health workers, driven by heightened trust, fosters collaborative efforts in EVD prevention and control.

### **Study limitations**

We acknowledge some limitations in our study. First, the exclusive reliance on self-reported measures for the KAP may have had a risk of response bias including recall and social desirability bias. Secondly, the cross-sectional nature of the study made it difficult to draw the association between the study variables in terms of cause and effect. Despite these limitations, our study conducted a census of all traditional healers who were in the 2 affected districts during the EVD outbreak and this gave the study high power. Additionally, findings from this study provides evidence to MoH about the key drivers of KAP amongst traditional healers who treat people in the communities. These can be used to design policies that support the establishment of avenues for collaborations to control future outbreaks.





### **Conclusion**

The study reveals a commendable level of knowledge about Ebola Virus Disease (EVD), while also highlighting persistent misconceptions, emphasizing the need for targeted education. Patient care practices exhibited a mix of willingness to seek medical attention but reluctance to adopt preventive measures, warranting behavior change strategies. Attitudes towards EVD management varied, necessitating comprehensive persuasion efforts. Factors associated with traditional healers' knowledge, attitudes, and practices included education, association affiliation, age, and gender, emphasizing their roles in shaping EVD awareness and engagement. Ultimately, the study emphasizes the importance of tailored interventions and collaborative approaches to optimize traditional healers' contributions to EVD prevention and control within the broader public health context.

We recommend develop and implementation of structured training programs that focus on EVD prevention, transmission modes, symptoms, and evidence-based treatment approaches. These programs should be tailored to address the specific knowledge gaps and misconceptions identified among traditional healers. Also establishment of platforms for regular interaction and collaboration between traditional healers and formal healthcare providers, such as health workers and medical professionals can facilitate knowledge exchange, mutual understanding, and joint efforts in EVD prevention and control. In addition, emphasizing the importance of evidence-based traditional remedies that have been scientifically proven to be effective against EVD and providing traditional healers with access to credible sources of information and research on traditional remedies that have demonstrated efficacy may breed trust and recognition of traditional practitioners among different stakeholders.

### **Conflict of interest**

The authors declare that there is no conflict of interest

### **Author contributions**

Brenda N. Simbwa and Godfrey E. Siu: participated in the conception, design, analysis, interpretation of the study and wrote the draft bulletin; Brenda N. Simbwa, Hellen N. Naiga, Richard Migisha, Saudah K. Namubiru, Thomas Kiggundu, Jane F. Zalwango, Mackline V. Ninsiima, Robert Zavuga, Peter Chris Kawungezi, Mercy W. Wanyana, Patrick King, Brian Agaba, Zainah Kabami reviewed the report, reviewed the drafts of the manuscript for intellectual content and made multiple edits to the draft bulletin; Brenda Simbwa, Marie G. Zalwango, Rebecca Akunzirwe, Elizabeth B. Katana, Josephine Namayanja, Daniel Kadobera, Lilian Bulage, Doreen N. Gonahasa and Alex R. Ario reviewed the bulletin to ensure intellectual content and scientific integrity.

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