

**SCHOOL OF PUBLIC HEALTH**

**COLLEGE OF HEALTH SCIENCES**

**UNIVERSITY OF GHANA**

**KNOWLEDGE, ATTITUDES AND PERCEPTIONS OF COMMUNITY  
MEMBERS TOWARD THE EBOLA VIRUS DISEASE (EVD) IN PAGA,  
KASENA-NANKANA WEST DISTRICT**

**BY**

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## DECLARATION

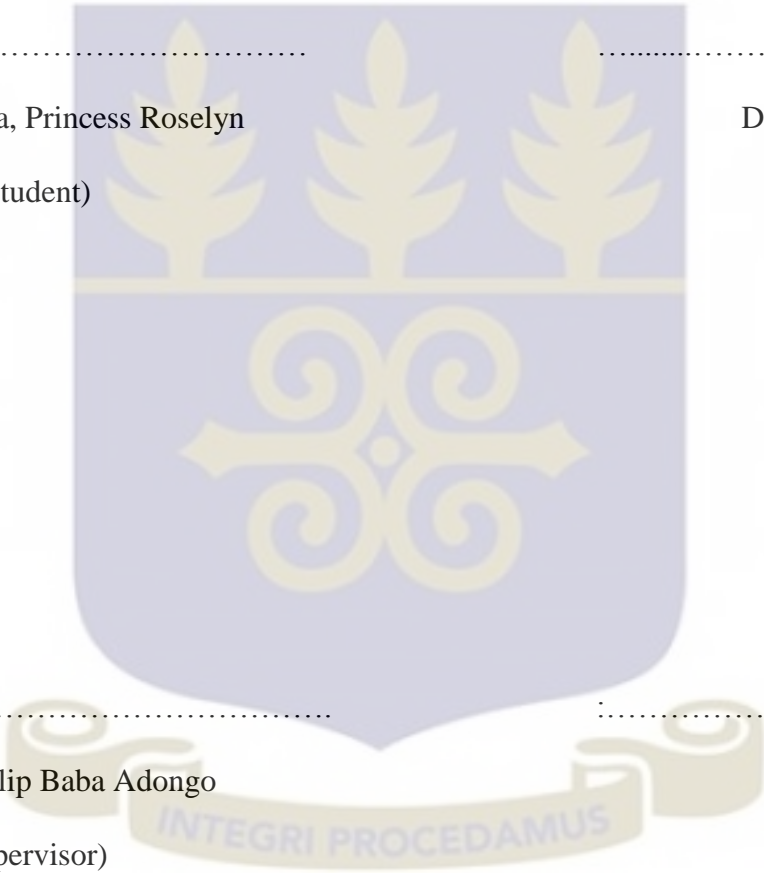
This dissertation is the result of my independent investigation. I have made acknowledgement where indebted to others. To the best of my knowledge, no previous submission of such has been made here or elsewhere for the award of a Master's degree.

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.....

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## DEDICATION

I dedicate this research work to my dad, Alhassan Osman. May his gentle soul rest in perfect peace.



## ACKNOWLEDGEMENT

For the time, patience, dedication, constructive criticism, suggestions and excellent guidance that shaped this work into reality, I owe my deepest gratitude to Prof. Phillip Baba Adongo, my research supervisor for his. Thanks to Mr. Abraham Mahama of USAID Systems for Health for his professional advice during the whole research process.

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## ABSTRACT

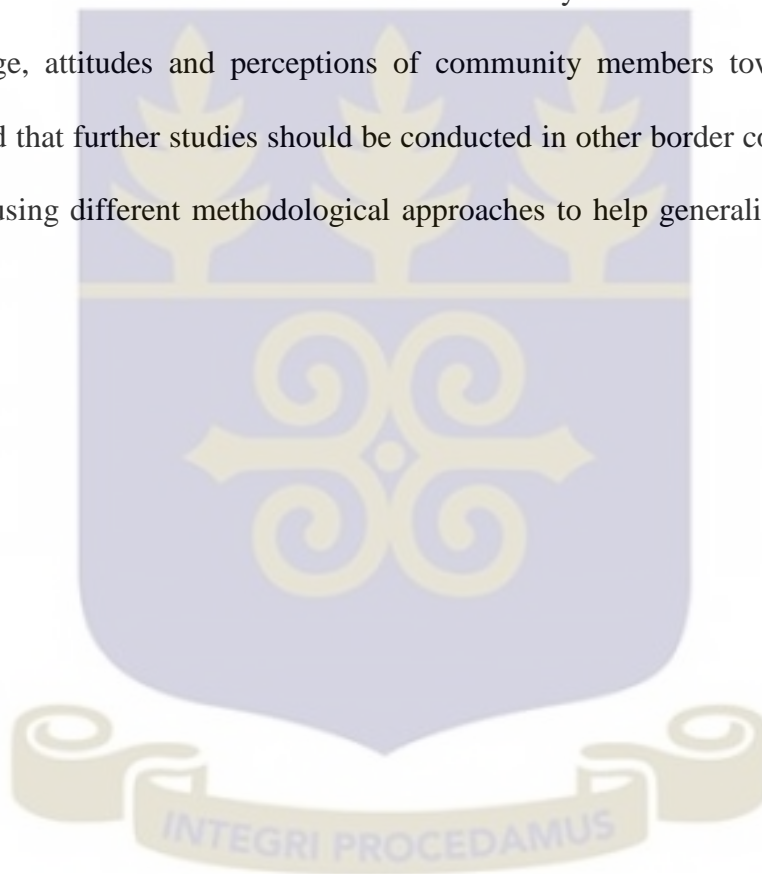
The study explored the knowledge, attitudes and perceptions of community members towards the Ebola Virus Disease (EVD) in Paga, Kasena-Nankana West District.

The study used a qualitative research design, and a phenomenological method. Data was collected using purposive, convenient and criterion sampling approaches to recruit respondents for the study. In all, thirty-six (36) respondents residing in the Paga community made up of fourteen (14) community men which includes two focus group discussions and two in-depth interviews, fourteen (14) community women which includes two focus group discussions and two in-depth interview, two (2) Port Health Officials, two (2) Custom Service Officers, two (2) Immigration Officers and two (2) Plant Quarantine Officers. A Semi-structured in-depth interview and focus group discussion guides, in addition to the use of an audio recorder and a field note book were used to collect data for thematic analysis.

The study revealed that the respondents have considerable knowledge on EVD. They recognize Ebola as a disease which is caused by bush animals such as bats, chimpanzees, antelopes and as an air borne disease which is transmitted and contracted through body contact, sweat, body fluids and others. They perceived Ebola as a deadly disease which can only be healed by health professionals, and not traditional health practitioners. At the community level, clean up exercises according to respondents are organized periodically and members are educated on the preventive methods of EDV. At the border, officers screen travellers to prevent them from entering the country with the virus, and officers are cautioned to ensure that they do not infect themselves with the virus in their quest of screening travellers. Health officials are also stationed at the border to assist the officers in the screening exercise. Cultural practices according to respondent that are most likely to

contribute to EVD were, funerals, festivals, Female Genital Mutilation, burial practices, naming ceremonies and church services which bring people together.

It was recommended that, the Government and neighbouring countries strengthen border security, in addition to stepping up advocacy to minimise or abolish the socio-cultural practices such as the female genital mutilation and widowhood rites which can increase infection or spread of EVD. Also, health promotion and education should be enhanced to help prevent the outbreak of EVD in the country. To further add literature on the knowledge, attitudes and perceptions of community members towards the EVD, it is suggested that further studies should be conducted in other border communities across the country using different methodological approaches to help generalize the findings of the study.



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Conceptual framework of community members toward the EVD

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## LIST OF ABBREVIATIONS

CDC	Centre for Disease control and Prevention
CHPS	Community-based Health Planning and Services
CHPS	Community-based Health Planning and Services
CNN	Cable News Network
CRS	Community Relation Service
DCE	District Chief Executive
DRC	Democratic Republic of Congo
ECOWAS	Economic Community of West African States
EVD	Ebola Virus Disease
FGM	Female Genital Mutilation
KAP	Knowledge, Attitudes and Perceptions
KNWDA	Kasena Nankana West District Assemble
KNWDHD	Kasena Nankana West District Health Directorate
SCT	Social Cognitive Theory
UNICEF	United Nation International Children Emergency Fund
USA	Unite States of America
WHO	World Health Organization

## CHAPTER ONE

### 1.0 INTRODUCTION

#### 1.1 Background Information

According to Sanchez, Geisbert & Feldmann (2006), Ebola Virus Disease, formerly known as Ebola haemorrhagic fever is a severe Zoonotic disease (ECDC, 2014). There are five distinct subtypes of the Ebola virus namely, Ebola Virus (formally known as Zaïre Ebola Virus), Ebola-Sudan Virus, Ebola-Ivory Coast Virus, Ebola-Bundibugyo Virus and Ebola-Reston Virus. The EVD has mostly occurred in Sub-Saharan Africa since its discovery in 1976.

The first cases of EVD were detected in the Democratic Republic of Congo (DRC) and Sudan in 1976. It reoccurred in DRC in 1977, 1995, 2007 and 2008, and in Sudan in the year 1979 and 2004. In Gabon it occurred in 1994, 1996, 2001 and 2002; Uganda in 2000 and 2007. There was another outbreak in the Republic of Congo in 2001, 2002, 2003 and 2005 (WHO, 2014).

The most recent outbreak began in Guinea in December 2013 (Baize et al., 2014; Bausch & Schwarz, 2014) and has subsequently spread to Liberia, Sierra Leone, and Nigeria (ECDC, 2014). Compared to all previous outbreaks combined, the recent outbreak of EVD in West Africa (involving Zaire Ebola Virus), is the largest outbreak of EVD in history (CDC, 2014). It is also the first to occur in West Africa, a region outside the previously known range of the Ebola Virus. (David et al., 2014).

Fruit bats have been identified to be the likely natural reservoir of the EVD (Leroy et al., 2005), and it is believed that, wildlife, particular the great apes, contract infections with Ebola viruses from infected bats. In Africa, it is believed that wildlife such as

chimpanzees, gorillas, monkeys of the species *Hypsignathus* and *Epomops*, forest antelopes, and porcupines contract the disease from bats (WHO, 2014; Groseth, Feldmann & Strong, 2007). Other possible routes of transmission, as put forward by Feldmann & Geisbert (2011), are person-to-person direct contact with an infected person, secretions (semen and breast milk), organs (ear, mouth and nose), and blood or body fluids (urine, saliva, sweat, faeces, vomit). Direct contact with the body of an infected deceased person during funeral ceremonies plays a significant role in the transmission of the disease. Improper control measures among healthcare workers who come in close contact with infected patients can also expose healthcare workers to the disease (Carvalho, 2014).

A person infected with Ebola is not contagious until symptoms appear, usually beginning 8 to 10 days after a person has been exposed to an ill Ebola person. However, symptoms may begin anywhere from 2 to 21 days after the exposure. Typical signs and symptoms of Ebola infection are fever (temperature greater than 37.5°C), severe headache, muscle and joint pain, vomiting, diarrhoea, stomach pain, unexplained bleeding or bruising (Martin & Reichelderfer 1994).

Currently, there are no specific vaccines or medicines (such as antiviral drugs) that have been proven to work against the Ebola virus. Sick patients are treated by providing relief to their symptoms as they appear. Typical treatment can involve providing intravenous (IV) fluids and monitoring body electrolytes, maintaining oxygen status and blood pressure, and treating other infections as they happen. Ebola vaccine trials will start in West Africa in December 2014, a month earlier than planned, and will involve hundreds of thousands of vaccine doses which will be available by mid-2015 (CDC, 2014).

People who recover from Ebola infection develop antibodies that last for at least 10 years, possibly longer. It is not known if people who recover are immune for life or if they can become infected with a different species of Ebola. Some people who have recovered from Ebola have developed long-term complications, such as joint and vision problems (CDC, 2014).

According to CDC (2014), the following prevention measures when practiced can help protect an individual from getting infected with EVD:

Practicing personal hygiene (washing hands with soap and water/alcohol-based hand sanitizer, and avoiding direct contact with blood and body fluids).

Avoid handling items that have come in contact with an infected person's blood or body fluids (clothes, bedding, needles, and medical equipment).

Avoid attending funerals or engaging in burial rituals that involve direct contact with Ebola dead bodies.

Avoid direct contact with bats and non-human primates or blood, fluids, and avoid eating the meat of these animals.

Avoid going to facilities where Ebola patients are being treated. However, when you happen to find yourself there, after you return, monitor your health for 21 days and seek medical care immediately if you develop symptoms of Ebola.

Knowledge, attitudes, perceptions, cultural practices and the preparedness of community members toward EVD can significantly contribute to an outbreak in an unaffected country like Ghana. Therefore, conducting a study on EVD would help put

in place preventive measures based on the findings of the study to avoid an outbreak in Ghana.

### **1.1 Statement of Problem**

The 2014 outbreak is the first to occur in West Africa, a region outside the previously known range of the Ebola virus in East and Central African regions (CDC, 2014). According to CNN (2014), 5,689 deaths out of 15,935 total cases of EVD globally were reported as of 23<sup>rd</sup> November, 2014. The affected countries include Spain, USA, Guinea, Liberia, Sierra Leone, Mali, Senegal and Nigeria. Africa recorded the majority of 5,688 and 15,930 deaths and cases respectively. Considering these records, it is glaring that Africa had the highest case fatalities in the current Ebola outbreak, largely because Africa, unlike the other affected Western countries has weak healthcare systems and poor cultural practices. These make it difficult to put in place the appropriate measures to prevent the continuous spread of the disease among the populace in these affected African countries.

Though Ghana has not recorded any case of EVD, the problem of weak healthcare systems and poor cultural practices in these affected African countries is not different from that of Ghana. The problem here is, the recent outbreak is a threat to Ghana and the whole West African sub-region because the outbreak in these countries indicate that the Ebola outbreak is shifting to other unaffected countries. The fact that Ghana shares boundary with Burkina Faso to the North, which also shares boundary with Mali (a country that was affected by the Ebola outbreak), coupled with the poor cultural practices of the people (rituals to the dead and mode of greetings) and the challenges faced by its health sector (well-trained staff, funding, necessary equipment and infrastructures) all point to the fact that in the event of an outbreak, Ghana will

find it difficult to put in place appropriate measures to prevent the disease from spreading among its populace. A lot of people will therefore be infected, causing deaths and destabilizing communities in the country. As confirmed by Towner et al. (2008), in susceptible patients, the disease picture changes so rapidly that patients frequently progress from experiencing severe body pains and haemorrhage to suffering shock, respiratory arrest, leading to death.

There was therefore the need to conduct a study to find out the knowledge, attitudes and perceptions of community members towards EVD, community preparedness towards EVD, and the cultural practices that may contribute to EVD outbreak in order to put in place preventive measures based on the findings of the study. This has the potential to reduce the pervasive stigma and social rejection that define infectious diseases like Ebola. This is particularly vital, given Ghana's vulnerability to future outbreaks.

### **1.2 Justification of the study**

In epidemiology, one case of an infectious disease like EVD is considered an outbreak in an unaffected area, for example in Ghana. In view of the major challenges the health sector in Ghana currently faces in terms of funding, well trained staff and the necessary equipment and infrastructure to handle any outbreak of Ebola, it is important for preventive measures to be put in place to in order to prevent an outbreak of the disease.

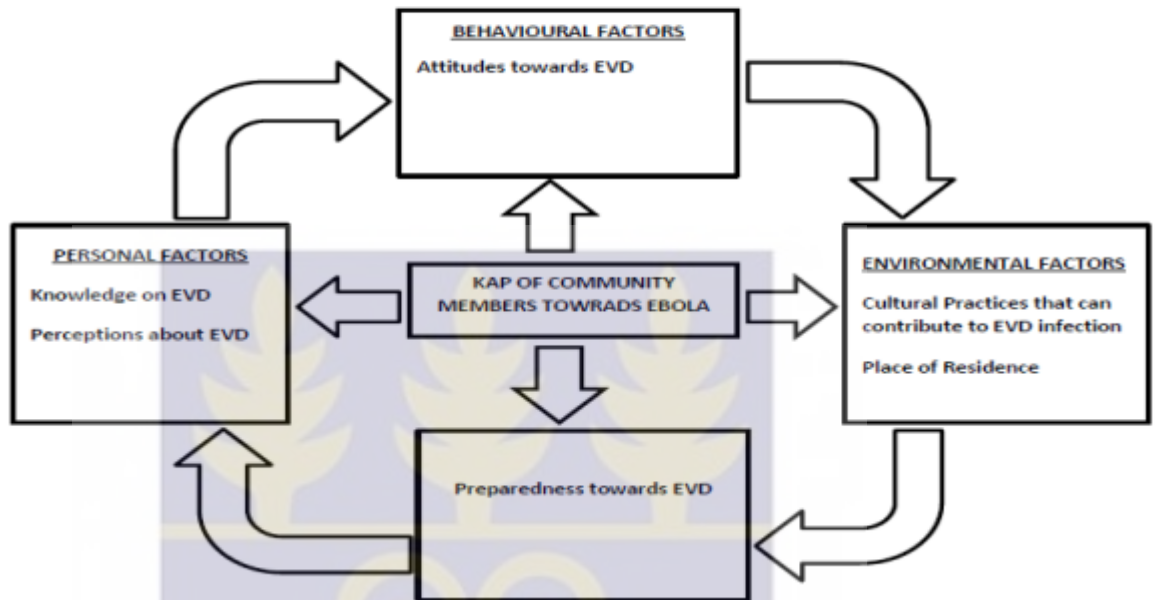
Paga is a border community in the Kasena-Nankana West district with neighbouring Burkina Faso where there is movement of humans, livestock and other commodities in and out of the community, and for that matter the country. Exploring the knowledge, attitudes and perceptions of community members towards the EVD, the

community preparedness towards the EVD and the cultural practices that may contribute to the EVD outbreak is therefore vital in helping to find out the understanding, the reactions, the views of community members about the disease, how ready the community is for an outbreak, and the cultural practices that may contribute to an outbreak. Again, enunciating such experiences will generate information that may be used to explain peoples' reactions and attitudes during and after outbreaks, and is also useful in enabling caregivers and policy makers to better prepare the public for the EVD outbreak. This will also be useful for stakeholders in developing appropriate and effective integrated strategies to prevent an outbreak of EVD in Ghana. Ni Chonghaile (2012) concurs that addressing such real life experiences reinforces community health education campaigns, which serve to reduce the widespread fear and panic that is characterized by Ebola epidemics in the outbreak countries and globally. In addition, the study will add knowledge to existing literature on the understanding, the reactions and the views of community members towards highly infectious diseases like EVD.



### 1.3 Conceptual framework for the study

**Figure 1: Conceptual Framework for KAP of Community Members towards EVD**



**Source:** Adapted from Bandura (1998)

#### 1.3.1 Explanation of conceptual framework

This framework is based on the social cognitive theory, which explains human behaviour in terms of a three-way, dynamic, reciprocal model in which personal factors, environmental influences, and behaviour continually interact. Social cognitive theory synthesizes concepts and processes from cognitive, behaviouristic, and emotional models of behaviour change. Hence, the theory can be readily applied to counselling interventions for disease prevention and management. A basic premise of social cognitive theory is that, people learn not only through their own experiences, but also by observing the actions of others and the results of those actions (Bandura, 1998).

The key paradigms of the Social Cognitive Theory that are relevant to health behaviour change interventions include observational learning, reinforcement, self-control and self-efficacy. Some elements of behaviour modification based on the Social Cognitive Theory paradigms of self-control, reinforcement, and self-efficacy include goal-setting, self-monitoring and behavioural contracting. Goal-setting and self-monitoring seem to be particularly useful components of effective interventions (Bandura, 1998).

Self-efficacy, or self-confidence in his or her ability to take action and to persist in that action despite obstacles or challenges, is especially important for influencing health behaviour change efforts. The key Social Cognitive Theory paradigm of reciprocal determinism means that a person can be both an agent for change and a responder to change. Thus, changes in the environment, the examples of role models, and reinforcements can be used to promote healthier behaviour (Bandura, 1998).

For the purpose of this study, the researcher adopted the three factors of the social cognitive theory, and the preparedness aspect of community members toward EVD in order to be able to achieve all the objectives of the study. The purpose of this framework is therefore to discover the human aspects that can influence the spread or prevention of the Ebola Virus Disease. For this study, the spread or prevention of EVD is considered to be a segment of the four characteristics, that is, behavioural factors (attitudes toward EVD), personal factors (knowledge on EVD and perceptions about EVD), environmental factors (cultural practices contributing to EVD outbreak and the place of residence of the individual), and community preparedness towards EVD as shown in the framework which are all interconnected. The interconnection is

such that the occurrence of one of any of the factors above, is influenced by one or more of the other factors in the framework.

#### **1.4 Research questions**

This study sought to answer the following research questions:

1. What knowledge, attitudes and perceptions do community members have towards Ebola?
2. How are community members prepared towards the EVD?
3. What cultural practices are most likely to contribute the EVD outbreak?

#### **1.5 General objective**

This study sought to explore the knowledge, attitudes and perceptions of community members towards EVD in the Kasena -Nankana West District.

#### **1.6 Specific objectives**

Specifically, this study sought to meet the following objectives:

1. To assess the knowledge, attitudes and perceptions of the community towards EVD.
2. To assess the community preparedness towards the EVD.
3. To identify the cultural practices that can contribute to EVD outbreak.

## CHAPTER TWO

### 2.0 LITERATURE REVIEW

#### 2.1 Introduction

This chapter presents reviewed literature on EVD generally, and examines findings made from other authors according to the objectives of the study.

The name Ebola Virus is derived from the Ebola River in Zaire (now the Democratic Republic of the Congo), the location of the 1976 outbreak (Kuhn, et al., 2010). The Zaire species of Ebola virus is the causative agent of the recent 2014 outbreak in West Africa, with an estimated 70% case fatality, as compared to the 80% to 90% case fatality rates in earlier outbreaks (WHO, 2014; Bray & Murphy, 2007).

The recent Ebola outbreak is generally thought to start whenever an individual comes into contact with the body fluids of an infected animal. The virus then spreads to others who come into direct contact with blood, skin, or other body fluids of a dead or living Ebola infected person. Ebola virus disease has resulted from accidental laboratory infections on few occasions, and there is concern that the virus might be used as an agent of bioterrorism (deliberate release of viruses, bacteria, toxins or other harmful agents used to cause illness or death in people, animals, or plants) (Mike, 2014).

#### 2.2 Epidemiology of EVD

The Ebola virus was first recognized when two outbreaks occurred in Zaire and Sudan in the year 1976 (Feldmann & Geisbert, 2011). Outbreaks of the Ebola virus disease have always occurred in Sub-Saharan Africa. The 1995 Ebola outbreak in Kikwit (Democratic Republic of Congo) was caused by the Zaire species and infected several

hundred cases, whereas the outbreak in Gulu (Uganda) in 2000 was by the Sudan virus and infected over 400 people. Although, the 2014 Ebola outbreak caused by the Zaire species of the virus is not the first to occur in West Africa, it is far larger than all previous outbreaks combined (WHO, 2014; Baize et al., 2014; Chan, 2014).

The 2014 EVD outbreak which started in the West African nation of Guinea in December 2013 was confirmed by the World Health Organization (WHO) in March 2014 (Baize et al., 2014; WHO, 2014). The first case was a two-year-old child who developed fever, vomiting, and black stools, without evidence of haemorrhage (Baize et al., 2014). The outbreak subsequently spread to Liberia, Sierra Leone, Nigeria, Senegal, and Mali (WHO, 2014). The outbreak has resulted from sustained person-to-person transmission, without additional introductions from animal reservoirs due to the sequence analysis of viruses isolated from patients in Sierra Leone (Gire et al., 2014).

Individuals have a part to play in the magnitude of the outbreak because persons with the EVD have been cared for outside the hospital setting most especially in Liberia and Sierra Leone (WHO, 2014). As of 23<sup>rd</sup> November, 2014, the number of laboratory-confirmed cases of the EVD were 15,930 and 5688 deaths (CNN, 2014). These cases included 592 infected healthcare workers which resulted in approximately 60% deaths (WHO, 2014; Lyon et al., 2014). No new cases of EVD had been reported in Senegal as of 29<sup>th</sup> August, and in Nigeria as of 5<sup>th</sup> September. Hence, Senegal and Nigeria were declared Ebola-free by the World Health Organization (WHO, 2014; CDC, 2014; Shuaib et al., 2014).

EVD cases in these outbreaks are mostly residents and healthcare workers who have been exposed to the virus in West Africa. These affected healthcare workers are usually taken to the United States and Europe for treatment (WHO, 2014). To confirm, on 30<sup>th</sup> September, 2014, the first travel-associated case of EVD was reported in the United States (CDC, 2014). This person who travelled from Liberia to Dallas, Texas started developing clinical signs and symptoms of the EVD approximately five days after arriving in the United States. Before and during the flight, the person was asymptomatic (showing no signs and symptoms of EVD). Two healthcare workers who were involved in his care eventually developed the EVD (CDC, 2014).

The Democratic Republic of Congo (DRC) recorded an outbreak of the current EVD in August, 2014 (WHO, 2014; Maganga et al., 2014). This was a pregnant woman who butchered an animal that had been killed by her husband. As of November 11, 2014, a total of 66 confirmed EVD cases comprising 49 deaths were associated to this outbreak (WHO, 2014). Sequence analysis has shown that the 2014 outbreak in the DRC has no connection with the current outbreak of the West Africa Zaire strain of Ebola virus causing the outbreaks. but is most closely related to the type that caused the 1995 outbreak in Kikwit (WHO, 2014).

### **2.3 Clinical manifestation of EVD**

Patients with EVD usually have a sudden onset of symptoms 6 to 12 days after exposure, although the onset ranges from 2 to 21 days (Mahanty & Bray, 2004; Baize, 2014; WHO, 2014). There is no proof that asymptomatic persons with EVD in the incubation period can infect others. All symptomatic individuals should be assumed to

have the virus in their blood and other body fluids, and appropriate safety precautions should be taken (WHO, 2014).

Most cases of EVD start with the sudden onset of fever, chills, and general malaise. Low-grade fever and malaise can precede the development of more severe symptoms (WHO, 1978). The most common signs and symptoms reported from the 2014 West Africa outbreak include fever, fatigue, headache, vomiting, diarrhoea, and loss of appetite (Mahanty & Bray, 2004; WHO, 2014). Reports have also described weakness, myalgia (muscle pain originates in any of the muscles in the body), as well as a high fever accompanied by relative bradycardia( abnormally slow heart beat) as seen in typhoid fever (Bray, 2005; WHO, 1978). A diffuse erythematous (redness of the skin caused by dilatation and congestion of the capillaries), nonpruritic maculopapular rash may develop by day 5-7 of illness. The rash usually develops on the face, neck, trunk, and arms, and can desquamate (Kortepeter, Bausch & Bray, 2011; Bray, 2005; Baron, McCormick & Zubeir, 1983; CDC, 2001; Sanchez, Lukwiya, Bausch, Mahanty, Sanchez, Wagoner & Rollin; Onyango, 2007). In Sierra Leone, rash is reported as rare in this 2014 outbreak, Mahanty & Bray (2004). However, it was clearly described in case reports of infected healthcare workers (Khan et al., 1999; WHO,1978).

Gastrointestinal signs and symptoms are common, and usually develop within the first few days of illness. These include watery diarrhoea, nausea, vomiting, and abdominal pain. In this current EVD outbreak, vomiting and diarrhoea have resulted in severe fluid loss, potentially leading to dehydration, hypotension, and shock (Mahanty & Bray, 2004; Johnson, Lange, Webb, & Murphy, 1977). Despite the traditional name of Ebola haemorrhagic fever, major bleeding is not a common finding. Case series from

the 2014 outbreak indicate that approximately 20% of patients have unexplained haemorrhage, and about 6% most commonly manifested as blood in the stool, petechiae, ecchymoses, oozing from venipuncture sites, pregnancy related haemorrhage, and/or mucosal haemorrhage (WHO, 2014; Formenty et al., 1999). Major bleeding is seen most commonly in the fatal stage of illness.

Other clinical manifestations of EVD may include hiccups, chest pain, shortness of breath, headache, confusion, seizures, and/or cerebral oedema. Conjunctival injection and dark red discoloration of the soft palate are common physical signs (CDC, 2001). Pregnant women may experience spontaneous miscarriages (Formenty et al., 1999).

#### **2.4 Knowledge about the cause and treatment of EVD**

Increasing human encroachment and certain cultural practices, coupled with poverty and bush meat hunting, result in increasing exposure of humans to animal infectious diseases such as Ebola (Daszak, 2000; Wolfe et al., 2005, 2007). Studies conducted in Sierra Leone and Liberia reveal that, the awareness on Ebola virus disease is high in the worse-affected countries, with many people aware of what the disease is, how it is caused, and the mode of transmission (CRS, FOCUS 1000 & UNICEF, 2014; Omidian, Tehoungue, & Monger, 2014). For example, 97% of people in Sierra Leone have heard of EVD and are aware that it exists (CRS, FOCUS 1000 & UNICEF, 2014). Studies conducted by Guimard et al. (1999) and Khan et al. (1999) in Kikwit reveal that, the risk factors for secondary human-to-human infection were mainly workers in the Kikwit general hospital, or those who prepared corpses for burial. Almost 20% of the 250 victims were health care workers.

According to Nyabola (2014), the Ebola outbreak in Uganda in 2001 reported that one of the major causes of the spread of the disease was cultural norms regarding treatment of the dead. These norms required female relatives to wash dead bodies before burial. Unfortunately, bodies of people who die of Ebola are the most contagious for the disease, and this meant that women disproportionately died from that particular outbreak of Ebola. Carvalho (2014) further adds that, EVD is transmitted through direct contact of an infected person's bodily fluids, including vomit, urine or diarrhoea. Transmission therefore often occurs during care giving, transport, or as part of traditional burial practices that include touching the body.

Human-to-human transmission is mainly through direct unprotected contact with infected individuals and cadavers, with infectious particles detected in a number of different body fluids (Feldmann & Geisbert, 2011). Health-care workers have frequently been infected while treating symptomatic patients infected with EVD. This may occur through close contact with infected patients where control precautions are not strictly practiced, including basic measures such as hand hygiene that should be applied even before a patient is suspected of being infected with EVD. For example, Liberians are aware that if they come in contact with needles used on Ebola patients by health workers they would become infected. They explained that, the virus lived outside its natural host for three days, hence physical contact with the needles within that time contributes to an individual becoming infected (Omidian, Tehoungue, & Monger, 2014).

Animal-to-human transmission occurs when people come into contact with tissues and bodily fluids of infected animals, especially with infected non-human primates (Leroy et al., 2004). In another study by CRS, FOCUS1000, & UNICEF (2014),

people in Sierra Leone believe that Ebola is transmitted by air or through mosquitoes bites, with 36% believing that they are not at risk of contracting Ebola within the next 6 months, while 34% of them believed that they were at risk.

#### **2.4.1 Signs and symptoms of EVD**

Symptoms of EVD manifest abruptly, are often non-specific flu-like, and may include chills, fever, myalgia, and malaise followed by lethargy, nausea, vomiting, abdominal pain, anorexia, diarrhoea, coughing, headache, and hypotension (Hartman, Towner, & Nichol, 2010).

Ebola patients present with severe headache, sore throat, muscle aches and weakness, and hiccups. As the disease progresses, patients vomit and may experience severe abdominal pain, diarrhoea, pharyngitis, conjunctivitis, multiple organ destruction, hypovolemic shock and bleeding from body orifices, including eyes, nose, anus, vagina, urethra and the ears (Feldmann, 2010). In susceptible patients, the disease picture changes so rapidly, that patients frequently progress from experiencing severe body pains and haemorrhage to suffering shock, respiratory arrest, leading to their death (Towner et al., 2008).

According to King (2010), fatally ill patients tend to experience extensive soft tissue damage, particularly within the gastrointestinal tract, often causing severe hyperaemia (large blood flow), making surface and bottom layers of the soft tissues such as in the tongue to separate, causing severe pain to patients.

#### **2.4.2 Prevention of EVD**

CRS, FOCUS1000, & UNICEF (2014) reveal that, there are positive attitudes towards the key prevention methods of Ebola. 87% of people in Sierra Leone agree the disease

can be prevented by avoiding contact with blood and bodily fluids, and 85% of them agree that avoiding funeral or burial rituals that involves contact with an infected deceased person can help in preventing the EVD. Similarly, 91% agree that a suspected person reduces the chance of spreading the disease by immediately going to a health facility, which is a contrast in a Liberia study conducted by Omidian, Tehoungue, & Monger (2014), which reported that, Liberians have not accepted the key messages of isolation and avoidance of contact with infected sick persons, not to touch infected dead bodies, and also have refused to take infected sick family members to health facilities for health care services.

In a study by Barry, Hewlett, & Richard (2003), they reported that, people treated symptoms of Ebola Haemorrhagic Fever as a regular illness, and sought for a variety of both biomedical treatment (malarial drugs or antibiotics) and indigenous cures (herbs, traditional healers).

#### **2.4.3 The fear, panic and discrimination associated with EVD**

A study conducted by Ni Chonghaile (2012), in Kibale district unveiled that, during the outbreak people were found fleeing their homes. Businge (2012), also adds that, several schools were closed down during the outbreak in Kibale.

A study conducted on public knowledge, attitude and practices on EVD in Sierra Leone revealed that, there exist very high level of stigma and discrimination towards Ebola victims in Sierra Leone. 76% of respondents would not welcome a neighbour who has recovered from Ebola. Similarly, 67% of the population would not buy from a shopkeeper who had contracted Ebola but has recovered and declared well (CRS, FOCUS 1000 & UNICEF, 2014). Children who lost one or both parents during outbreaks were not spared, they were abandoned, fearing they might harbour the

Ebola virus (Hewlett & Amola, 2003). Many survivors also experienced intense stigmatization, with some of them not allowed to return home, many had all their good clothes burned, and some were abandoned by their spouses. Their children were told not to touch them, and wives were told to go back to their home villages. The discrimination also extended to family and village members. For instance, community members from one of the first rural villages affected were regularly turned away at the marketplace and watering hole. One man eventually committed suicide, in part, because he had lost his wife to Ebola Haemorrhagic Fever, but also reportedly because of the stress of rejection, harassment, and discrimination in public because of his association with Ebola Haemorrhagic Fever (Barry, Hewlett, & Richard, 2003). In Mukono district, Nakigozi (2012), reported that, the news of a suspected Ebola patient admitted at the Kayunga district hospital caused severe panic and hysterical response which led to both patients and attending health workers to flee the hospital for fear of infection.

Hewlett & Hewlett (2005), described that, Ebola outbreaks have in the past led to emergence of vigilante groups to protect their communities by targeting suspected sources of infection such as survivors, orphans and health workers. Mason (2008), validates this claim by confirming that during the 2007 Ebola Bundibugyo outbreak, vigilante groups in areas surrounding the epicenter of the epidemic vandalized and destroyed survivor properties, including burning their houses to undermine their re-integration into the villages. Such violence directed at victims of Ebola, results in senseless loss of lives and destruction of property (Locsin, Barnard, Matua & Bongomin 2003).

Locsin, Barnard, Matua & Bongomin (2003), affirmed that, the psycho-social burden on affected persons and their families is worsened by the culturally sanctioned and medically approved strict protocols that characterize epidemic response efforts. A common rumour that was found in every interview conducted, regardless of country, was that people were getting Ebola because the wells have been poisoned with formaldehyde. People were therefore afraid to drink the water, and spent their money buying mineral water whenever possible (Omidian, Tehoungue, & Monger, 2014).

Hewlett & Amola (2003), describe that the scary disease picture, especially the high fatality rate and the unfamiliar burial practices triggered widespread fear and panic in the population. In affirmation, Matua & Locsin (2005), contend that the fear of infection is the most powerful stimulus for neighbors turning away friends, even to the extent of diverting routes away from affected homes. Kabanankye (2001), similarly reports that, abrupt cessation of established social practices such as congenial gestures of sharing of domestic items and communal eating, prompted by the fear of infection have become characteristic of serious disease outbreaks, overriding the close ties that exist among families and local community members.

Ocwich (2000) and Wendo (2001), recall that, during the 2000 Gulu Ebola outbreak, survivors and their family members were refused to mix freely with others, while those in trade were shunned and their business transactions became limited only to unsuspecting customers. However, once such customers discovered that they had purchased goods from Ebola survivors, they promptly returned these contaminated goods, leading to further alienation. In support, Onencan & Tokwiny (2001), stated that, the ostracism was so overt that survivors and their families were even barred

from public gatherings like schools, prayers, markets and even walking along village paths.

#### **2.4.4 Perceptions about EVD**

Among the urban educated in Liberia, some said they did not believe that Ebola is real. Their argument was that the government created the situation in order to generate income for themselves. Others added that the reason Liberia has had two waves of the outbreak is that the government got 1 million US dollars during the first wave, and decided they wanted more money by making a much larger outbreak and hence getting promises for US \$5 million. A few also said that, the money was to be used to pay the striking health workers. However, some noted that EVD is viral terrorism by the West (Omidian, Tehoungue, & Monger, 2014).

Many Christians in Liberia also believe that the outbreak of EVD is a curse from God, due to the various evil practices by the leadership of the country. They attribute the outbreak on the visit to the country by the Queen of Sheba, a woman they claim is from the “dark world and who is the devil incarnate.” They said, she visited Liberia because she wanted blood to increase her powers in the dark world (Omidian, Tehoungue, & Monger, 2014).

According to a Gorman (2014), a recent survey conducted by the Kaiser Family Foundation showed that 25% of Americans believe that Ebola can be transmitted through the air, and 37% believe that Ebola can be transmitted by shaking hands with someone who has it but is still asymptomatic (showing no signs and symptoms). Matua (2014), also reported that, the affected families initially thought the Ebola disease was either the work of witchcraft or evil spirits.

## **2.5 Preparedness towards EVD**

According to WHO (2012), the intervention of psychosocial counseling targeting communities prior to discharging survivors and contact persons before returning home, proved effective because it allayed peoples' fears and reduced the associated stigma, enabling survivors, families and contacts to be accepted back to their communities. In order to reduce the Ebola transmission, several strict public health measures need to be implemented as quickly as possible, including isolation of patients, barrier precautions and identification and tracking of all contacts (WHO, 2014).

The response activities carried out during the Uganda outbreak included the following, surveillance for early case detection and contact tracing, reinforcement of infection prevention and control including case management in isolation facilities using barrier nursing and conducting supervised safe burials, reinforcement of standard precautions in health care settings and enhancing communication interventions at the national and community levels. (WHO, 2012).

To minimize the spread of infection, Baguma (2011), claims the government warned the public to stay calm, and advised them to avoid sex, hosting visitors or visiting, mass gatherings and public transport. Baguma & Nankya (2011), point out that, the Ministry of Health officials at that time also encouraged the public to avoid direct contact with body fluids of persons suffering from Ebola through use of personal protective materials such as gloves and masks, as well as by timely and correctly disinfecting beddings and clothing of persons suspected and confirmed to be infected with Ebola. Whenever death occurred, the community was advised to use protective gears to ensure safe burial of the dead.

A study conducted by Omolo (2011), revealed that, during the third Ebola outbreak, authorities in neighboring Kenya, Tanzania, DRC and Rwanda were scared. As a result they embarked on double checking safety controls at their border posts with Uganda, as fear and rumors spread across the border that the Ebola outbreak in Uganda may well have spread to these countries. Consequently, this time as in previous outbreaks, neighbors of Uganda declared high alert status, especially at the border posts as a preventive strategy to ensure they were shielded from Ebola.

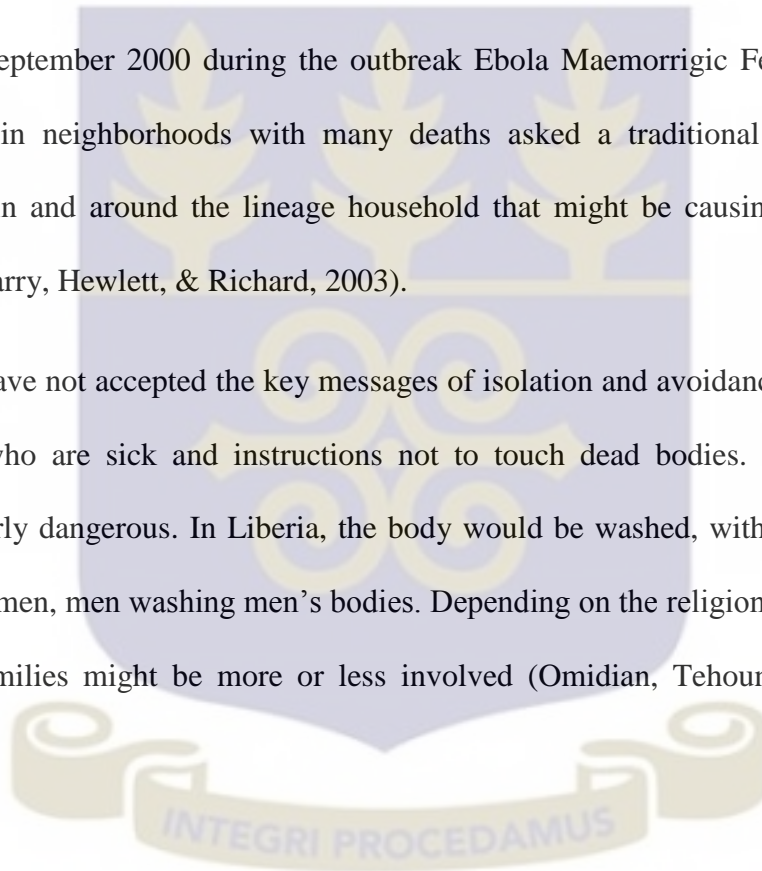
## **2.6 Cultural practices that contribute to EVD outbreak**

Traditional practices regarding patient care and burial rituals often involve high risk conducts, such as washing and preparation of the body for exposure for several days, during which family and friends pay tribute by stroking or hugging the deceased (Hewlett & Amola, 2003). Local persons were not coming to the hospital when symptoms first appeared. Healthcare workers explained that patients were afraid of being buried at the airfield if they died. Persons were running and hiding when the ambulance arrived to take them to hospital. Later interviews indicated, however, that the airfield burial was not the problem. As described in the study, once an illness is identified as a killer epidemic, burial at the edge of the village is expected. Rather, sources indicated many persons ran from the ambulance and did not seek treatment quickly because they feared they would never see their family once they were admitted to the hospital since bodies were placed in body bags and taken to the airfield to be buried without relatives being notified. (Barry, Hewlett, & Richard, 2003).

According to Matua (2014), the New Vision team on 30 July 2012 stated that the affected families initially thought the disease was either the work of witchcraft or evil spirits. In response they took the first patients to a local shrine for prayers which too failed to stop the deaths. This created fear and panic among the locals. The irrationality and ignorance of West Africans has directed them to visit traditional healers instead of doctors and ignoring warnings from health officials that traditional burial ritual can hasten the spread of the disease (Gorman, 2014).

In late September 2000 during the outbreak Ebola Haemorrhagic Fever the heads of families in neighborhoods with many deaths asked a traditional healer to locate poisons in and around the lineage household that might be causing the illness and death (Barry, Hewlett, & Richard, 2003).

People have not accepted the key messages of isolation and avoidance of contact with people who are sick and instructions not to touch dead bodies. Death rituals are particularly dangerous. In Liberia, the body would be washed, with women washing other women, men washing men's bodies. Depending on the religion and or economic level, families might be more or less involved (Omidian, Tehoungue, & Monger, 2014).



## CHAPTER THREE

### 3.0 METHODOLOGY

#### 3.1 Introduction

This section presents the various techniques and tools that were employed to collect data from respondents. It also describes the type of study, study location, sampling technique, data analysis tools that were used to analyze the data collected from respondents, and themes that were measured. It further looks at the ethical consideration and related issues.

#### 3.2 Study design

A descriptive study design, using a qualitative research approach was used to ground this study. According to Denzin & Lincoln (2011), this research approach stresses socially constructed nature of reality, the intimate relationship between the researcher and what is studied, and the situational constraints that shape inquiry. Therefore, researcher's choice of a qualitative research approach was supported by Denzin & Lincoln (2011), who further point out that qualitative research approaches enable researchers to discover understanding, and describe meanings people assign to their lived experiences.

Qualitative research entails in-depth and holistic investigation of human phenomena through collection of rich descriptive data and then analyzing it (Polit & Beck, 2010). Again, the choice of this approach was in agreement with Creswell (2009), who explained qualitative research as a well-grounded process of inquiry that may be used to understand a social or human problem through building a holistic picture of the situation, using words instead of figures, presenting the issues as seen through the

eyes of participants, through a close interaction with participants in the natural setting in which the phenomenon occurred.

The researcher's choice of a qualitative research approach was further supported by the belief that human experience is best understood using modalities that lend themselves well to in-depth study in natural settings.

### **3.3 Study location/ area**

The study was conducted in Paga, a multi-cultural border community of the Kasena-Nanaka West District of the Upper East Region of Ghana (KNWDA, 2012) where there is the regular in and out-flow of people and goods from countries susceptible to Ebola. The district is predominantly rural, and located approximately between latitude 10.997°N and longitude 01.10°W, and has a total land area of approximately 1,004sq/km. It shares boundaries with Burkina Faso to the North, Bongo district to the North-East, Bolgatanga municipal to the East, Kassena-Nankana municipal to the South, Builsa district to the South-West and Sissala East district to the West. The entire district has a total population of 73,242, comprising 36,013 males and 37,229 females (KNWDHD, 2014).

Malaria, Acute Respiratory Infections (ARI), skin diseases, diarrhoea, acute eye infection, rheumatism, intestinal worms, and hypertension are among the top ten (10) diseases in the district, with the HIV/AIDS prevalence rate in the district at 2.0% (higher than the national prevalence rate of 3.0). In relation to health infrastructure, there are nine (9) health sub-districts, 4 health centres, 2 private clinics, 10 CHPS compounds serving a total of 112 communities in the district (KNWDA, 2014).

In terms of climate, the district is characterized by pronounced dry and wet seasons, with these seasons influenced by two oscillating air masses. First is the warm, dusty and dry harmattan air mass which blows in the north easterly direction across the whole district from the Sahara desert (late November to early March) and May to October is the wet season. (KNWDA, 2014).

Agriculture is the dominant economic activity in the district, employing over 68.7% of the people. The major crops grown are millet, sorghum, rice, groundnuts, leafy vegetables, cowpea, Bambara beans, okro, cotton, tomatoes and onion. Livestock reared in the district include cattle, sheep, goat, pigs, guinea fowls, fowls and other domestic animals like donkeys. Fish farming involving tilapia and mudfish are quite insignificant (KNWDA, 2012).

### **3.3 Themes explored**

The following themes were explored:

Knowledge, attitudes and perceptions towards EVD

Preparedness towards EVD

Cultural practices that can contribute to EVD infection

### **3.4 Study population**

According to Polit & Beck (2010), population includes all individuals or objects with common defining characteristics that meet a designated set of criteria for inclusion in a study. However, the term population in this study refers to community members who were willing, readily available and were members of the Paga community where the study took place.

### **3.5 Sampling**

The purpose of sampling is to attain data from a smaller particular sample, which in turn increases efficiency by allowing generalizations to be made about the population without having to examine every member (Procter & Allan, 2007). For this study, three (3) qualitative sampling methods consisting purposive, convenient and criterion sampling techniques were employed.

Purposive sampling according to Polit & Beck (2010), involves deliberately selecting individuals judged to be typical of the population or particularly knowledgeable about the subject. Also, convenience sampling involves selecting the most readily available people as participants (Polit & Beck, 2010). In other words, as Burns & Grove (2007) articulate, these people would happen to be at the right place at the right time during data collection. Again, criterion sampling, as Polit & Beck (2010) point out, involves consciously selecting prospective community members from the target population who meet the selection criteria of the researcher.

### **3.6 Selection of participants**

Selection of community members began with those who were present and readily available to participate in the study. Only members of the Paga community, consenting to participate and share experiences in the study, granting permission to be audio-recorded during the interview and expressing readiness to share their lived experiences with the researcher were selected for the study. This was because it is a border community hence, its members live there and so are at risk of getting the Ebola in the event of an outbreak.

In all, a total thirty (36) respondents were sampled for the study because they were the respondents that turned out during the community mobilisation and were of age (eighteen years and above). This comprised of fourteen (14) community men which includes two focus group discussions and two in-depth interviews, fourteen (14) community women which includes two focus group discussions and two in-depth interview, two (2) Port Health Officials, two (2) Immigration Officers, two (2) Customs Service Officers and two (2) Plant Quarantine Officers.

### **3.7 Data collection techniques**

Research techniques refer to specific steps, procedures and strategies that are used to gather and analyze data generated (Polit & Beck, 2010). The researcher settled on the phenomenological technique because it fits well within the qualitative research domain, and was appropriate to study poorly conceptualized phenomena. In this case, ‘2living in an anticipation of Ebola outbreak. Proper with qualitative descriptive study design and phenomenological methods, data was gathered using two data collection techniques namely, in-depth interviews and focus group discussions.

In-depth interviews were used by the researcher to conduct face-to-face interviews with the following respondents within the Paga community. Two (2) men, two (2) women, two (2) Port Health Officials, two (2) Immigration Officers, two (2) Customs Service Officers and two (2) Plant Quarantine Officers. One-on-one interviews were conducted with each, with the interviews audio-recorded and notes written down in a field note book.

Focus group discussions, comprising six (6) respondents in a group within the Paga community were conducted. These were two (2) groups of community men, two (2) groups of community women.

One (1) research assistant was recruited to help with the tape recordings and notes writing, whilst the researcher conducted the the interviews and discussions, and managed group dynamics.

Interviews and focus group discussions were arranged by the researcher and participants, and lasted an average of 30 minutes. Prior to any interview and discussions, the researcher verbally explained the purpose of the study to respondent(s), and provided respondent(s) with an information a sheet in-print (see Appendix A). Also, the researcher provided a sheet in-print and verbally explained to reseedpointent(s) the details in the consent form solicited voluntary participation of respondents in the study and a pledge of confidentiality and anonymity of any information respondent(s) will provide (see appendix B).

### **3.8 Data collection tools**

A semi-structured interview guide (see Appendix C), focus group discussion guide (see Appendix C), supported with an audio tape recorder and field notebook were used to collect information from respondents on their;

Knowledge, attitudes and perceptions towards EVD

Preparedness towards EVD, and

Cultural practices that can contribute to EVD infection

The semi-structured interview guide and focus group discussion guide contained a list of open-ended questions which were derived from the objectives of the study. These open-ended questions were balanced, unbiased, sensitive and clear (Whitehead & Annells, 2007).

### **3.9 Quality control**

In qualitative research, quality control tends to attain consistency (rigor) which in other words is termed, trustworthiness. This is referred to in quantitative research as reliability and validity. The researcher strived to follow Guba & Lincoln (1994), four (4) “gold standard” criteria of trustworthiness. These are, credibility, transferability, dependability, conformability and authenticity criterion.

Sommer & Sommer (1997), argue that, a high quality recording of interview sessions is essential, especially when such information is the final source for data analysis. The researcher therefore ensured that, tape recordings were of the best possible quality during interviews and discussions. Davies (2007), affirms that the researcher must be able to agree with the participants of the study, and conduct the interviews and discussions in a setting that is relaxed and familiar to them. The setting should be free from distractions and favorable for interviews and discussions. These allow participant to talk freely about possible emotional and confidential matters. Tape recordings were therefore as much as possible made at a noise-free setting.

Recordings and written field notes made during interviews and discussions were strictly confidential. Following the transcriptions of the audio-recorded data, tapes were destroyed afterwards to ensure anonymity of the study.

### **3.10 Data processing and analysis**

Qualitative data analysis involves the organization and interpretation of narrative data for purposes of discovering important underlying themes, categories and patterns (Polit & Beck, 2010). It also involves ordering vast amounts of narrative data in order

to document and communicate general conclusions about the phenomenon (Norwood, 2000).

Thematic analysis was appropriate for this study because it is relatively easy to use, and allowed the researcher the flexibility to say a lot about the data (Braun and Clarke, 2006). True to this, data was analyzed based on the following four (4) summarized steps by Braun & Clarke (2006) in conducting thematic analysis.

### **3.10.1 Familiarization**

The researcher repeatedly read through field notes and each respondent's transcript after transcription in order to relate more with the data, and to grasp an understanding to address the aim of the research (Braun & Clarke, 2006). With this, the data was analyzed by first of all reading field notes, listening to and transcribing verbatim tape recordings from the interviews and discussions into Microsoft word.

### **3.10.2 Coding**

A code in qualitative inquiry is most often a word or short phrase that symbolically assigns a summative, salient, essence-capturing, and/or evocative attribute for a portion of language-based or visual data (Saldana, 2009). After transcribing, data was then coded by summarizing interesting features (elements that are related to the research questions, and best explain the phenomenon under study).

### **3.10.3 Categorization**

This involved organizing and grouping similar coded data into categories or families according to the themes of a study. A theme captures something important about the data in relation to the research question and represents some level of patterned response or meaning within the data set (Braun & Clarke, 2006). Data was therefore put into groups according to the themes of the study after coding.

### **3.10.4 Interpretation**

Explaining and finding meanings to categorized data. After data have been categorized according to the themes of the study, the researcher then analysed, described and narrated ( tell a story) based on the findings of the study using Microsoft Office Word for reporting.

### **3.11 Limitations**

The limitation to this work is the cost that is involved in doing a more representative, broad-based study, hence the relatively small sample size. Also, the language barrier due to many inhabitants of the Paga community speaking and understanding the the local knowledge (Kasem) other than the English language presented a limitation in explaining some nuances of the study to them, and their ability to fully describe their thoughts.

### **3.12 Pretesting or pilot study**

A pilot study can be described as a small scale version or trail run done in preparation for a major study. A pilot study can be used to improve a project, assess its feasibility, improve its clarity, eradicate problems and refine methodology (Polit & Beck 2010).

Considering this, the researcher conducted a pilot study of community members of the the Kasena-Nankana East district precisely Navrongo who fitted the inclusion criteria. This consisted of, one (1) in-depth interview and one (1) focus group discussion. These persons were was excluded during the actual data collection for the study. The findings of the pilot study were as well excluded. The pilot study was carried out using the same study instruments, in-depth interview guide, focus group discussions guide and tape recorder. Opportunity was given for respondents to give their opinion

on the interview, the setting and the interview guide. The pilot study enabled the researcher to identify problems which were amended before the actual study commenced.



## CHAPTER FOUR

### 4.0 RESULTS

#### 4.1 Introduction

This chapter presents the results obtained from the thematic analysis of interviews and discussions. The results reflect the three main research objectives that guided the study; knowledge, attitudes and perceptions of the community towards EVD, community preparedness towards EVD and the cultural practices that can contribute to EVD outbreak.

#### 4.1 Knowledge, attitudes and perceptions of community members towards EVD

##### 4.1.1 Knowledge of community members

It was realised that, responses from respondents on the knowledge, attitudes and perceptions of community members towards the Ebola Disease were in four forms, hence researcher sub-categorised this objective as knowledge of community members, attitudes of community members, perceptions of community members and community risk of getting EVD. On the whole, most respondents during the in-depth interviews (IDI) and focus group discussions (FGD) mentioned that Ebola is a virus caused by the consumption of bush meat (from monkeys, fruit bats, antelopes), and transmitted through physical contact with infected people.

*“Ebola is a dangerous virus transmitted by bush animals such as antelopes, monkeys and bats. Is transmitted through body contacts and handshakes.”  
(FGD, male respondent).*

*“Ebola is a disease which is caused by bush animals such as bats, chimpanzees and antelopes.”(IDI, Female community member)*

However, other respondents mentioned that EVD is an airborne disease transmitted through person-to-person direct contact.

*“It’s an airborne disease. And anyone who is affected can equally infect another by touch, by any ehh body fluids or blood from the affected fellow.”*  
(IDI, Plant Quarantine Official)

On whether respondents could identify the signs and symptoms that will enable them tell whether a person is suffering from EVD, most respondents gave the indication of the duration of the onset of the disease, and some signs and symptoms of an Ebola-infected person such as diarrhoea, vomiting, headache and body pains.

*“...when it gets you, it takes about days before you know it. About 20-25 days before you know you are affected by Ebola.”* (FGD, female community member).

*“...it’s like if it’s going to started you will feel body pains and headache. You will see that the person has vomit or diarrhoea. So you know that it is Ebola that’s the sign of Ebola. But if after 21 days and you don’t see them, then you will now be clear that the person don’t have Ebola?”* (IDI, community member)

The use of gadgets that detect high temperatures which has been linked to the identification and detection of EVD, alongside other signs and symptoms in individuals entering the country were also mentioned by respondents.

*“With the gadget available, I’ve forgotten the name...high temperature can be a good sign of Ebola, vomits and headaches. If anybody complains of severe*

*headache, and then if actually the person is affected with Ebola, you see bleeding discharging from the nose, even the eyes and the ears. I could use that to identify an Ebola person” (IDI, Customs Officer)*

Respondents also mentioned the high mortality rates, economic challenges, and decline in productivity as some of the effects associated with Ebola.

*“...when it infects a community, a lot of deaths occur, and so productivity is completely zero; let’s put it that way. And a lot of resources are spent on trying to manage Ebola when it appears. So the effect is terrible. Economic activities slow down because people will fear to travel to countries in West Africa because of Ebola. So, economically it affects the economy, it affects productivity because investors will fear to come.” (IDI, Plant Quarantine Official)*

When asked whether Ebola can be treated, most respondents mentioned that EVD cannot be treated once a person is infected, although some admitted having heard of vaccines used in Europe for the disease.

*“I hear there’s no cure for it, except that in Europe they’ve been able to develop some products that they’re using them as vaccines.” (IDI, Plant Quarantine Official)*

However, some respondents mentioned that the disease could be treated, whereas another responded had heard treatment of EVD could be achieved through chewing Kola nuts.

*“Yeah, it can be treated but we saw it in tele, we see some people have it, this people have Ebola and been treated and the treated be correct.” (FGD, male community member)*

*“I don’t know so far but, ehhhh and earlier on when it came they said we should chew bitter kola (I don’t know whether you know it? It’s a small nut, it looks like shea nut. You chew it, it’s very bitter). Some people say when you chew it, the Ebola fears bitter things or whatever.” (IDI, Plant Quarantine Official)*

#### **4.1.2 Attitudes of community members**

When asked about the way they relate with people following the global EVD, most respondents expressed reservations and fear about embracing each other or shaking hands with people (especially strangers), avoiding large or public gatherings such as funerals, parties and naming ceremonies.

*“...when Ebola was not there we use to embrace our friend mostly this part of the country. Shaking of hands is what we know is a respect and now because of Ebola you cannot shake your family member, you don’t know what the family member is having, so that it loses some of our respect.” (IDI, community member)*

*“Normally if you met a friend for a long time, you will be so excited and then you will go and embrace the fellow but knowing about Ebola, is something that we don’t do again.” (FGD, male community member)*

However, other respondents mentioned that since the country was Ebola-free, their relationship with people had not changed and that, they still went about their normal way of life.

*“Oooh, not that much, it’s still...because we know that Ebola has not come to Ghana. I have a friend who is working in Sierra Leone. He came for a funeral during the Christmas season and he was telling us that we should even praise him for coming from Sierra Leone without Ebola (laughing). We should thank him for that. Err, we related very well with him...we shook hands with him. ..We shake hands with them, walk with them, eat with them, and drink with them. So it’s not very much of a problem.” (IDI, Plant Quarantine Official)*

Considering the recent outbreak of EVD, most respondents said they had changed their way of lives, and now practice regular washing of their hands, while others have resorted to not eating meat, especially bush meat.

*“Well, yeah, it has changed the way we do things because we have to prevent ehheh the disease from spreading and so our lifestyles have changed. Ehh, like in my church, after certain ceremonies we shake hands. But that has been stopped, and we don’t shake hands again even though we still gather we don’t shake hands.” (IDI, Plant Quarantine Official)*

*“We thread more cautiously than before. You know you have to wash your hands regularly after you have gotten in touch with any other person. Then we have to be using this thing...hand sanitizers. So we’re adhering to those.” (IDI, Customs Officer).*

*“Yes, bush meat. I’ve stopped. I used to buy this eh, what do you call it?...somebody used to hawk around with this bush animals; rabbits (the smoked rabbit), and eh Guinea, the wild Guinea fowls. I’ve stopped eating those things because of the Ebola, Yes.” (IDI, Plant Quarantine Official)*

On how they will handle an infected Ebola patient, most respondents said they will not touch the person, but will wear protective clothing, and report to the nearest health facility for further action to be taken. Others indicated they will neglect the person to die or quit their relationship with the person.

*“When a person is having Ebola, you first of all have to cover your hands with gloves if there is any. You are supposed to wear protective clothes to prevent yourself from touching the person before you take that person to the nearest health centre.” (IDI, community member).*

*“A person with Ebola! I’ll not even want to get near a person with Ebola. If am to do that, I would wear gloves, in fact overall to cover the whole body, wear face mask if you have any, to prevent direct contact with the infected person.” (IDI, Plant Quarantine Official)*

*“I will take him to the hospital or call the health workers to come for him. If it is a friend, “there is no friendship in Ebola” so I will stop the friendship.”*

*“If it is my father or my mother even, I will not touch them”. In short, Ebola chases everybody away from you.”*

*“Me, I will contact the health worker as soon as my wife has Ebola because everybody will run away and I can’t run away, I will call the health workers because they know what to do with her.”*

*“If he is my friend, then we will have to break the friendship”. We can also leave the person to die so the disease doesn’t spread.”*

#### **4.1.3 Perceptions of community members**

When asked about their perceptions on EVD, some respondents mentioned that purchasing goods from certain countries was a risk factor to getting Ebola.

*“Because some countries have been...they’ve been grouped as high risk...high risk countries. So goods coming from those countries are given some form of treatment because when you know goods are coming from Liberia, Guinea and those things, you know they are infected with the Ebola virus. So there is fear of even consuming goods from those countries.” (IDI, Customs Officer)*

Other respondents mentioned that the fear associated with EVD had affected trade, raising suspicion about the possibility of getting EVD by touching products bought or currency exchanging hands.

*“Yes, trading dieee, it has because, like those who normally buy hens and sheep and go and normally go and sell, it was some time that they prevented us from not entering the yorongo market which is at Burkina.”(FGD, male community member).*

*“Okay, at that time, at that moment, we collected some gloves so when you are going to buy something you can wear the gloves and collect the thing and the money too you want to give him, you wear the gloves and take the money and give him.” (FGD, male community member).*

A Port Health Official added that, travellers coming into the country are subjected to numerous levels of screening, especially when coming from Ebola-affected areas.

*“...when the people come we do the screening. That is, those people who are coming from other countries like Mali, Senegal, Burkina Faso, and Niger. When they get to this place we screen them. We make sure that everybody is screened.”*

A female community member in an in-depth interview added that, Ebola could bring issues of stigmatization in the community.

*“If you are affected by Ebola, you know, if they see you, they will be pointing at you, teasing you in so many ways. Like people, they will not like to come near to you. Because, if it affects somebody, it will not be treated. So you will be stigmatized.”*

#### **4.1.4 Community risk of getting EVD**

Responses from respondents revealed that, the community preparedness towards the Ebola disease is in three forms for this reason, responses researcher put responses on preparedness of the community members towards the EVD into sub-categories of community preparedness, border sector preparedness and health sector preparedness. This can be deduced from the following responses.

Respondents were largely of the view that, the location of their communities near the border exposed them to the risk of getting EVD. They mentioned that such risks is based on the many unapproved routes through which potentially EVD-infected persons may enter the country through their communities, especially when they patronize the services of motor-bike riders popularly called “Okada”

*“Those around the borders are at risk because we have other border boys who work as Okada boys. And normally they pick a suspect from the other border*

*(I mean our French side or our French-speaking border) which is very close to us like Po and Burkina Faso.” (IDI, Port Health Official).*

*“...As we share border with them they just pick the person there and cross with the person without...because here, our border is very porous and we have so many unapproved routes so they can pass anywhere to enter. And when that thing happens or when they’re in that situation any community member can be infected because they may drop somewhere and even go to a house and take water. Or may go there to shake hands with other people over there” (IDI, Port Health Official).*

The Customs, Immigration and Port Health Officials were equally of the view that their work exposed them at a high risk of getting the disease since most travellers, documents and goods had to pass through them on first contact before entering the country.

*“...because here is a border, we have people from neighbouring countries bringing their documents to us. And we do physical examinations too on the bodies of people who come around. So assuming someone is coming from an Ebola-prone area to Ghana, you examining the person without protective gears and all that you are prone or at risk of getting Ebola.” (IDI, Customs Officer).*

#### **4.2 Preparedness towards EVD**

Respondents gave responses to their preparedness towards the Ebola Virus Disease in three different ways. These were community preparedness, border sector preparedness, and health sector preparedness as reported below.

#### **4.2.1 Community preparedness**

Most respondents mentioned that the community-based volunteers embarked on education and sensitization activities to help improve the knowledge of their fellow community members on how to prevent EVD.

*“We are explaining, educating the people about Ebola so that they don’t get infected with it.” (FGD, male community member).*

*“And then we move house to house, and tell them how about the Ebola and then we tell them to stop those hunters, to stop hunting the bush animals.” (FGD, male community member).*

*“By going house to house educating those who don’t know what it is about Ebola and tell time by avoiding eating all those meat, regular cleaning and so on and so forth”. (IDI, Female community member).*

Other respondents said that, they were championing cleanliness by advocating for clean environments as a way of ensuring that community members adhere to environmental hygiene, in addition to personal hygiene.

*“Yes, ones I, we are carrying on, on a general cleaning every first Saturday of a month.” (FGD, male community member)*

#### **4.2.2 Border sector preparedness**

Respondents mentioned that community and staff sensitizations had been carried out by border officials to build the capacities of staff and community members on EVD, as a way of preventing any possible entry of the disease into the country.

*“Yes, the immigration services are, like, they are preventing some of the strangers from, I learnt they are using some of the machine to testifying them*

*before they enter, yeah, at that time. Before, any bus come, they make sure you go through a test before you enter. So that's all the actions.”(FGD, male community members).*

Respondents added that individual behaviours of officers operating at the border post have changed. Preventive practices such as proper handwashing and adherence to good personal hygiene are practices engaged in.

*“...And we went further by getting some water...water this thing...bins with taps...running water and sanitizers with tissues whereby, before, you interact with Customs...before you enter our Office you have to wash your hand, sanitize your hand clean before you present any document. When-en you finish you do same.” (IDI, Customs Officer).*

The necessary measures and equipment to foster proper adherence to hygienic practices were also mentioned as ways in which institutions at the border have put in place to prevent any potential outbreak.

*“...In the office too, when you come to the Office our Director in charge has ensured that when you come to the office the first thing to do is wash your hands, sanitize your hands before you embark on any customer-related activity. And we have gloves, what's the name....ehhh masks, nose masks and other basic logistics to help facilitate our contact with people in our work.” (IDI, Customs Officer).*

A respondent also added that, Immigration Officers routinely embarking on 24 hour border patrols in a bid to check potential persons who may enter the country through the many unapproved or illegal routes.

*“We have so many underground work, especially the Ghana Immigration Service are taking a 24 hour patrol at the demarcated areas where the unapproved routes are. Whoever is coming in on a motor bike or any other thing, as they are there, they normally question the person and if he is to bring to book they bring them down for us to question them? And with that I think we are successful.” (IDI, Port Health Official)*

#### **4.2.3 Health sector preparedness**

On the preparedness of the health sector, some respondents mentioned that the health sector had embarked on education and sensitization sessions through workshops and seminars with border staff, and with community members through durbars and film shows; all in a bid to help boost social mobilization on the disease, and to put everyone on the alert.

*“We have a lot of seminar and workshops and meetings with the community at their local level. We talk to them about Ebola...and we organize a durbar for them. They even put on film show on Ebola to sensitize them on one or two things.”(IDI, Port Health Official)*

Some respondents also mentioned that a holding room had been created at the border to help isolate any suspected case before authorised paramedics come, as well as a designated quarantine unit at the Regional Hosital in Bolgatanga

*“...now have a small holding room whereby assuming there is a case we put the person there and call for the ambulance to transfer the person to Bolga for further treatment.” (IDI, Port Health Official)*

*“...we call for the ambulance to send the person to the Regional Hospital in Bolga because we don't have a quarantine base...designable quarantine base here. So normally what we do is that when we get any infected person or anyone who is from the prone country who is coming in as a suspect we just call the ambulance from Bolga to evacuate that person to the Regional Hospital.” (IDI, Port Health Official)*

Other respondents mentioned that the screening of all travellers entering the country was also a way of ensuring that the disease does not enter the country.

*When travellers come in, they screek2n them with their gun ...I don't know whether they call it a gun...they take the temperature from a far away. If the temperature is high it means that, they have to quarantine you or whatever.” (IDI, Plant Quarantine Official)*

A Customs Officer narrated a practical example of how the preparedness at the border, and most especially of the health sector was out to a test when a traveller died on arrival at the border.

*“There was an incidence that, this thing, a practical incidence that a passenger arrived from...he was a passenger from the Ebola area... So when he got here, he was about to die. So when he got here he entered our arrival Office...there was a chair there and he sat. So when he sat he just died on the chair. So all the Officers, as I was telling you, they evacuated the place...they*

*left the place. Then invited the Port Health Authorities. The place was quarantined and secured, and they brought some sprays to spray the people before they took the body. Authorities came from Health Directorate, Navrongo and Bolga to come and do some test to ensure that whether it was Ebola or not before the body was taken. I think the body was buried at the far end there (pointing).*

#### **4.3 Cultural practices that contribute to Ebola outbreak**

Most respondents mentioned that festivals could contribute to the spread of EVD in the event of an outbreak, due to the large gathering of people and the body-to-body contact and handshakes that characterize such events.

*“And the festival, festival annual, is an annual they call on the different communities to meet and ones it is a body contact disease, ones you meet there, and handshake and all those things must come there. So too, that one too, can bring it.” (FGD, male community member).*

Respondents also mentioned issues related to performing funerals. They explained that, some rites they perform bring about person-to-person contacts and contacts with the dead which could contribute to the spread of Ebola.

*“And those funeral rites and those too am talking about is that, ones you meet in the funeral grounds, in our community in particular, after a burial, the next morning , you go, you shake hands, errrrm , it’s one of the things, it can cause it.” (FGD, male community member).*

*“Yes because, if someone is dead they will sit around the person for some hours before taking the person to bury.” (FGD, female community member)*

*“Some of us when it is your father and he is dead, maybe they will say you should come and they will put his head under your legs. Maybe you can get it.” (FGD, female community member)*

A Port Health Official added that communal eating at funerals and festivals were also practices that could contribute to an EVD outbreak.

*“I think funerals, and....durbars and we call it ehhe video shows and parities. Because people go there to drink, shake hands, eating from one bowl and there are some people if they eat here and they are not satisfied they go and join others. These are some of the bad practices.”*

Respondents also mentioned that certain burial practices that had to be performed before burial could take place exposed people to EVD in the event of an outbreak since they touched corpses directly.

*“Yeah, locally they’d bath the corpse, our people here some of them bury in mats; our locally made mats. They put the fellow in the mat and then some young men who think they’re corpse bearers or whatever will carry the corpse round, round, round.” (IDI, Plant Quarantine Official)*

*“Our people when someone dies, we have people who bury them, they just remove their trouser and put the dead in the traditional mat. If like we are burying Ebola person like that, the same way, that will get it easily.” (FGD, female community member).*

*“Also our local people when they are to bury, they will go inside this thing before they will bring the dead person inside so they can get it inside the hole before they come out.” (FGD, female community member)*

*“...when they are burying the person, maybe they will remove the clothes from the person before they bury, so when the person inside the hole come near to bury maybe the fellow may get.” (FGD, female community member)*

A Customs Officer was also of the view that, the lackadaisical attitude of some people towards orthodox medicine, largely due to their entrenched beliefs in their cultural practices which makes them seek treatment from only traditional practitioners, was a contributory factor.

*“Dependents on local treatment, the mind-set, primitive mind sets of the people. You see, the primitive mind set, the lack of consciousness and awareness of the risk of Ebola. Some people don't go to the hospital when they're sick. They believe in local medicines, it's a practice. Exactly! Those are practices that will be injurious. It will cause more harm than good, yeah, basically.”*

A Plant Quarantine Official mentioned that some joint religious and social activities among community members across the border, such as praying together, funerals and naming ceremonies can contribute to an outbreak of EVD in the community.

*“Yes, emmmm, actually they're at a high risk because of the way things are. A lot of them are religiously Muslims so you know they pray together and after praying they shake hands. You know they wash their feet together. And ehh, if*

*there happens to be Ebola you can imagine how it will spread fast because of the way they interact with each other. The funerals, at funeral houses, the naming of babies, you know how the Muslims do their things. If there's Ebola virus it will spread very fast"*

*"They have their Mosque across the border here and they go there every Friday to pray and that's why I'm saying that if there's an outbreak it will spread very fast."*

Other respondents mentioned that, Female Genital Mutilation, using the same instrument on several people, could contribute to the spread of EVD in the event of an outbreak.

*"Female genital mutilation like this, is an operation which. It is a practice here. They use the same instruments. They can use you the same instruments of 5 above people and ones. They don't like, they don't mechanize it, like after using it, the treatment they will give it before errrrmmm, they will know after using it the disease will be killed before they will use it on another person again so they can easily transmit it." (FGD, male community member)*

## **CHAPTER FIVE**

### **5.0 DISCUSSIONS**

#### **5.0 Introduction**

This chapter presents a detailed discussion of the results obtained from the interviews and discussions conducted and presented in the previous chapter. The discussion will contextualize the findings in relation to the literature presented in previous chapters within this dissertation.

#### **5.1 Knowledge community members towards the EVD**

##### **5.1.1 Knowledge of community members**

It was however clear from the responses that some of the members provided descriptions about the Ebola disease whilst others tried to define what Ebola means. It can be summarized from the responses that all the respondents have knowledge on what the disease is although trying to define what the disease is, is a contested one as each of the respondents have a different view of the disease. These findings on the knowledge of Ebola can be traced from the studies conducted in Sierra Leone and Liberia. According to CRS, FOCUS 1000 & UNICEF, (2014), 97% of people in Sierra Leone have heard of EVD and are aware that it exists.

The respondents expressed the view that Ebola is a disease caused by bush animals such as bats, chimpanzees and antelopes. This supports the literatures of WHO, (2014); Groseth, Feldmann & Strong (2007), which states that, in Africa, it is believed that, wildlife in particular great apes, chimpanzees, gorillas, monkeys of the species *Hypsignathus* and *Epomops*, forest antelopes, and porcupines contract the disease from bats.

Others were with the view that, Ebola is an air borne disease which is contracted through body contact with an infected person, sweat, and body fluids and by eating the meat of an infected animal and body contact with an infect. This affirms the literature of CRS, FOCUS & UNICEF (2014), who stated that, people in Sierra Leone believe that EVD is transmitted by air or through mosquito bites. 35% believe that they are not at risk of contracting EVD within the next 6 months as at the time of the study while 34% of them believe that they are at risk.

Gorman (2014), revealed that, a recent survey conducted by the Kaiser Family Foundation showed that 25% of Americans believe that Ebola can be transmitted through the air and 37% believe that Ebola can be transmitted by shaking hands with someone who has it but is still asymptomatic (showing no signs and symptoms). Carvalho (2014), EVD is transmitted through the direct contact of an infected person's bodily fluids, including vomit, urine or diarrhoea. Transmission often occurs during care giving, transport, or as part of traditional burial practices that include touching the body.

With respect to the signs and symptoms of Ebola headaches, vomiting blood, diarrhoea, body pains and bleedings from open sores which may eventually lead to the death of the person were what some respondents mentioned whilst others indicated that Fatigue, loss of appetite and frequent vomiting are early symptoms of the disease. This confirms the views of Onyangoet, et al. (2007), that, signs and symptoms of Ebola usually begin suddenly with an influenza-like stage characterized by fatigue, fever, headaches, joint, muscle and abdominal pain. Vomiting, diarrhoea and loss of appetite are also common. Less common symptoms include the following: sore throat, chest pain, hiccups, breath and trouble swallowing.

Some respondents affirmed that, they have never heard of any traditional medicine for the cure of Ebola and the nature of the Ebola virus makes it worrisome to make any attempt to treat at home. This means that, even transporting the infected person to the hospital is left in the hands of the health professionals. The only medicines according to the respondents that they have heard of are certain vaccines developed in the USA which are being tried on people in countries with outbreaks and susceptible countries. This confirms the views of King (2010), that, there is no cure for Ebola, nor are there any vaccines that can prevent the disease. Those who recover from the disease do so through the strength of their own immune system, according to the CDC.

It was evident from the interview that the respondents have ideas on how to recognize a person infected with Ebola. To the respondents, such people usually bleed and vomit regularly. Some also have bleeding nose and general body weakness. To other respondents, the person's eyes become red, coupled with headaches, body pains, vomiting, diarrhoea and blood coming out of the person's nose. Mostly, it is associated with diarrhoea and vomiting blood. The findings attest that of Hartman, Towner, & Nichol (2010), who stated that, symptoms manifest abruptly and are often non-specific flu-like and may include chills, fever, myalgia, and malaise followed by lethargy, nausea, vomiting, abdominal pain, anorexia, diarrhoea, coughing, headache, and hypotension. Ebola patients present with severe headache, sore throat, muscle aches and weakness and hiccups. As the disease progresses, patients vomit and may experience severe abdominal pain, diarrhoea, pharyngitis, conjunctivitis, multiple organ destruction, hypovolemic shock and bleeding from body orifices, including eyes, nose, anus, vagina, urethra and the ears (Feldmann, 2010).

Generally, the findings of this study therefore point out that, the awareness level of EVD in the study area is very high, with respondents able to recognize the signs and systems of the disease, the mode of transmissions, and appropriate management of the disease. The realization from this study that bitter can be used to treat also adds to existing literature on the local (traditional) ways in which highly infectious diseases such as EVD are managed in communities. The findings of the study largely reflected the framework developed for this study which was based on Bandura's (1998), Social Cognition Theory in that, personal factors (knowledge on EVD) contribute to influencing human behaviour in response to the Ebola Virus disease.

### **5.1. 2 Attitudes of community members towards the EVD**

Responses from respondents revealed that, the Ebola Virus can be prevented by washing hands regularly. Also, avoiding the eating of bush meat and shaking hands with unknown persons. Avoid socializing with infected persons showing signs and symptoms of Ebola. This shows that the respondents have ideas on how to prevent the spread of Ebola. This confirms the view of CRS, FOCUS1000, & UNICEF (2014), who revealed that, there are positive attitudes towards the key prevention methods of Ebola. 87% of people in Sierra Leone agree the disease can be prevented by avoiding contact with blood and bodily fluids and 85% of them agree that avoiding funeral or burial rituals that involves contact with and infected deceased person can help in preventing the EVD.

Some respondents intended to handle infected relatives, friends and community members by reporting them to the nearest health care facility, and wearing protective clothes before taking them to the health facility. Others intended to neglect the affected person to die in order to prevent the person from spreading the Virus.

Quitting of friendship were some responses .To some of them, they have stopped purchasing meat at the border. This is in consistency with the views of Matua & Locsin (2005), who contended that the fear of infection is the most powerful stimulus for neighbours turning away friends, even to the extent of diverting routes away from affected homes.

Kabananukye (2001), similarly reports that abrupt cessation of established social practices such as congenial gestures of sharing of domestic items and communal eating, prompted by the fear of infection have become characteristic of serious disease outbreaks, overriding the close ties that exist among families and local community members.

Hewlett & Hewlett (2005), who described those Ebola outbreaks, have in the past also led to emergence of vigilante groups to protect their communities by targeting suspected sources of infection such as survivors, orphans and health workers. The findings of the study are in line with Bandura (1998) Social Cognitive Theory developed for the study in that, behaviour factors (attitudes towards EVD) can help prevent the spread of the Ebola disease at the study area. This also has an influence on environmental factors in that, cultural activities such as festivals, burial of the dead and community socialisation may be temporarily suspended to help prevent the spread of the Ebola disease. Again movement of people to reside in and out of Paga may be prevented to prevent the spread of the Ebola disease.

### **5.1.3 Perceptions of community members towards the EVD**

With respect to the treatment of Ebola, some respondents revealed that, the only place where infected persons with EVD can be treatment is the health facility. This findings is different from that of Omidian, Tehoungue, & Monger (2014), who stated that, in

Liberia, Liberians have not accepted the key messages of isolation and avoidance of contact with infected sick people, not to touch infected dead bodies and also have refused to take infected sick family members to health facilities for health care services.

Additionally, respondent's views that bitter Kola can be used to cure the disease, although they could not confirm this. This finding adds to existing literature since cure for the disease has largely been through health professionals who use of orthodox medicine in confined places in health facilities, and is in conformity with the study of Barry, Hewlett, & Richard (2003), who reported that people treated symptoms of Ebola Hemorrhagic Fever as a regular illness and sought for a variety of both biomedical treatment (malarial drugs or antibiotics) and indigenous cures (herbs, traditional healers).

From the results it was realized that all the community members have knowledge about Ebola. While majority of the respondents have a good attitude towards the disease, few have poor attitude towards disease. Majority have a positive perception towards the disease and the few have a negative perception toward the disease. Of all the respondents one was of the view that he is not at any risk of getting the disease

These findings of the study affirms Bandura (1998) Social Cognitive Theory adapted for the study in that, personal factors (perception about EVD) contribute to influencing human behaviour such as taking suspected Ebola patients to the health facility and then consuming bitter cola to prevent Ebola.

#### **5.1.4. Community risk of getting the EVD**

Respondents were largely of the view that, the location of their community near the border exposed them to the risk of getting EVD. They mentioned that such risks is

based on the many unapproved routes through which potentially EVD infected persons may enter the country through their community, especially when they patronize the services of motor-bike riders popularly called “Okada”. This affirms the studies conducted by Daszak (2000) and Wolfe, et al., (2005, 2007), who stated that, increasing human encroachment and certain cultural practices coupled with poverty and bush meat hunting result in increasing exposure of humans to animal infectious diseases such as Ebola.

These findings of the study confirm the conceptual framework adapted for the study in that, environmental factors (place of residence) has an influence on the preparedness towards EVD, that is, people living near the border community (Paga) are more prepared for the Ebola disease than those living far away from border community.

## **5.2 Community preparedness toward the EVD**

### **5.2.1 Community preparedness**

Responses from respondents indicate that, various activities have been put in place to ensure that the outbreak of EVD is prevented. Activities such as periodic clean up exercises are organized to ensure that the community is cleaned. Community members are entreated to report to the authorities on the use of unapproved routes at the border. This will help authorities establish mechanisms to ensure that people who use these unauthorized routes are screened before entering the country. This affirms the literature of Baguma & Nankya (2011) who point out that the Ministry of Health officials at that time also encouraged the public to avoid direct contact with body fluids of persons suffering from Ebola through use of personal protective materials, such as gloves and masks as well as by timely and correctly disinfecting beddings and

clothing of persons suspected and confirmed to be infected with Ebola. Whenever death occurred, the community was advised to use protective gears to ensure safe burial of the dead.

### **5.2.1 Border preparedness**

It is evident from the responses from the respondents that several activities are undertaken at the border post to prevent the EVD from coming into the country through the community.

Officers have been stationed at the border to assist in the screening and diagnoses of any form of Ebola related cases. Travellers coming into the country are required to fill the forms which were made for yellow fever before screening so that when declared Ebola free are allowed to pass. They also embark on patrols to check the activities of smugglers who carry people and goods across the border through unapproved routes. When a sign of Ebola is detected by the officials, the port health officials are alerted since because they have the expertise to handle cases of Ebola. Some of the officers at the border in their quest to ensure that people do not enter the country with the EVD prevent travellers queuing for screening from coming into body contact with fellow travellers. Officers at the border have also been instructed to report to the port health team anything that looks like signs of an Ebola infection. Officers at the border have also been instructed to report to the port health team anything that looks like signs of an Ebola infection.

Again, Officers at the border post have stoped people from bringing in bush animals to the community for sale. Officers at the border post also offer health education to community members. This findings supports directly in line with the views of WHO (2014) that, in order to reduce the Ebola transmission, several strict public health

measures need to be implemented as quickly as possible, including isolation of patients, barrier precautions and identification and tracking of all contacts. To minimize the spread of infection, Baguma (2011), claims, the government warned the public to stay calm and advised them to avoid sex, hosting visitors or visiting, mass gatherings and public transport.

Baguma & Nankya (2011), point out that the Ministry of Health officials encouraged the public to avoid direct contact with body fluids of persons suffering from Ebola through use of personal protective materials, such as gloves and masks as well as by timely and correctly disinfecting beddings and clothing of persons suspected and confirmed to be infected with Ebola. Whenever death occurred, the community was advised to use protective gears to ensure safe burial of the dead. It wasn't different from the views of Omolo (2011), that, during the third Ebola outbreak, authorities in neighboring Kenya, Tanzania, DRC and Rwanda were scared. As a result they embarked on double checking safety controls at their border posts with Uganda, as fear and rumours spread across the border that the Ebola outbreak in Uganda may well have spread to these countries.

With respect to the border preparedness towards the EVD, various activities are carried at the border. The officers at the border ensured foreigners were screened before being allowed to enter the country through the community. This was to prevent infected persons from bringing EVD into the country and infecting people with the disease. Community members were also entreated to report to the authorities on the use of unapproved routes at the border, as a way of helping authorities establish mechanisms to ensure that people who use these unauthorized routes are screened before entering the country. Again, Officers at the border have also reported to the

port health team anyone suspicious of having the signs of an Ebola infection. Furthermore, Officers at the border post offered health education to community members on EVD. The findings of this study therefore agree with the findings of WHO (2014), which revealed that, in order to reduce the Ebola transmission, several strict public health measures need to be implemented as quickly as possible, including isolation of patients, barrier precautions and identification and tracking of all contacts.

### **5.2.2 Health sector preparedness**

Both community members and officers at the border post were educated on the activities to engage in order to prevent an outbreak in the country. Community members were thus educated to avoid unnecessary hand shaking in public, cultivate the habit of regular hand washing, and also washing of fruits before eating. They are also advised to avoid eating bush meat and not touching the dead bodies of suspected Ebola patients, as well as referring all suspected Ebola to the nearest health facility. They were also sensitized on the need to wear protective clothing, if the need arose, before touching a suspected Ebola person. Additionally, community members were sensitized on the need to properly bury their dead by taking precautionary measures. And most especially allowing the health and environmental health authorities to handle burials of potential Ebola-infected persons. These findings affirm the literature of Baguma & Nankya (2011) who point out that, the Ministry of Health officials at that time also encouraged the public to avoid direct contact with body fluids of persons suffering from Ebola through use of personal protective materials, such as gloves and masks as well as by timely and correctly disinfecting beddings and clothing of persons suspected and confirmed to be infected with Ebola. Whenever

death occurred, the community was advised to use protective gears to ensure safe burial of the dead.

From the conceptual framework adapted for the study, community, border and health sector preparedness towards the Ebola disease influences personal factors (knowledge on EVD and perceptions about EVD). Respondents were sensitized and educated on safe practices, giving them needed knowledge on EVD. Further the preparations they were exposed to, shaped their perceptions of what EVD is and how it can be managed.

### **5.3 Cultural practices that can contribute to the outbreak of EVD**

With the responses gathered from responded, there exist a number of cultural practices in the community that can contribute to the spread of EVD infection. Respondents agreed that performing funerals, as a cultural practice, can lead to EVD infections and spread. It can be explained that the organization of funerals and festivals brings people from all walks of life to the community, hence a possible influx of infected people. Directly linked with cultural practice as a contributory factor for the spread of EVD is the burial services of the people. Most respondents agreed that the burial practice adopted by members in the community can also lead to the EVD infection. This is a confirmation of the fact that the burial practices of members in the community can expose the members to a person who died through Ebola which will lead to the contraction of the disease.

Respondents also revealed that, widowhood rites in the community can spread the EVD. The practice of widowhood rites which involves woemn sitting with corpses all night and singing. Three other cultural practice mentioned by respondents that contributes to the spread of EVD were festivals, church services and naming

ceremonies an avenue which brings together communities, families and friends into one place. There is therefore the tendency that some of these relatives might come with the virus and spread them to other people. The over-reliance on local treatments, as against orthodox medicine for some disease conditions was also mentioned as a contributory factor to EVD-infection or spread. Finally, the respondents identified the practice of Female Genital Mutilation (FGM) in the community can also lead to a spread in the virus if the instruments used for the process are not properly sterilized. The use of unsterilized instruments to conduct FGM can also spread the virus. It is observed from the responses that whereas some of the courses are culturally related, others are medically related.

The findings of this study are therefore in line with Gorman (2014) who found out that, the irrationality and ignorance of West Africans has directed them to visit traditional healers instead of doctors and ignoring warnings from health officials that traditional burial ritual can hasten the spread of the disease. In addition, this study found that traditional practices regarding patient care and burial rituals often involve high risk conducts, such as washing and preparation of the body for exposure for several days, during which family and friends pay tribute by stroking or hugging the deceased (Hewlett & Amola, 2003).

The environmental factors (cultural practices that can contribute to EVD infection) of conceptual framework adapted for the study influences preparation towards EVD in the sense that, ready acceptance of the need to modify cultural practices by respondents can aid preparation for the outbreak. In addition, the retaining of harmful practices of FGM, and visiting traditional healers would hinder preparations, as many

community members would begin to feel a false sense of security that undermines the preparation of the EEVD outbreak.



## CHAPTER SIX

### 6.0 CONCLUSION AND RECOMMENDATIONS

#### 6.1 Conclusion

This chapter presents a summary of the study, and discusses the major issues arising from the study. Some recommendations for future action are also proposed.

This study sought to find out the knowledge, attitudes and perceptions of community members towards EVD, the community preparedness towards the EVD and the cultural practices that may contribute to EVD infection. Although some literature on EVD exists, the limited scope of these in relation to exploring the knowledge, attitudes and perceptions of community members towards EVD, the community preparedness towards the EVD in an Ebola-free country contributed to the rationale for this study.

The results of the study revealed that, through community sensitization respondents have considerable knowledge on EVD. Respondents knew the causes, effects, treatment and prevention of the EVD. Most respondents had a good attitude towards the disease. They opted to send suspected Ebola persons to the nearest health facility with the use of protective clothes while a few who had poor attitude toward the disease. Opted to end their relation with suspected friends with Ebola or neglect them to die. There was as well a positive perception toward the disease.

Most respondents perceived Ebola as a very deadly disease. However, one respondent perceived the use of cola nuts as a method for treating Ebola. Periodic clean up exercise by community members clean, health education on Ebola by health workers, screening of travellers by port health officials and patrol exercise by customs service at porous route to fish out “Okada” (motor riders) sneaking in out of the community

with travellers according to respondents are the various activities taken in the community to prevent an outbreak of the EVD. The cultural practices that respondents believed could contribute to an outbreak of the EVD were funeral, poor burial practices, festivals, Female Genital Mutilation, naming ceremonies, Church services and the use of local treatments.

The researcher recognises that this study was limited to a small number of respondents, and as such the findings represent the experiences and views held by respondents. In conclusion, this study offers some implications for future research into the subject of the knowledge, attitudes and perceptions of community members towards EVD, the community preparedness towards the EVD and the cultural practices that may contribute to EVD infection in a different study setting.

## **6.2 Recommendations**

The findings of this study provide some useful insight into the often ignored perspectives of the respondents. The findings highlighted the knowledge, attitudes and perceptions of community members towards EVD, the community preparedness towards the EVD and the cultural practices that may contribute to EVD infection. It is therefore important that necessary strategies are sustained by all stakeholders to avert or contain any possible outbreak of EVD in Ghana. In this regard, the following recommendations are made.

### **6.2.1 Recommendations for policymakers**

1. The Government of Ghana, in collaboration with neighbouring countries and the international development community should sustain the efforts put in place to contain the global EVD outbreak in the effected countries, as well as prevention of its spread to other counties.

2. Health promotion and education by the Ministry of Health and Ministry of Information should be scaled up and sustained on EVD in border and non-border communities, in collaboration with the Immigration services as well as schools and churches.
3. There should be health promotion and education directed to the traditional institutions of Paga to help modify the cultural practices in the Paga Community that could potentially contribute to the spread of EVD in the event of an outbreak.
4. Advocacy on the need to abolish harmful cultural practices such as women sitting with corpses, and female genital mutilation (FGM) that could contribute to the EDV outbreak in the community should be done across border communities. This should be specifically targeted at social and cultural organisations and opinion leaders in those communities.
5. Community members should be encouraged to report all suspected cases of EVD, even among family members whom they are emotionally attached to.

### **6.2.2 Recommendations for future research**

1. Ensuring the trustworthiness of future studies, in connection with the methodology used, will be useful. This can be achieved by using external persons to cross-check the whole process through member checking. This would involve presenting the themes generated from interviews and discussions back to respondents to confirm the findings and help validate them as suggested (Smith, 2003).

2. Future research should consider using a mixed methodological approach by incorporating confidential survey questionnaires where the identities of participants will be unknown could richen of data (Wisker, 2001).
3. Future research with similar objectives to this study should focus on a larger sample and broader geographical boundaries (by adding more respondents) to obtain more information on the subject under study.



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## APPENDIX

### Appendix A

#### Respondent information sheets

##### In-depth interviews

**Research Topic:** Knowledge, Attitudes and Perceptions of Community Members toward the Ebola Virus Disease (EVD) in Paga, Kasena-Nankana West District.

My name is Anamolga, Princess Roselyn. I am a master of public health student at the University of Ghana. I am currently working on a research that aims to explore the Knowledge, Attitudes and Perceptions of community members toward the Ebola Virus Disease (EVD) in Paga, Kasena-Nankana West District. Professor Philip Baba Adongo, a senior lecturer and the Social and Behavioural Sciences Head of department at the University of Ghana is my research supervisor.

Ebola is a severe and often deadly virus disease transmitted to people by animals such as chimpanzees, gorillas, fruit bats, monkeys, forest antelope and porcupines. It can also be transmitted from person-to-person through direct contact with infected persons, secretions such as semen and breast milk, organs such as ear, mouth and nose, blood or body fluids such as urine, saliva, sweat, faeces, vomit. Some typical signs and symptoms of the Ebola disease are; fever, severe headache, muscle and joints pain, vomiting, diarrhoea, stomach pain, unexplained bleeding or bruising.

I am inviting you to participate in this study. I hope that the findings of the proposed study would help in preventing an outbreak of the Ebola Virus Disease in this country.

If you would like to participate in the proposed study, you would be required to give consent. I would contact you to arrange a suitable time for an interview within the Paga community. The interview would be audio taped and would last for a period of 30-60 minutes. All information will be confidential and no identifiable data would be included in the study. All data from the interview would be managed, stored and disposed off after data analyses. Also, your right to withdraw from the study at any stage is guaranteed.

If you would like to participate in the study, please sign the attached consent form and return it to me in the stamped addressed envelope. If I do not hear from you I would assume that you do not want to participate and I would not contact you again.

If you have any questions before making a decision, please feel free to contact me on the following: Tell: +233208765743 Email: [anamolga.pee@gmail.com](mailto:anamolga.pee@gmail.com)

**Anamolga, Princess Roselyn**

Yours sincerely,



## **Focus Group Interviews**

**Research Topic:** Knowledge, Attitudes and Perceptions of Community Members toward the Ebola Virus Disease (EVD) in Paga, Kasena-Nankana West District

My name is Anamolga, Princess Roselyn. I am master of public health student at the University of Ghana. I am currently working on a research that aims to explore the Knowledge, Attitudes and Perceptions of community members toward the Ebola Virus Disease (EVD) in Paga, Kasena-Nankana West District. Professor Philip Baba Adongo, a senior lecturer and the Social and Behavioural Sciences Head of department at the University of Ghana is my research supervisor.

Ebola is a severe and often deadly virus disease transmitted to people by animals such as chimpanzees, gorillas, fruit bats, monkeys, forest antelope and porcupines. It can also be transmitted from person-to-person through direct contact with infected persons, secretions such as semen and breast milk, organs such as ear, mouth and nose, blood or body fluids such as urine, saliva, sweat, faeces, vomit. Some typical signs and symptoms of the Ebola disease are; fever, severe headache, muscle and joints pain, vomiting, diarrhoea, stomach pain, unexplained bleeding or bruising.

I am inviting you to participate in this study. I hope that the findings of the proposed study would help in preventing an outbreak of the Ebola Virus Disease in this country.

If you would like to participate in the proposed study you would be required to give consent. I would contact you to arrange a suitable time for discussions within the Paga community. The discussions would be audio taped and would last for a period of 30-60 minutes. All information would be confidential and no identifiable data would be included in the study. All data from the discussions would be managed, stored and disposed of after data analyses. Also, your right to withdraw from the study at any stage is guaranteed.

If you would like to participate in the study, please sign the attached consent form and return it to me in the stamped addressed envelope. If I do not hear from you I would assume that you do not want to participate and I would not contact you again.

If you have any questions before making a decision, please feel free to contact me on the following: Tell: +233208765743 Email: [anamolga.pee@gmail.com](mailto:anamolga.pee@gmail.com)

**Anamolga, Princess Roselyn**

Yours sincerely,



## Appendix B

### Respondent consent form

#### In-depth Interview Consent Form

**Research Topic:** Knowledge, Attitudes and Perceptions of Community Members toward the Ebola Virus Disease (EVD) In Paga, Kasena-Nankana West District

#### CONSENT Please tick

I confirm that I have read and understood the Respondent Information Sheet for the study and understand what is expected of me.

Yes No

I understand that I am making a voluntary decision to participate in this research study.

Yes No

I understand that I am free to withdraw from the study at any time and I am free to withdraw anything I say up to one week from the date of my interview.

Yes No

I give my consent to be audiotaped during the interview.

Yes No

I agree to the use of direct quotations providing that any quotations are anonymised by the use of a false name or pseudonym.

Yes No

Any questions that I had about the study have been answered.

Yes No

I know Information about me will be kept safe by the researcher .

Yes No

I understand that the research might get published and I am fine with this .

Yes No

Your signature certifies that you have decided to participate, having read and understood the information presented. You will be given a copy of this consent form to keep.

\_\_\_\_\_

Signature of Participant

Date

I hereby confirm that the respondent has decided to voluntarily participate in the study.

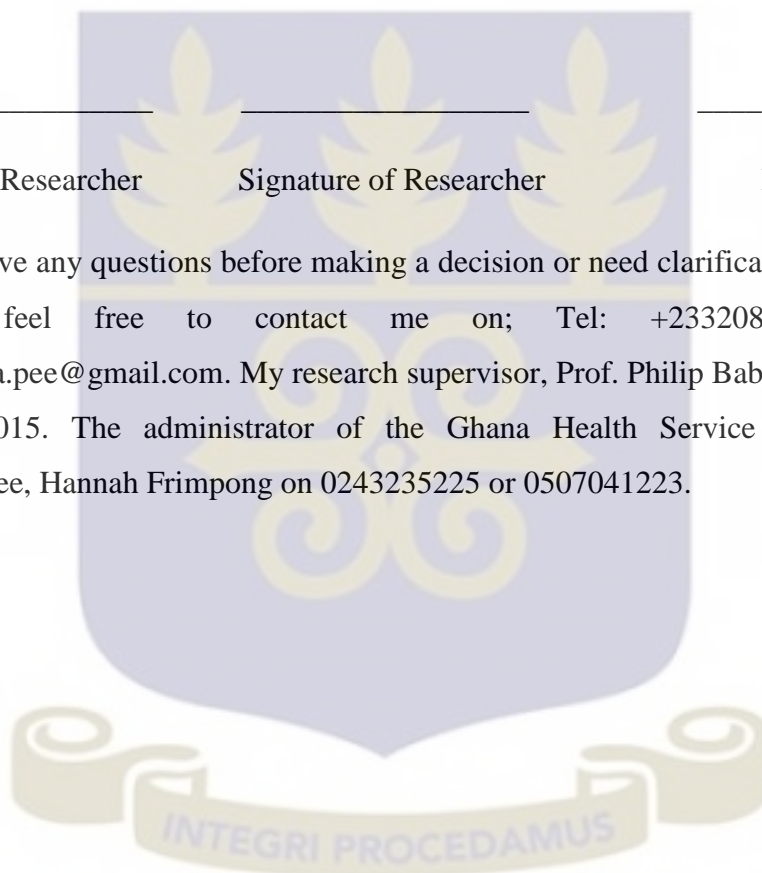
\_\_\_\_\_

Name of Researcher

Signature of Researcher

Date

If you have any questions before making a decision or need clarification on any issue, please feel free to contact me on; Tel: +233208765743 Email: [anamolga.pee@gmail.com](mailto:anamolga.pee@gmail.com). My research supervisor, Prof. Philip Baba Adongo on Tel: 0244806015. The administrator of the Ghana Health Service Ethical Review Committee, Hannah Frimpong on 0243235225 or 0507041223.



**Focus Group Discussion Consent Form**

**Research Topic:** Knowledge, Attitudes and Perceptions of Community Members toward the Ebola Virus Disease (EVD) in Paga, Kasena-Nankana West District

**CONSENT Please tick**

I confirm that I have read and understood the Respondent Information Sheet for the study and understand what is expected of me.

Yes No

I understand that I am making a voluntary decision to participate in this research study.

Yes No

I understand that I am free to withdraw from the study at any time and I am free to withdraw anything I say up to one week from the date of the discussion.

Yes No

I give my consent to be audiotaped during the discussion .

Yes No

I agree to the use of direct quotations providing that any quotations are anonymised by the use of a false name or pseudonym.

Yes No

Any questions that I had about the study have been answered.

Yes No

I know Information about me will be kept safe by the researcher.

Yes No

I understand that the research might get published and I am fine with this.

Yes No

Your signature certifies that you have decided to participate, having read and understood the information presented. You will be given a copy of this consent form to keep.

\_\_\_\_\_

Signature of Participant

Date

I hereby confirm that the respondent has decided to voluntarily participate in the study.

\_\_\_\_\_

Name of Researcher

Signature of Researcher

Date

If you have any questions before making a decision or need clarification on any issue, please feel free to contact me on; Tel: +233208765743 Email: [anamolga.pee@gmail.com](mailto:anamolga.pee@gmail.com). My research supervisor, Prof. Philip Baba Adongo on Tel: 0244806015. The administrator of the Ghana Health Service Ethical Review Committee, Hannah Frimpong on 0243235225 or 0507041223.



## Appendix C

### Study Guides

#### In-depth Interview Guide

**Research Topic:** Knowledge, Attitudes and Perceptions of Community Members toward the Ebola Virus Disease (EVD) in Paga, Kasena-Nankana West District

#### QUESTIONS

#### NOTES:

Greet

Ensure that participant is comfortable

Introduce myself and the study

Check that participant has;

Read and understood the Participant Information Sheet

Signed the consent forms (and also consented to being audio-recorded)

Ask for participant's permission to start interview, and then switch on audio-recording device.

#### SECTION A: KNOWLEDGE, ATTITUDES AND PERCEPTIONS TOWARDS EVD

1. In your own opinion can you tell me what you know about the Ebola disease?

**Probe:** Risk of getting Ebola

Causes

Treatment

Prevention

2. How has the disease Ebola affected life in this border community?

**Probe:** Traveling

Trading

Relationships

3. How would you identify a person who is affected with Ebola

**Probe:** Signs

Symptoms

4. How has the disease changed the way you do things?

**Probe:** How you relate with people.

What you eat

5. In what way are you in this community at risk of developing the Ebola?
6. Can you mention as many as possible how you can prevent infection and transmission of the Ebola Virus Disease?

## **SECTION B: PREPAREDNESS TOWARD EVD**

7. Can you mention as many as possible the actions you are taking to prevent an outbreak of the disease?

**Probe:** At the Border

In the community

8. How would you handle a person with Ebola?

**Probe:** Someone you do not know

Let's assume it is your friend, how would you handle the person

Let's assume it is your family, how would you handle the person

Let's assume it is your Son/Daughter/Spouse, how would you handle the person.

9. If a community member has Ebola what would you do?

**Probe:** What about the use of traditional Medicine

What about treat at home (home management)

What about sending the person to the hospital

**SECTION C: CULTURAL PRACTICES THAT CAN CONTRIBUTE TO EVD INFECTION**

10. What cultural practices do you think may increase the risk of getting Ebola disease?

**Probe:** Festival

Funeral Practices

Burial Practices

These are all the questions I have. Thank you very much for your cooperation.

Your answers will help to develop public health policy for the prevention of an Ebola outbreak in Paga and the country as a whole.

Do you have any remarks you wish to add?

Yes: .....

No.....

Once again thank you very much for your cooperation, am grateful.

## **Focus Group Discussion Guide**

**Research Topic:** Exploring the Knowledge, Attitudes and Perceptions of Community Members toward the Ebola Virus Disease (EVD) in Paga, Kasena-Nankana West District

### **QUESTIONS**

#### **NOTES:**

Greet

Ensure that participant is comfortable

Introduce myself and the study

Check that participant has;

Read and understood the Participant Information Sheet

Signed the consent forms (and also consented to being audio-recorded)

Ask for participant's permission to start interview, and then switch on audio-recording device.

### **SECTION A: KNOWLEDGE, ATTITUDES AND PERCEPTIONS TOWARDS EVD**

1. In your own opinion can you tell me what you know about the Ebola disease?

**Probe:** Risk of getting Ebola

Causes

Treatment

Prevention

2. How has the disease Ebola affected life in this border community?

**Probe:** Traveling

Trading

Relationships

3. How would you identify a person who is affected with Ebola

**Probe:** Signs

Symptoms

4. How has the disease changed the way you do things?

**Probe:** How you relate with people.

What you eat

5. In what way are you in this community at risk of developing the Ebola?  
6. Can you mention as many as possible how you can prevent infection and transmission of the Ebola Virus Disease?

7. **SECTION B: PREPAREDNESS TOWARD EVD**

8. Can you mention as many as possible the actions you are taking to prevent an outbreak of the disease?

**Probe:** At the Border

In the community

9. How would you handle a person with Ebola?

**Probe:** Someone you do not know

Let's assume it is your friend, how would you handle the person

Let's assume it is your family, how would you handle the person

Let's assume it is your Son/Daughter/Spouse, how would you handle the person.

10. If a community member has Ebola what would you do?

**Probe:** What about the use of traditional Medicine

What about treat at home (home management)

What about sending the person to the hospital

**SECTION C: CULTURAL PRACTICES THAT CAN CONTRIBUTE TO EVD INFECTION**

11. What cultural practices do you think may increase the risk of getting Ebola disease?

**Probe:** Festival

Funeral Practices

Burial Practices

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Your answers will help to develop public health policy for the prevention of an Ebola outbreak in Paga and the country as a whole.

Do you have any remarks you wish to add?

Yes: .....

No.....

Once again thank you very much for your cooperation, am grateful.

