HOW ELEMENTS OF CULTURE HAVE CONTRIBUTED TO THE CONSTRUCTION OF HEALTH MEANINGS IN REGARDS TO THE 2014 EBOLA OUTBREAK

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Chapter 1: Literature Review

West Africa has been experiencing the biggest outbreak of the Ebola virus ever known, causing thousands of deaths, devastating fragile healthcare systems and damaging the economies of the affected countries. As of January 28, 2015, The World Health Organization (WHO) said there had been 22,000 officially recorded cases, almost all in Sierra Leone, Liberia and Guinea, with about 8,800 deaths. The WHO has been criticized for not reacting fast enough to the outbreak: it took three months to diagnose the first cases and five months more before a public health emergency was declared (Boseley, 2015). A number of factors including dysfunctional health systems, high population mobility across state borders, densely populated capitals and lack of trust in authorities (e.g., health advice is not listened to) contributed to keeping this outbreak out of control.

To raise awareness about the seriousness of the disease and convince people that Ebola was real, health messages issued to the public repeatedly emphasized that the disease was extremely serious and deadly, and had no vaccine, treatment, or cure. While intended to promote protective behaviors, these messages had the opposite effect. In the view of local communities, if death is almost inevitable, they would prefer it to happen in the comfort of their home surrounded by loved ones. Moreover, when a sick person is taken to treatment or transit centers, families often receive little information about the loved one's condition, outcome, or even the place of burial. As several experts noted, when technical interventions are at cross purposes with deep-rooted cultural values, culture always wins.

The cultural beliefs and practices among the diverse populations in the affected countries of Liberia, Sierra Leone and Guinea influence how people understand the virus, its causes, and what it takes to stop its transmission. Persuading people to change their cultural practices has been hard (Boseley, 2015); advice that runs against the cultural practices is disregarded; and with the lack of trust in the authorities, myth and superstition take over. Local communities have rejected help from health care workers for several reasons. Many refused to believe that Ebola was real. People and their ancestors had been living in the same environment for centuries, hunting the same wild animals in the same forest, and had never before seen a disease like Ebola. On top of that, control measures, like disinfecting houses, setting up barriers, fever checks, and the involvement of foreigners dressed in something that local communities have never seen before (i.e. Hazmat), who took people to hospitals from which very few returned, make it even more difficult to comprehend for local people.

From the above, we can see that culture plays an important role in how prevention and risk-reduction messages are created and disseminated and that control efforts must work within the culture, not against it.

The purpose of this paper is to examine the extent to which elements of culture (values, beliefs, and behaviors) have contributed to the construction of health meaning in regards to 2014 Ebola outbreak in Guinea. In the following sections of literature review, I will provide a brief background of the Ebola virus, and then I will introduce the theoretical frameworks through which I will examine the outbreak.

First, I will discuss the need to consider culture when designing health interventions. Pender, Murdaugh, and Parsons (2006) argue that sociocultural factors,

such as ethnic or racial identity, culturally based practices, and socioeconomic standing, are recognized in several health-promotion models, however they are perceived as relatively fixed and not open to healthcare providers' interventions. These factors should be looked at closely because they could be the key to improving health-promotion efforts.

The second framework is the cultural theory developed by Douglas and Wildavsky (1982). This theory states that what people choose to fear and choose not to fear is not an individual cognitive process such as the perception of threats to health or feelings of uncontrollability, rather, they are socially shared worldviews which means that individuals choose what they fear in relation to their way of life, in relation to the culture they belong to (Mary & Wildavsky, 1982; Thompson, Ellis, & Wildavsky, 1990; Wildavsky, Ellis, & Thompson, 1997).

The third theory is the culture-centered approach developed by Dutta (2007) which stipulates that health communication is the negotiation of shared meanings situated in socially constructed identities, relationships, social norms, and structures. It seeks to engage cultural participants as partners in health meaning-making, allowing cultural members to enter into health communication processes by voicing alternative perspective of health that are relevant to their context (Dutta, 2008).

The Ebola Virus

The first human Ebola outbreak occurred in Zaire (now the Democratic Republic of Congo) in 1976 (Bres, 1978) and was named after the nearby Ebola River. During the same year, another outbreak with a different Ebola virus species occurred in Sudan (Deng et al., 1978). Since then, over 25 known outbreaks have occurred in Africa with 5 different Ebola virus species identified.

The current Ebola outbreak in West Africa is the largest ever recorded given the number of affected persons, countries involved, and longest persistent transmission. To put this in to perspective, the previous largest outbreak occurred in Uganda in 2000 and involved 425 persons, which is about 1.7% of the affected population in the current outbreak. Early outbreaks were limited to relatively rural and remote areas in Central Africa without spreading to urban areas, which facilitated the effective intervention of control measures (Bres, 1978).

Because of apparent food insecurity and poverty, wildlife animals, including bats and nonhuman primates, are often killed for food and trade (Schulte-Herbrüggen, Cowlishaw, Homewood, & Rowcliffe, 2013). This activity increases human exposure to deadly viruses harbored by these animals and these viruses can easily be transmitted to human when their hosts are processed for human consumption (Fao.org, 2010). Although it is not entirely clear to how animal-to-human transmission works, most Ebola outbreaks to date are linked to a single individual who (or whose family members) had contact with wildlife animals in remote African villages with limited food security (Leroy et al., 2009).

Once an outbreak starts, spread is often boosted by a variety of cultural beliefs and practices. Some of these beliefs attribute diseases to supernatural or evil forces and have specific treatment approaches, including ritualistic practices to appease gods and ancestors (Skolnik, 2011). These views lead many to seek care from traditional or spiritual healers, who in turn use unsafe practices to treat patients. Unsurprisingly, in many outbreaks traditional healers' homes have been an epicenter for disease propagation (Kinsman, 2012).

For many years, researchers, healthcare practitioners and policy makers have implemented health-promoting interventions for diverse groups of people and have reported mixed degrees of success (Garcia, 2006). Health promotion is defined as "behavior motivated by the desire to increase well-being and actualize human health potential" (Pender et al., 2006, p. 7). Such behavior changes may be as simple as getting more sleep or as hard as changing cultural norms. Pender et al. (2006) argue that sociocultural factors, such as ethnic or racial identity, culturally based practices, and socioeconomic standing, are recognized in several health-promotion models, however they are perceived as relatively fixed and not open to healthcare providers' interventions. These factors should be looked at closely because they could be the key to improving health-promotion efforts. To explore this idea, I will review the literature on health promotion messages with respect to culture and construction of meaning.

In this particular Ebola outbreak, misconceptions or erroneous beliefs held by affected populations contribute to poor compliance to health messages. Patients' worries about the treatment conditions, belief that the disease is uncontrollable, and mistrust of outsiders add to the likelihood that they are not compliant to recommendations.

Containment teams have been blamed for initiating and spreading the disease (Nossiter, 2014). These misconceptions have made several of affected villages inaccessible and have led to the destruction of treatment center (Prewitt, 2014) and physical attacks on containment teams, including killing of staff (Deng et al., 1978). In addition, intense disease transmission in hospitals has further amplified mistrust of authorities when communities view hospitals as institutions that kill more than they cure.

Another major issue in containing this outbreak is the profound view about life after death held in some communities. In many cultures the goal of life is to become an ancestor in the spirit world or to join the creator in heaven. "Proper burials" are mandatory requirements for achieving this goal (Gire et al., 2014). Therefore the dead must be prepared and buried in a prescribed way, which must be supported by numerous religious rites.

Poor communication with healthcare providers was also likely to cause a negative effect on patients' compliance (Apter, Reisine, Affleck, Barrows, & ZuWallack, 1998; Bartlett et al., 1984). For example, under the pressure of acting rapidly and having too many patients at the time, health care providers may spend very little time with individual patient, also patients could not understand health care providers' language.

These findings demonstrate the need for cooperation between patients and healthcare providers and the importance of good communication. To build a good and healthy relationship between patients and providers, providers should have patients involved in designing their treatment plan (Gonzalez, Williams, Noël, & Lee, 2005; Vlasnik, Aliotta, & DeLor, 2005), and give patients a detailed explanation about the disease and treatment (Butterworth, Banfield, Iqbal, & Cooper, 2004; Gascón, Sánchez-Ortuño, Llor, Skidmore, & Saturno, 2004).

Cultural theory

According to Leininger and McFarland (2002, p. 47), culture refers to "the learned, shared and transmitted knowledge of values, beliefs, and lifeway of a particular group that are generally transmitted from generation to generation and influence thinking, decisions, and actions in patterned or in certain ways." Kreuter, Lukwago, Bucholtz,

Clark, and Sanders-Thompson (2003) also define culture as a term that refers to "the inherited set of implicit and explicit rules guiding how a group's members view, feel about, and interact with the world. Cultural expressions and, to a lesser extent, cultural values change over time and are influenced by others. Individual and group beliefs about personal control, individualism, collectivism, spirituality, familial roles, and communication patterns contribute to cultural expression."

Ethno-medicine, which explores the manner in which people deal with illness and disease as a result of their cultural perspective (Fabrega Jr, 1977) and emic approaches (sometimes referred to as "insider," or "inductive," approach) which is a process where a researcher tries to put aside prior theories and assumptions in order to let the participants and data "speak" to them and to allow themes, patterns, and concepts to emerge (Lett, 1990, p. 130) have been used to understand how people conceptualize their health, diseases, illnesses, treatments, and symptoms in the context of their culture and experience. For instance, according to Hunt and Arar (2001) although patients and physicians were typically close in their beliefs about the cause and course of diabetes, they highly diverged in their goals, strategies, and evaluations of care.

In fact, although researchers have focused on how people of various cultures define illness, they have paid less attention on how people define their health and maintain it according to their own definition. The most highly elaborated approach dealing with how people evaluate risk according to their own worldview is the so-called Cultural Theory developed by Douglas and Wildavsky (1982).

In the early 1980s, Douglas and Wildavsky (1982) started a discussion about the impact of values and cultural settings on the perception of risks. They suggest that risk

perception and concern about social issues are socially and culturally framed. In other words, the individual's perception and evaluation of risks are shaped by values and worldviews of certain social and cultural contexts.

According to this perspective, what people choose to fear and choose not to fear is not an individual cognitive process such as the perception of threats to health or feelings of uncontrollability, rather, they are socially shared worldviews which means that individuals choose what they fear in relation to their way of life, in relation to the culture they belong to (Mary & Wildavsky, 1982; Thompson et al., 1990; Wildavsky et al., 1997). This may explain why most people during the Ebola outbreak risked their lives to care for loved ones.

Construction of meaning

In response to the Ebola outbreak, health providers had one goal which is to stop the disease. However, they barely looked at how cultural contexts influence health experiences, and therefore in the early stages of the crisis, there existed a lack of responsiveness to the role of culture in the creation of health meanings. The cultural sensitivity approach (Dutta, 2007), which privileges external actors to decide which cultural characteristics are most relevant to health communication theory and practice. This approach suggests that culturally sensitive health communication seeks to maintain power by treating cultural participants as "other" based on expertise located outside of the culture (Dutta, 2007, 2008). On the other hand, the culture-centered approach challenges the cultural sensitivity approach of health communication by finding the links between culture and structure, acknowledging that culture resides within multiple and moving contexts, and looking for experts within the culture's members (Dutta, 2007).

This approach suggests that health communication is the negotiation of shared meanings situated in socially constructed identities, relationships, social norms, and structures.

Meaning that communication messages should be created from within the culture(Dutta, 2008). Exploring health meaning and practices in an affected culture from a culture-centered approach suggests how culturally-based principles can challenge and also help create the foundation for interventions, patient-provider care, education and policy. In other words, the cultural-centered approach seeks to engage cultural participants as partners in health meaning-making, allowing cultural members to enter into health communication processes by voicing alternative perspective of health that are relevant to their context.

The culture-centered approach

In recent years, health communicators and promoters have put an increased importance on understanding ways in which health meanings are constructed, and health practices are constituted within cultures (Airhihenbuwa, 1995; Dutta-Bergman, 2004; Dutta-Bergman, 2004; Dutta-Bergman, 2004; Dutta-Bergman, 2004). Culture is vital to how health is understood and the ways in which health meanings are negotiated; it is the entry point for meaning construction (Dutta, 2008). In order to address a specific disease within a population, Airhihenbuwa (1995) argues that it is first important to understand the beliefs, attitudes and behaviors that underlie a population's approach to health, disease and illness. With that being said, the culture-centered approach articulates the importance of engaging with voices of local communities in co-constructing meanings of health and illness (Dutta, 2008). Conversations with representatives of the local population create openings for them to have their voices into the discursive spaces where they have been neglected from

dominant approaches of health communication. The idea here is to use the culture-centered approach to examine the health beliefs, behaviors, and meaning-making practices of Guinea's local population in regards to Ebola, and to identify corresponding or conflicting health meanings or practices between what is believed to be right and the culture of specific ethnic minorities' culture. The culture-centered approach brings forward these voices from the margins and places them at the center of the discourse.

According to Dutta (2008, p. 28) "central to the culture-centered approach is the understanding that communicating about health involves the negotiation of shared meanings embedded in socially constructed identities, relationships, social norms, and structures." In this sense, the culture-centered approach locates communication about health in the realm of identities, relationships, beliefs and social structures that constitute and constrain health experiences. In the context of this study, the culture-centered approach locates those points of health communication that address the identities, relationships, beliefs and social structures that have contributed to aggravation of the 2014 Ebola outbreak in Guinea. The relevance of the culture-centered approach to this study comes from its ability to connect issues of meaning, culture and health. This makes the culture-centered approach an appropriate method of conducting this specific research project, as the culture-centered approach relies on the basis that community members actively participate in constructing shared meanings and experiences (Dutta, 2007).

Applying the culture-centered approach to examine the Ebola outbreak in West

Africa is a starting point for a shift from the static characteristics of culture and health to
a dynamic and co-constructed meaning that arise from voices of those who have been
previously excluded. The culture-centered approach strives to provide an alternative of

past communication research where there are particular assumptions, theoretical frameworks and research tools that are considered acceptable within the disciplinary body of knowledge, and some that are not (Dutta, 2008). On the same note,

Airhihenbuwa (1995) argues that , even though each culture responds to health differently, there are entities that, through social, political, or economic power, have exercised authority over how health should be perceived and treated. This means that this ideology addresses culture through incorporating cultural concepts into the health communication model and into health promotion interventions in order to make these efforts more effective. What this ideology is missing are the voices and approaches that do not strictly adhere to the model or interventions, but have an impact on those efforts.

Airhihenbuwa (1995) criticizes these authoritative health approaches for reflecting biases that disregard those who do not adhere to the values of the West. This dominant paradigm is problematic in the sense that, although it includes cultural concepts into its methodology, it uses its own models and frameworks as a starting point; it limits cultural values, beliefs, and practices to a set of variables that needs to be included in the messages of the health communicators (Dutta, 2007). Meaning that the culture or its members on whom the efforts are focused are not the center of attention, the outsider health communicator is.

From the above literature review, I want to ask the following research questions.

RQ1: What health meanings do people in Guinea construct regarding the deadly Ebola virus?

RQ2: To what extent do elements of culture (values, beliefs, behaviors) contribute to the health meanings related to Ebola that are constructed?

Chapter 2: Method

To respond to the above research questions, I conducted 14 interviews with people who lived in Guinea during the 2014 Ebola outbreak about their own experiences of the crisis and how health related messages were received by the general population. The reason I chose to use interviews as my data collection method is because I can have richer information. There is more room to ask open questions since participants do not have to write in their answer. I asked the participants to respond to a series of questions designed to highlight their perception with respect to the deadly outbreak the country is experiencing. I submitted the proposal of the study to the institutional review board (IRB) and the methodology was reviewed and approved by the review board of my university.

Designing the interview guide

I formulated my interview questions and procedure to solicit information from participants without sounding like an "academic" or "researcher." As an academic researcher studying in the United States, I realize that my very position can create a power dynamic which could potentially make my participants reluctant to share the information I needed; however, as a culture-centered researcher, I tried to create discursive dialogue through my interview format by positioning myself to listen to the voices of my participants as they shares their health beliefs. I was hoping that the interviews would go in such a way that it would ease the interviewee into a natural conversation and dialogue. Dutta (2007) says that: "The culture-centered approach is committed to the notion that humans have the capacity to understand their environments, to understand the contexts within which their health is enacted, and to act within and with

these contexts to create and recreate their health experiences" (p. 321). The questions were first written in English then translated into French.

Recruitment

To recruit participants, I used convenience sampling; the first entry-point was a health provider I personally know. She has been actively involved in the fight against the Ebola virus in the 2014 outbreak. I contacted her early February 2015 to inform her about the research I am conducting and asked for her help, which she agreed. I explained to her the nature of my study and that I was looking for about twenty participants for interviews that would last approximately 20 to 30 minutes. She asked me to email her the research information forms which I did after I had translated them to French. In the forms, I mentioned that participation in the interviews was voluntary and that participants will not be identified. However, conversations would be recorded (audio only), and later transcribed and analyzed. I also explained to her that all interviewees would be referenced anonymously in the write-up of my study and that I would only refer to participants by pseudonyms. In late May 2015, she (my initial contact) provided me with a list containing names and contact information of people who are interested in participating in the study.

Study Participants

I interviewed a total of 14 participants. I was 6 participants short to what I was expecting, but I decided to stop interviews at 14 because I already have sufficient information for the study. Also, I had fair representation from all ethnic groups I wanted to include. According to Kuzel (1999, pp. 31-44) 12-20 interviews are generally accepted as adequate for qualitative research.

All the participants in this study were between 25 and 56 with an average age of 41; lived in Guinea during the 2014 Ebola outbreak; have been exposed to the communication campaign conducted by the government and health care organizations, and were able to respond to the interview in French language. The reason for this is to have opinions from people who have personally experienced the Ebola outbreak, and because although Guinea has more than 27 dialects, French is the official language. Therefore, I was not limited to a specific population of the country due to language barrier. I was able to capture the perception of the 4 major ethnic groups in regards to health related messages. Each ethnic group has its own cultural norms and its own indigenous language. I had 6 participants from the largest group, the Fula (40%), who live mostly in central Guinea, 3 participants from the Mandingo ethic group who account for 30% of the population and live mostly in eastern Guinea. 2 participants from the Sussu group (20%) who live in the coastal area of northwestern Guinea. The people living in the southern (forest) part of the country made up the rest of the minority ethnic groups accounted for 3 participants. I grouped the southern (forest) part minority ethnics groups into one group because of their geographical location and cultural similarities.

Conducting the interviews

To collect the data I conducted in-depth interviews over the phone in French and audio recorded them all. Although I conducted all interviews over the phone, I took notes and wrote a short analysis of how I felt immediately after each interview. While conducting the interviews, I did not present myself as an expert or health campaigner who communicates with preconceived understandings of problems and solutions. Rather, I tried to establish a two-way relationship with participants as we both engaged in

construction of knowledge and meaning. I know that dialogue is not always guaranteed, therefore I had to rely on establishing a relationship with participants and making an attempt on my part to bring myself to a point where, at least on my side of the conversation, I could enter into dialogic engagement with participants.

The semi-structured nature of in-depth interviews looked like a conversation, and therefore provided rich insight into the interviewees' experiences and the meaning they attach to them. I conducted 14 interviews ranging from 22minutes to 60 minutes; however 5 to 20 minutes of that was ice—breaking. I initiated random conversation at the beginning of each interview to set participants at ease allowing us to have a "friendly" yet focused conversation.

Before each interview, I called each participant directly on their cell phones provided by my first contact to schedule the interview and discuss the most convenient channel to conduct the interview. My preferred channel was a Skype video call, followed by a Skype voice call, Viber voice call, and lastly a regular phone call. On that first call, I introduced myself and explained the purpose of my study; I told every participant that the entire interview will be recorded and I ask for their verbal agreement.

I went on to read the informed consent form to them and asked for their agreement on that too. Most of them did not care about the content of the informed consent form; I had to explain to them that informed consent is mandatory and that I have the obligation to read it to them. Out of the 14 participants, 3 were available to be interviewed immediately. During the interview, I asked a few questions about their demographic information to get their cultural identity. In Guinea, last names indicate to what ethnic group an individual belongs. It was easy to categorize participants since there

are very few last names. For instance, the Fula (40%) mainly share four last names. After the first set of questions, I asked some general questions about their perception of the Ebola outbreak followed by open-ended questions to understand how the interviewee perceives health messages sent by the government and health organizations. A copy of the interview guide is included as Appendix A.

Data Transcription and Translation

I began transcribing the interviews as I conducted them. Doing so helped me identify areas of improvement such as areas where I could have asked a follow up question that I should have asked but I did not. Since the data is collected in French, and French is my first language, I transcribed the interviews in French. With participants and me speaking the same language, no language differences were present in data gathering, transcription and during the first analyses, so the first coding phase stayed closely to the data. Polkinghorne (2007) argues that qualitative research is considered valid when "the distance between the meanings as experienced by the participants and the meanings as interpreted in the findings is as close as possible" (pp. n/a). Moreover, the relationship between thought process and language has been studied from different scientific perspectives, e.g. in psychology and in the philosophy of language (Jackendoff, 2009). As a bi-lingual, I can affirm that speaking and reading in English leads to thinking in the English language as well. Also, translation of quotes may be a challenge because it can be difficult to translate concepts for which specific culturally bound words were used by the participants. Therefore, I chose to conduct the first analysis in French in order to avoid potential limitations in the analysis.

Chapter 3: Data Analysis

To analyze the data I collected during the interviews, I conducted a theme analysis based on grounded theory methodology where I inductively explored the interview data in order to extract concepts and theory based on the cultural and health beliefs of participants and their understandings of the Ebola crisis. The practice of analyzing data from a constructivist grounded theory perspective is one way of approaching data within the larger family of grounded theory methods (Charmaz, 2003). I believe that the constructivist grounded theory is the most appropriate method to guide my analysis and to engage in substantive theory-generation from interview transcripts because constructivist grounded theory analysis is less procedural and more multidimensional than the previous approaches taken by Glaser, Strauss and Corbin (Charmaz, 2003). Charmaz (2000) argue that with this approach, data is created from the shared experience of the researcher and participants and that meanings are contextual. Moreover, this perspective lines up well with the emphasis of culture-centered approach to engage in co-construction of meanings with participants to find the voices that are absent in dominant society (Dutta, 2008).

While Straus & Corbin (1990, 1998) define grounded theory as a qualitative research approach that systematically guides data analysis by emphasizing theory generation from data, Ryan and Bernard (2003) state that constructivist grounded theory provides tools for interpreting the themes that emerge from texts, taking into consideration the experience of the researcher as he or she becomes increasingly "grounded" in the data. It requires the researcher to read the data multiple times to

identify categories and concepts that emerge from the text and then find the relationships that lead to substantive theory generation (Ryan & Bernard, 2003).

Constructivist grounded theory provides tools for interpreting the themes that emerge from texts, taking into consideration the experience of the researcher as he or she becomes increasingly "grounded" in the data and develops progressively richer concepts of how these emergent themes link together to formulate theory (Ryan & Bernard, 2003). It requires the researcher to read and reread the data in order to identify categories and concepts that surface in the text and subsequently find the relationships that lead to substantive theory generation (Ryan & Bernard, 2003).

In the case of this research, the constructivist grounded theory approach directed the examination of the discursive themes that emerged from both interview transcripts and my notes; it acknowledges that both me as a researcher and participants are contributors in the meaning-making process (Charmaz, 2000; Dutta, 2008; Dutta & Basu, 2007, 2008; Dutta-Bergman, 2004, 2004b; Strauss & Corbin, 1990; Yehya & Dutta, 2010). Furthermore, because constructivist grounded theory requires a continuous examination of the data, I should engage in reflexive thinking by discussing the understandings of emergent themes with participants for validation (Lincoln & Guba, 1985). However, in this case I was unable to do so because participants were not available for themes discussion.

I started the transcription simultaneously as I was gathering the data from interviews. I constantly compared the themes that emerged from the interviews. I used open coding, axial coding, and selective coding, in that order, to identify themes from the data.

During the open coding process, I looked for distinct concepts and categories in the data, which formed the basic units of my analysis. To do so, I broke down the data into first level concepts and second-level categories. At this stage of the coding process, there were no restrictions in the sense that I was able to freely contemplate the meanings of the words, phrases and sentences that emerged from the text (Lindelof & Taylor, 2002; Strauss & Corbin, 1998). I identified themes and concepts that could be easily labeled and categorized; they consisted of groups of sentences and phrases that all talk about the same idea.

After the open coding process, I started the axial coding where I re-read the transcripts with these concepts and categories in mind to confirm that they fit and represent the data then I explored the relationship between the concepts and categories specifically causal relationships via a combination of inductive and deductive thinking. (Lindlof & Taylor, 2002). The idea here was to inter-relate the concepts and categories that emerged from the open coding process in order to develop broader and more meaningful categories. This integration of concepts and categories here consisted of making connections between categories, considering the conditions, context, causes, consequences, and interactions that influence what is being studied (Strauss & Corbin, 1998).

After core concepts emerging from the coded data concepts and categories have been identified through open and axial coding, I started my final stage of the data analysis. I used selective coding to identify a core concept under which all others themes will be covered. During the selection process, I eliminated all the themes that cannot be covered by the core themes. The goal is to link all the categories together under a single

storyline that reflected the core concepts that existed in my study (Ryan & Bernard, 2003). Having done the open, axial and selective coding, I linked the outcome to my research questions.

Chapter 4: Results

The results reported in this chapter represent the conversations I had with my participants, my personal notes and my own contribution to the construction of meaning as a qualitative researcher. Construction of health meanings regarding the Ebola virus was the focal point of these conversations. The goal here was to use the culture-centered approach to capture the voices of affected population in order to understand their perception from within their culture. Interrogating the structures that shape health beliefs and understandings, especially those related to Ebola was an opportunity to foreground the voices of those who are affected in a discursive space from which they have previously been absent.

The research questions and my interview guide served as a starting point for my data collection. During the whole process, I kept in mind that the culture-centered approach focuses on opening up spaces for alternative ways of knowing, and therefore I entered a self-reflexive mode to question my contribution, my biases and the most basic assumptions that is inherent to me as a researcher. In this self-reflexive mode, I questioned the research questions that I created and how they may create power-imbalances as I attempted to dialogue with cultural participants. I was afraid that I would passionately seek the answers to these questions and disregard the true story being told. And if that were to happen, it would mean that I am not being culturally-centered at all. I was afraid that I might set myself up to go into these interviews with the premeditated mindset of someone who is going to ask questions, get the answers I wanted, and leave.

The culture-centered approach is meant to open up spaces for alternative ways of finding answers; in this context, a premeditated mindset can be seen as a power structure

that reinforces the dominant paradigm by marginalizing the voices of the subjects.

Therefore, it is important to question oneself position. Dutta (2008) suggests that in order to open up spaces for alternative epistemologies, the researcher must question his or her expertise and the basic assumptions that are inherent in the position, privilege, and power that exist in the role of the researcher. During interviews, I consistently reminded myself to listen to the stories of the participants with whom I was engaging in dialogue and to keep myself from specifically asking questions without a proper transition that makes the interview looks more like a friendly dialogue. By doing this, I began to see myself in the participants' stories and in the emergence of co constructed meanings regarding culture, health beliefs, and Ebola. In building this solidarity with the participants, I realized that my initial research curiosities were being satisfied through the intricate and dynamic web of meanings that emerged from our dialogues. Therefore, the themes presented in the following sections do not necessarily answer my research questions in a clean and categorical manner; however, one can see that answers to each of the research questions are intertwined in and through the description of these themes.

RQ1: What health meanings do people in Guinea construct regarding the deadly Ebola virus?

When analyzing the data, three main themes emerged with regards to research questionsRQ1: (1) Denial and Fatalism, (2) Mistrust and (3) Fear.

Denial and Fatalism

Religious beliefs can play a large role in affecting how people perceive their health and their health behaviors (Davis et al., 1994; Ellison & Levin, 1998; Ferraro & Koch, 1994; Gall et al., 2005; Koenig, 1999; Sutherland, Hale, & Harris, 1995). Along

with the well-documented positive effects, researchers have also suggested that certain religious beliefs may hinder health care utilization and health care behaviors leading to poor health outcomes. Sometimes, beliefs and practices of various religious groups can conflict with the recommendations of medical professionals, creating conflicts and misunderstandings in patient education and a lack of adherence to treatment or prevention (Gall et al., 2005; Powe, 1995). Based on previous research, a person with fatalistic beliefs perceives health as being beyond one's control and instead dependent on chance, luck, fate, or God (Powe & Finnie, 2003; Straughan & Seow, 2000). How these beliefs may impact health decisions and behaviors should be looked at closely.

In the context of Ebola outbreaks, some people ascribe the disease to evil spirits, witchcraft, sorcery or curse. These views lead many to seek care from traditional or spiritual healers, who in turn use unsafe practices to treat patients. Some do not seek treatment at all. Fatalism or the perception that every person has a predetermined life path is also considered by many people in Guinea to be the cause of Ebola. Fatalistic thinking about Ebola is based on the idea that the acquisition of the disease is outside an individual's control, and that there is little to nothing an individual can do to change that. In this context, the individual's behavior has little to nothing to do with the outcome of the disease, and therefore any attempt to control it would be pointless.

For instance, Fatou (Pseudonym) in her late 40's lost her entire family. She lived with her husband and four children in a modest house in Conakry, the capital city of Guinea. In May 2014 when her husband got infected at the clinic he worked at while treating an undiagnosed Ebola patient, it was believed that he was cursed by the neighbors over a land dispute. Instead of seeking medical treatment for the husband, they

called his mother to mediate the conflict with the neighbors and ask forgiveness in exchange to her son's health. A couple of days later, the husband's mother travelled from her hometown 250 miles away to Conakry to take care of her son and help resolve the conflict with the neighbor. Within two weeks, the entire family of seven was sick except Fatou. After the death of the husband, the government sent a medical team to Fatou's house where she was caring for her sick children and mother in law. The entire family was forcefully taking to an Ebola treatment center. One after another, Fatou watched them die.

"It was a very difficult moment. I was really afraid for my life.

There were some rumors about the origin of the disease, and that there is no cure. They took me to the area of the treatment center for suspect cases. After two weeks, they came for my blood test, it was negative. I came out. I am alright; but I was kept in isolation for 21 days before being declared Ebola free" said Fatou.

She says:

"I am very lucky to have survived Ebola but I wish I had died because now I have nothing left. I am learning to live a new life without my husband and my four children. Now there is so much emptiness in the house..."

When I asked her what she thinks about her being the only survivor. Fatou responded:

"You know we all have our destiny already sealed by God, if our time to die has not arrived, it doesn't matter what we do, we will not die, but if the time has come, there is nothing you can do, you can hide in an eggshell, death will still find you".

Because Guinea is also predominantly a monotheist culture throughout the country, the concept that God controls all is a contributing factor in the fatalistic view. From a religious perspective, because God controls everything, it is faith which is essential to recovering from illness. Fatou believes that Ebola is a will of God and we have no effect on the course of events.

To the question about what heath messages she remembers from the government, she said:

"The government is wasting their time and they know it. They said that Ebola has no cure. If there is no cure then why bother yourself? If your death is around the corner, there is nothing you can do. You see. I lived in a household with 6 sick people, I cared for them while they were ill, but I did not get Ebola, when my husband died, out of the hundreds of people who attended his funeral only very few got sick."

Although she does consider herself lucky, she doesn't see the cause-effect of the disease. It appears that she doesn't understand the contagious aspect of the disease based on her own experience. We can see that Fatou's family did not follow any of the recommendations of the government because they don't believe that the disease is contagious and that with some simple measures such as washing hands with bleach, avoiding physical contact, early treatment of sick people can save lives.

Fatou falls into the denial and fatalistic theme; those who believed that Ebola is not a real disease; instead, they believe it is fatality. They think Ebola is a curse to those who have done something wrong.

Along with Fatou, 3 other interviewees did not consider Ebola as an illness; rather it is viewed as a curse, punishment or a call of God. They did not accept a diagnosis and even believed they cannot change the course of events or did not want to change. Instead, they can only accept circumstances as they unfold.

Bah, 36 years-old, woman said:

"I really don't care if I die today, God knows what is best for us; if he wants me there [heaven], I am ready to go. If Ebola is what takes me to God, I am fine with that. No one can go against the will of God you know..." On that same note, another participant, Sory, a 49 years-old male responded to the question "Did any of the government messages conflicted with your cultural norms and customs?" with:

"You know, we have never seen something like this, I think the government is confused; they don't know what to do. Remember when it all started? They told us that Ebola has no cure, but they still want us to go to a treatment center and die there. To be honest with you I prefer to die at home next to my relative then over there. If the government cannot solve this crisis, the only option is to ask the God for forgiveness."

However, not all fatalistic talks were absolute. One participant had an overall fatalistic perspective, but at the same time makes some positive assertions about the efficacy of behaviors for changing health outcomes. Sow, a male participant in his late 40's made a fatalistic statement about people getting infected in public places:

"You know some people really don't look for Ebola, Ebola comes to them without invitations. Imagine someone going to the market to buy groceries, you need to take a bus, and you know how crowded our buses are, even if you hire a taxi, you will share it with four other unknown people. You see what I am saying; you don't know who's sick, and who's not. So it is almost impossible to fully protect yourself from Ebola and live your normal life. The best you can do is to limit your moves and make sure you have a jug of bleach wherever you go [loud laugh]."

This suggested that behavior changes might not be a lost cause to prevent people from the disease, but realistically it is a hard task to achieve.

Mistrust

Some participants are conscious that Ebola is real but they believe the government is behind it. According to Nossiter (2014), mistrust of governments and foreign workers has helped to speed up transmission chains in communities, where containment teams have been blamed for initiating and spreading the disease. These misconceptions have rendered dozens of affected communities inaccessible and have led to the destruction of

treatment units and physical attacks on containment teams, including killing of staff (Prewitt, 2014). When I interviewed Jean-Pierre who is in his early 30's, he expressed the belief that Ebola was imported by the government to control the population and harvest organs for western countries. Jean-Pierre is from Lola, a city in the southeast corner of Guinea where the epidemic started. Jean-Pierre said:

"In Lola, we have been eating bush meat for centuries and nothing like Ebola ever happened; now the government and NGO's are telling us that we should not eat bush meat. It doesn't make any sense."

From a culture-centered standpoint, forcing people to adhere to scientific explanations of causes, medical descriptions of symptoms, and bio medically approved treatments of diseases is viewed as a mean of exercising a moral domination over cultural understandings of health and disease (Dutta, 2008). This moral domination implies that experts are located outside a patient's culture, implying that foreign doctors or foreign health organizations know what is best for the culture. Such an implication devalues culturally-based understandings and minimizes the involvement of the affected population in understanding and fighting a specific disease or health issue (Dutta, 2007).

Pascal, 28 years-old lives in Conakry with his uncle. There are 13 people living in his uncle's house. His uncle, the head of the household is conscious about the seriousness of Ebola.

"When this all started [Ebola outbreak] my uncle instructed everyone in the house to avoid shaking hands with unknown people, avoid crowded places and wash hands with bleach more frequently" said Pascal.

He also said that they were instructed by his uncle not to let any government representative or Ebola response team come close to their home; especially the decontamination team. When asked why they would not allow Ebola response team near their home, Pascal responded:

"... they come to houses for so-called disinfection, but sometimes they are spraying the virus in people's homes. We've heard of entire family dying just days after their house was sprayed. We don't want to take any risk because we cannot trust the government and all these foreign organizations."

Although Pascal's family is taking measures to avoid the Ebola virus, they do not follow any government recommendation as they do not trust the government. However, they follow whatever the head of the household says. According to Pascal, his uncle makes all decision when it comes to the health of those living under his roof. "My uncle is the boss of the family; we follow what he says because if something goes wrong, he is the one who takes care of it. We trust him and respect him" said Pascal with a very convincing tone. This statement goes in line with how people co-exist in collectivistic societies where they value family cohesion, cooperation, solidarity, and conformity (Skillman, 2000), and thus people is these societies tend to make more references to others, emphasize group goals, and follow the expectations and regulations of the group (Desai, 2006). Merzel and D'afflitti (2003) support this logic, and they said that the rationale for the community-based approach to health promotion stems from the notion that individuals cannot be considered separate from their social setting, and that context is interdependent with the health and lives of individuals in the community, and hence the community as a whole.

It is also interesting to note that I observed people who were better educated knew more of the cultural beliefs and practices that affect or hinder prevention plans. Like Pascal and Jean-Pierre, Evance, 25 years-old college student is from the Southern part of Guinea. He believes that Ebola is real and follows all the prevention rules recommended by the government. "In my house, we all agreed not to shake hands with anyone, avoid crowded place and we always wash our hands with bleach, soap and water" said Evance.

As to what health messages he recalls, he mention an ad on the radio telling people how to protect themselves from Ebola but using bleach and reporting any suspect case to the authorities. Although he agrees that those ads could be effective, he believes that "People have the impression that they are not getting all the necessary information or they do not agree with the prevention measures and medical procedures being imposed on them". He went on to add:

"The problem is not that people don't accept modern medicine and prevention practices, it's that they do not trust foreign people coming into their country telling them how they should behave. You know people don't like change, especially ancestral practices. It takes time to convince them".

Evance thinks that the government should target influential people such as imams, priests, and local district authorities to relay messages to the general population for better adherence to the prevention plans in place.

"In our culture, health is not personal, it is a family matter; targeting people individually is a waste of energy and time. The government should approach the elderly and religious figures first. People are more likely to believe something passed on by a community elder, an imam, or a pastor than a government representative... not to mention a foreign doctor [hysteric laugh]".

As I mentioned earlier, Guinea is mostly a collectivist society, therefore the elderly and the religious leader have almost full obedience from the general population. Collectivism, according to Hofstede, "stands for a preference for a tightly knit social framework in which individuals can expect their relatives, clan, or other in-group to look after them, in exchange for unquestioning loyalty(Hofstede, 1985, p. 347)". Power distance in collectivist societies is defined by Hofstede as "the extent to which the members of a society accept that power in institutions and organizations is distributed unequally"(Hofstede, 1985, p. 348). In other words, less powerful members of a society

accept their lower status and authority roles vis-à-vis the more power powerful members. Specific to the current Ebola outbreak, people of less power are willing to follow whatever the people with power say. Taking this into account, influential people are valuable assets for the Ebola response team. Moreover, members of a culture will share certain mindsets that make them interpret situations and events in similar ways, this reinforce the importance of using local influential people at the front line of the battle against the Ebola virus.

The culture-centered approach would allow for a deeper understanding here of how structures such as social status or hierarchy affect overall community perception of a health issue. Within the context of the current study, while some participant expressed mistrust toward the government, they suggested that the elderly and religious would be a more efficient channel to get the health messages to the general population. Stephens, Rimal, and Flora (2004) point out that since participation and membership in community organizations are voluntary, health messages that come out of community organizations are likely to be considered with greater trust.

Fear

Kadi is 34 years old single woman, lives in Conakry. She is a nurse at a local clinic few blocks away from her home. As a nurse, Kadi knows that Ebola is real and highly contagious. When the outbreak started, Kadi received a patient who was found to have contracted the deadly virus. The entire staff on duty at her clinic was put in quarantine for 21 days. Luckily no one was infected. Kadi feared for her life and witnessed firsthand the conditions in which Ebola patients are treated in treatment center.

She describes the condition as "non-dignifying and scary". With a sad and low voice, she says:

"When you are confirmed positive, you family will never see you again. No one is there to support you, you are on your own and that's terrifying. When you get there, they [the medical staff] dehumanize you, you become a subject. I will never let anyone in my family experience such treatment. It is terrifying you know..."

In fact, when her brother got infected while attending a funeral, Kadi spoke-up and did not allow her brother to go to a treatment center, instead, she offered to treat him at her home. She gave him IVs every day to help him fight the virus for over 3 weeks.

She followed every procedure she learned at her clinic on how to handle an Ebola patient.

"When my brother got ill, I knew it was Ebola, I immediately isolated him in a room. I was the only one who gets to come close to him. I wore gloves and I was very careful. It was hard for the entire family, but at least we had peace in mind that if he dies, he will receive a proper burial, even at the cost of me dying with him".

Slovic, Fischhoff, and Lichtenstein (1980) find that people are more afraid of a risk if it puts them in personal peril than if it threatens somebody else. In this case here, Kadi was more fearful of her brother dying in the hands of unknown people than her own death. Fear of a statistically lower risk (people treated by professionals) led her to engage in a behavior that has a much higher risk (caring at home), and that fear could cost her life.

In many cultures the goal of life is to become an ancestor in the spirit world or to join the creator in heaven. "Proper burials" are mandatory requirements for achieving this goal. Hence, the dead must be prepared and buried in a prescribed way, which must be supported by numerous religious rites. According to these beliefs, the person might be subjected to severe torture, rejected by the ancestors, or transformed into wandering ghosts or totems if these rules are not followed. In some cultures improper burials are

only reserved for witches and sorcerers, whose bodies are sometime subjected to burning, fed to carnivores, or secretly disposed of in isolated places and away from family graves (Gire et al., 2014). This could explain why Kadi and her family did not seek care for her brother at a treatment center. When I asked her about what government recommendation went against her cultural norms, she responded:

"The government is not doing anything right, they don't have any moral value, and no one will let his loved one buried in plastic bags by unknown people without any relatives and traditional rituals. It is really terrifying. That's why my family and many other families stayed away from seeking health care or even notifying the government of Ebolarelated deaths."

Löfstedt (1996) suggests that the more we trust the people who are supposed to protect or inform us, the less afraid we will be. The less we trust them, the greater our fears. If the public trusts the government to deal with a crisis effectively, take care of the deceased people the way they would be treated outside of the Ebola epidemic, there will be less fear, less hidden cases and more adherence to prevention plans.

According to Chan (2014) burial rites and mourning ceremonies appear to be the most significant transmission channel of the disease. In some settings they account for roughly two thirds of all new cases of Ebola in the 2014 outbreak. Kinsman (2012) stated that the risk is high because these ceremonies, which bring hundreds of people in close contacts with highly infectious corpses, most often require people to follow long-standing rituals, including keeping corpses for three days.

In conclusion of research question RQ1: What health meanings do people in Guinea construct regarding the deadly Ebola virus? The health meanings constructed in regards to the Ebola virus are diverse. During the first part of the interview, I was under the impression that all my participants did not consider Ebola as an illness. Instead, it is

viewed as a curse or a will of God. One participant said: "Ebola is not an illness, it has a spiritual connection. We have sinned against God, and he has brought his fury on us. So we have asked the ancestors to appeal to God on our behalf".

Later on, some participants perceive the disease as a hoax. They believe that it is a government plan to earn financial support from foreign countries. For example, Michelle, in her late forties said that:

"The government doesn't want this crisis to end; they are making good money out of this. Where are all the millions of dollars of foreign aid? Definitely not in those pitiful treatment centers. You know, people don't even want to seek treatment there because no one comes out alive, you know taking a family member there is like sending him to a slaughterhouse. I hope by now they have enough money so they can end this disaster. It's pathetic".

Other participants are conscious about the danger of the disease. Although they do not necessarily follow government recommendations, they do have some sort of prevention plan (e.g. washing hands with bleach, avoiding physical contact with unknown people, etc.)

In most cases, health meanings are created based on superficial observation, past experience and cultural value. For instance, when Fatou said that she survived Ebola because it was not time for her die and that not everyone who attended her husband's funeral got sick, she was making sense of the disease based on her own observation and beliefs.

Some participants like Pascal are followers of the elderly's rule. People like Pascal would not think for themselves or act on an individual basis; instead they will follow what they have been told. Generally they receive instructions and guidance only from a person they trust, usually the head of the household.

RQ2: To what extent do elements of culture (values, beliefs, behaviors) contribute to the health meanings related to Ebola that are constructed?

During the data analysis, I found that all participants from the Fulani ethnic group were concerned about burial practices imposed by the government. They would not change their ancestral burial practices even if it would cost them their lives.

Kadi is good example, as a nurse, she is aware of the danger, but she is willing to risk her life to attempt saving her brother from being buried alone.

Kadi said that: "I am certain, I am not the only one who is willing to die trying to save a family member; I am sure many other people around here will do the same. You know how important family is so I am sure I am not telling you anything new."

Kadi, like 3 other participants from the Fulani ethnic group were more concerned about life after death than contracting the Ebola virus. Barry 48 years-old women said

"You know what is scary about Ebola, it is not the fact that it will kill you, one day you will die one way or another, it is scary because when you die of Ebola, you don't get a dignifying burial. They put you in plastic bag then throw you in a hole. That's it! ... No one wants that. That's why people are scared of Ebola and scared reporting Ebola cases to the authorities."

On that same note, Alpha 54 years-old, with a strong and firm voice, he said:

"The government is asking people not to personally bury their loved one. That's just insane, no one will follow that. Do you think the president himself will let a member of his family buried by unknown people in a remote grave? Let me tell you that will never happen! We have to follow our ancestral practices even if it's at the cost of our lives here on earth."

Alpha seems to be shocked by the authorities' burial program, by the tone of his voice, one can tell that Alpha would do everything possible to challenge anyone trying to stop him from practicing what he believes is key for a human to be accepted in the ancestors' world.

Sory said:

"... to be honest with you I prefer to die at home next to my relative than over there [Ebola treatment center]. If the government cannot solve this crisis, the only option is to ask the God for forgiveness."

All participants from the southern part of Guinea did not deny the existence of the disease. Although they distrust the government and contrarily to the Fulani ethnic group, they all have their own prevention plan, two participants out of three from the southern part of the country argue that the government started this epidemic because people in this region have been living this way, eating the same food for centuries and nothing like Ebola had never happened. Jean-Pierre said: "In Lola, we have been eating bush meat for centuries and nothing like Ebola ever happened; now the government and NGO's are telling us that we should not eat bush meat. It doesn't make any sense."

Pascal reinforces with: "You know, they come to houses for so-called disinfection, but sometimes they are spraying the virus in people's homes..." He also said "The government's plan is to harvest organs for foreign countries, that's why they introduced this Ebola thing. When someone is suspected to have Ebola, they steal him from his family, collect his vital organs and bury him without any ritual so people won't know what they did to the dead body."

The one last participant from this ethnic did not blame the government for causing the disease; however, he stated something along the lines that the government is asking too much from the population when it comes to prevention plan and behavior changes.

Evance mentioned that "...they [people] do not agree with the prevention measures and medical procedures being imposed on them...,You know people don't like change, especially ancestral practices. It takes time to convince them".

The Sussu and Mandingo ethnic groups have shared opinion. While they are aware of the danger, they do want to stay away for everything related to Ebola. One Sussu participant (Pseudonym Momo) said: "They [Ebola response team] can do whatever they want, as long as they don't come to my house, I don't really care. I am tired of hearing the same stories over and over again on the radio. May God save this country and its people".

Although this participant may not seem to care, he prayed for the country and its people, indicating that he do care about the outcome but tired of hearing the same stories, I wanted to include him in the fatalistic group, however, he did not give me enough indication that he would not do something to avoid being infected by the virus.

Another participant Kabinet said: "You know all this is politic, politic is dangerous, and so is the disease. I don't want to get involved or involve my family. Soon it will be over and everything will come back to normal. Right?" It appears that this participant by the tone of his voice has had enough. Although he seemed open, it had a feeling that he was not fully opening up to me. When I asked him about what he thinks the government should have done different in managing this crisis, he giggled and said "Nothing, this government is perfect". I was confused as to whether he was being sarcastic or honest. I think is will never find out with certainty, but when I look at the interview transcript, I notice that it was the shortest. That's probably because this participant was more reserved than the rest.

Kaba, in his forties belongs to the Mandingo ethnic group, he is also nonchalant about Ebola, when I asked him about the prevention plan in place in his household, he said: "We don't really care that much. [Long pause] I don't want to live in fear. [Long

pause] We pay attention to who we get in contact with, clean hands but that's about it.

[Long pause] You know this is too complicated to understand."

When it comes to conflict with his culture, Kaba said that: "It is hard not to shake hands with people, especially when they initiate the handshake, it is very rude not to give your hand".

All participants agreed that culture played a crucial role in how people perceived the disease. It has also impacted the way people responded the prevention plans. When the ones did not believe in the existence of the disease, others did believe but because of certain customs, they were unable to follow public health safety recommendation. For example, some find it hard to report suspected cases because they may never see the sick person again, other are more concerned about the practicality of daily activities (i.e. shaking hands, riding public buses, attending weddings and other social meetings).

Chapter 5: Discussion

The 2014 epidemic in West Africa has been the most severe Ebola virus disease outbreak ever reported according the World Health Organization. My contribution aimed to find out through the lens of culture-centered theory what health meanings are created in regards to the 2014 Ebola outbreak and how those health meanings are created in Guinea.

This final chapter brings all parts of this study together to provide a summary of what I learned, what limitations I encountered in conducting the research, what remaining questions I have, where I would like to go from here, and contributions to the field of health communication.

This study brings to light the voice of those who are primarily affected by the Ebola epidemic. It allowed a better understanding of why people react in certain ways when it comes to healthcare. During this study, we found out that not only health related practices are relevant for epidemic prevention or containment, cultural factors contributes as well. For instance, all Fulani participants were more concerned about burial practices and life after death than getting sick. To most of them, an illness is inevitable and it is a will of God, therefore there is nothing they can do about it, however, they can make sure that when someone dies, that he is buried according to ancestral ritual in order to be accepted in the world of the death. Having this in mind, health campaign promoters could better address these problems as understood through the active participation of those who are directly affected in the processes of meaning-making. They could widen the scope of their campaign to address not only standard hygiene rules, but also cultural factors that go beyond health care. For example, by acknowledging the need to incorporate local burial

practices yet keeping them safe, health promoters may gain the trust and the collaboration of the local population who may perceive the promoters as helpers rather than heartless people. As mentioned by one of the participants, "these heartless and disrespectful people show up in our houses with armed guards to tell us what to do; of course we don't fight them, but the moment they leave, it's like they never came". This statement reinforces the idea that health communication should move away from a top-down approach to informing and instructing communities to a more community-centered approach that tailors the information to needs, engages in discussions, and builds trust with the communities. Dutta's culture-centered approach is a valuable resource in gathering culturally constructed meanings associated with diseases and I believe that this approach to health communication should be the foundation of any health communication strategy. Approaching global health issues with an approach that integrates cultural understanding such as Dutta's culture-centered approach and knowledge of communication is essential to designing interventions that will help save lives.

Limitations and future directions

All interviews were conducted over the phone. Therefore, it was impossible to capture body languages, visual cues or facial expressions of participants during the interview. Although, these data may not always be essential or helpful, as nonverbal behavior can easily be misinterpreted (Burnard, 1994; Chapple, 1999; Sturges & Hanrahan, 2004) and these data may not actually be used extensively in analyses that rely more on transcripts rather than on field notes; there may be ways of compensating for the absence of nonverbal responses, such as intonation(Opdenakker, 2006), hesitations, tone of voice and sighs (Sturges & Hanrahan, 2004). However, absence of visual cues is said

to have a number of effects, including the loss of informal communication and contextual information, the inability to develop rapport or to probe, and the misinterpretation of responses (Chapple, 1999; Creswell, 2012; Opdenakker, 2006; Sturges & Hanrahan, 2004; Sweet, 2002). Future research should explore other ways of conducting interviews that would allow researchers to capture those visual cues and body languages and make good use of the non-verbal data during the analysis.

Future research would not only benefit from engaging a greater number of cultural participants, but also a wider variety of voices. I had only interviewed 14 participants, and of those 14 participants, there only 3 participants from southern part of Guinea where the epidemic started. All my participants live in urban areas and have some level of education; it would be beneficial if future research could include participants from rural area as they have a different lifestyle, different levels of health literacy, and different level of education than those who live in urban areas. Widening the pool for interview participants to include all level of education, social statuses, would allow this study to get a clearer understanding of the contextual and structural processes that surround the construction of health meanings within Guinea's individual sub-cultures.

Furthermore, while this outbreak was unique in that it crossed countries and ethnic borders, in this study, I focused only on Guinea. I did not examine how the meanings made in Guinea might have translated in other affected countries. The culture-centered approach suggests that we can't necessarily generalize the findings to other cultures (Dutta, 2008).

Finally, conducting this research in French caused some translation limitations on the report of findings. Couple of meanings got lost in translation, and it is difficult

(sometimes impossible) to convey those meanings in words that do not fully translate the intent of the participants. Even though I consulted with many English-French bilinguals, there were still meanings that I felt were not completely conveyed through the translated report.

Contribution to the field of Health Communication

In considering all the limitations of this study, I still believe that this research provides a starting point from which future culture-centered research can build on both theory and practice in the field of health communication especially within the sociocultural context of Guinea.

This research is particularly noteworthy in considering what it contributes to understanding multi-cultural health issues from the perspective of those who are affected by using the culture-centered approach. It brings new light to how the culture-centered approach can be used in locating beliefs about a specific disease within overall health understandings of sub-cultures within a bigger culture. It was also worth noting that this study allowed exploring how sub-cultures experiencing the same health issue perceive and respond differently to that particular issue.

It is no doubt that the culture-centered approach excels at generating alternative understandings of health communication; this study presents how alternative understandings of a culture's beliefs about a specific disease can emerge from dialogue with cultural participants. There has been an emerging acknowledgement that community participatory processes can provide important avenues for disseminating health interventions, particularly in the context of ethnic communities. On that regards, Dorsey (2003) states that health communicators have increasingly focused on the community

context of health care as they have attempted to address the locally situated nature of health issues. Scherer et al. (2003) also argue that there is an increasing awareness that local communities must to be at the heart of health promotion efforts. The idea is that communities can serve as channels of communication about health issues. The formal and informal networks within a community offer ways for creating and sustaining beliefs, attitudes, and behaviors within communities (Beaudoin, Thorson, & Hong, 2006). The culture-centered approach, as used in this study, provided understandings of what health meanings are created, how those health meanings are created with regard the 2014 Ebola outbreak and most importantly how critical it is to understand to health issue through the lens of those who are affected. We have seen in this study that there was no consensus as to how the entire crisis was perceived. For instance, the Fulani ethnic group was worried about burial practices; most of the attention was focused on that concern and less attention was given to prevention. Campbell and Jovchelovitch (2000) state that participation allows community members to formulate strategies that are based on the barriers they face and their perceived health needs. Health communicators should therefore come up with a plan design specifically for this group taking into account the input of the group in order to achieve the intended outcome. As a result, health program messages and program implementation procedures are created within the community; this increases their chances of generating desired results.

Although I experienced my own dialectical tensions between wanting explicit answers to my research questions and allowing conversationally constructed meanings to emerge from interviews with the participants, I was able to see health related beliefs construction through the larger lens of culture-centered theory as opposed to the culture-

sensitivity approach which conducts research by soliciting only beliefs about a particular disease and ignores how larger health conceptualizations, health structures, and social realities contributes in making those beliefs. As health communication researchers, we should approach research from a culture centered perspective and normalize that practice so we design effective communication plans to limit loss of lives during epidemics like the 2014 Ebola outbreak.

I do know that I want to continue to use the culture-centered approach in any other research where culture is being studied. I also know that I want to use the culture-centered approach to explore health understandings in areas in which this study did not touch upon. During the interviews, several participant referenced God in their statements, I would be interested in knowing specifically the influence of faith in creating health meanings within a culture.

Appendix I

Interview Guide

Hi, thank you for accepting to participate in this study. This interview will take approximately 25 minutes; it is anonymous and confidential meaning that your identity will not be published. You are not obligated to respond to all questions, and if you have any question for me, please feel free to ask me at any time.

I would like to start with a few general questions about you and your household.

- 1. Gender: I will note the gender, but if i have a doubt, I will ask nicely by saying that it is part of my interview script therefore I have to read the question.
- 2. In what year were you born?
- 3. To which ethnic group do you consider yourself belonging to?
- 4. Would you describe the area in which you live as being a city, town, or village?
- 5. How much have you heard about the Ebola outbreak?
 - a. Do you have any family member/ friend, who was got ill?
 - b. How did you communicate with them about the disease?
- 6. In your household, how did you perceive this outbreak? (add follow-up question to gather more information about how the household deals with diseases)
 - a. Did you implement any prevention plan within the family?
 - b. If yes to the question (a), what was the plan about?
 - c. If someone in your family had been ill, what would you have done? Who would have made decisions?
- 7. What messages do you recall hearing related to Ebola?

- a. Do you recall messages/interactions related to Ebola diffused by the officials?
- b. How do you feel about those messages/interactions in regards to how they were created and broadcasted? Do you think it was effective?
- c. What do you think others feel about the messages?
- 8. Did any of those messages conflict with your cultural norms and customs? Please elaborate and exemplify.
- 9. What do you think should have been done better to limit the outbreak?
- 10. Do you have anything else you wish to add? Any question for me? Thank you very much for your time.

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Curriculum vitae

Abdourahmane Balde

Experiences TMS Health

July 2015 - Present

Diabetes Care Product Specialist, Roche Health Solution

ACCU-CHEK® Customer Care

Speaker's Lab Team Leader – IUPUI, School of Liberal Arts - Indianapolis, IN August 2014 – July 2015

- •Provide complete independent training to enhance students' public speaking skills
- •Edit and organize speech outline for undergraduate public speaking students

Social Media Coordinator - IUPUI – Office of Student Involvement – Indianapolis May 1st 2014 - Present

- •Create and publish all social media content
- •Develop and expand community outreach efforts
- •Monitor, listen and respond to users
- •Collect and analyze metrics

Project Manager - Guru Software SARL – Casablanca, Morocco

February 2012 – July 2013

Led the planning and implementation of IT related projects (Mobile apps, websites...)

- •Defined project tasks and resources requirements
- •Managed project resources allocation for a team of 5 engineers.

Assistant Manager Customer Service - SCICOM Berhad (Air Asia) Kuala Lumpur, Malaysia

October 2010- February 2012

- •Handled all enquiries and complaints from customers that were escalated to me including issues related to flight cancellation, rescheduling, and delays.
- •Ensured accurate records are kept of communications with customers.
- •Analyzed key metrics to evaluate customers' satisfaction and proposed improvement plan.

Sales Executive - Safae Services SARL, Kenitra Morocco September 2007 – November 2009

- •Proactively called local businesses to offer advertisement space on restaurant's tables
- •Built customer base from scratch and maintained over 80% loyalty.
- •Grew business with follow-up calls, face-to-face meeting, and proactive assessment of business need vs. current services offered.
- •Increased sales by 20% to 30% quarter over quarter.

Education

- •Indiana University: Master of Arts Applied Communications (Graduated June 2016)
- •Help University: Master of Business Administration (Graduated February 2012)
- •University Ibn Tofail—Bachelor's degree in Accounting and Finance (Graduated June 2009).