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Deciding to work during the Ebola outbreak: The voices and experiences of nurses and midwives in Liberia

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ABSTRACT

In this study we explored the experiences of nurses and midwives, including the process involved in deciding whether or not to render care to patients during the Ebola outbreak in Liberia, West Africa. Data were collected from 30 registered nurses and registered midwives through face-to-face, semi-structured, tape-recorded interviews. We combined both Corbin and Strauss (2015) and Charmaz (2014) grounded theory methods of data collection and analysis. The result is a description of the experiences and a conceptual model that describes the social process involved in the work decisions made by the study participants. The core category identified in the data is "living in fear and terror." The work decisions of nurses and midwives were primarily influenced by family responsibilities and demands. The findings of this study could be applied to education, research, and working policies when planning for future disease outbreaks in Liberia and other regions in the world.

1. Introduction

The recent Ebola outbreak in the West African region resulted in many deaths plus devastating health and socioeconomic upheaval. Health care workers (HCWs) are central to the restoration and maintenance of optimum public health, especially in situations such as disease outbreaks. Health professionals are equipped with skills for surveillance, communication, reporting, and containment of a disease outbreak (Barnett et al., 2012). The willingness of HCWs to respond in situations of uncertainty and insecurity, along with their perceptions and attitudes towards their roles during disease outbreaks, influences their availability and response to the need for disease containment (Barnett et al., 2012). The determinants of HCWs' willingness to respond to disease outbreaks include type of disease, threat perceptions of health care workers, and associated perception of efficacy (Barnett et al., 2012; Connor, 2014).

During the Ebola outbreak in Liberia and West Africa as a whole, there was need to care for patients who had contracted the Ebola virus, as well as other patient populations which also needed health care services. Coping with a new, high-mortality disease, including development of treatment protocols, was a concern throughout the region. The resources needed, including experts and health care workers who were experienced in treating patients with Ebola, were not readily available. In Liberia, this was a result of the country emerging from 14 years of civil war that had led to limited availability of health resources and dysfunctional health care systems (Buseh, Stevens, Bromberg, & Kelber, 2015). Ebola virus disease (EVD) is caused by a virus called Filoviridae which cause severe illness in humans including fevers and bleeding tendencies. It is thought that fruit bats are a natural Ebola virus host. Ebola is introduced into the human population through close contact with the blood, secretions, organs or other bodily fluids of infected animals such as chimpanzees, gorillas, fruit bats, monkeys, forest antelope, and porcupines found ill or dead or in the rain forest (Borio et al., 2002). Human-to-human transmission of Ebola occurs by means of direct contact, such as when broken skin or mucous membranes come into contact with the blood, secretions, or body fluids of infected people, and with surfaces and materials (e.g. bed clothing) contaminated with these fluids. Infected humans are infectious as long as their blood contains the virus, even after they die from the disease (World Health Organization [WHO], 2015). The WHO (2015) describes the symptoms manifested by people infected with EVD as starting 2–21 days after infection, although they are not infectious until symptoms begin to develop. Symptoms start with the sudden onset of fever, fatigue, muscle pain, headache, and sore throat, followed by vomiting, diarrhea, rash, symptoms of impaired kidney and liver function, and in some cases, both internal and external bleeding (Symptoms of Ebola virus disease, para.1). The situation was complex and elusive in that, Ebola virus disease symptoms are indistinct from other endemic

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diseases such as malaria, gastroenteritis, or cholera (World Health Organization [WHO], 2015, "Diagnosis," para. 1). Ebola virus disease is deadly. The WHO fact sheet reports the fatality rate of Ebola virus disease to be 50% on the average and have recorded between 20% and 90% in past outbreaks (WHO, 2015). These led to increased anxiety levels in health care workers, such that every patient who presented for treatment or services for other health conditions was considered a suspected case (Hayter, 2015). Furthermore, the WHO (2015) released a statement that Liberia had reported the highest number of deaths in the 2014–2015 Ebola outbreaks. This was considered as the largest, longest, and most complex outbreak since Ebola first emerged in 1976 in the Democratic Republic of Congo. By August and September 2014 when the outbreak was at its peak, the country was reporting from 300 to 400 new cases every week. Public facilities in the capital city, Monrovia, were closed down once the government declared a state of emergency. All residents were mandated to stay home and public gatherings were strongly discouraged (WHO, 2015). Fear and uncertainty about the future of families, communities, and the country, including its economy, dominated the national mood. Health professionals remained vital to the treatment of patients, even when supplies of personal protective equipment and training in its safe use were inadequate. In sum, 375 health care workers were infected and 189 lost their lives (WHO, 2015). According to the International Council of Nurses [ICN] (2015), Ebola intensified the existing inadequacies in the health care system of the West Africa countries most affected by the outbreak. These countries were Guinea, Liberia, and Sierra Leone. These inadequacies as identified by ICN (2015) ranged from shortage of health care workers, high rates of attrition, uneven distribution of health care workers, and poor working conditions to gaps in occupational health and safety (such as unavailability of personal protective equipment).

Some nurses cared for patients infected with Ebola at a hospital in the U.S.; these patients apparently visited West Africa during the outbreak. These nurses demonstrated the possibility of health care institutions and health professionals to care for patients with EVD with desired clinical results such as recovery and reintegration into society, while at the same time protecting the safety of staff and other patients (Matlock, Gutierrez, Wallen, & Hastings, 2015).

Touch is considered a main source of direct physical connection and an integral part of the nurse-patient relationship, however, skin-to-skin contact is not suitable when caring for EVD patients. Regardless of the layers of protective equipment, nurses needed to provide human and safe touch that is intentional, deliberate, and meaningful in order to offer comfort, connection, and care to their patients (Connor, 2015). Ethically, the American Nurses Association (2015), in the fifth provision of the code of ethics, indicates that while nurses are obliged to conduct nursing actions such as assessment, intervention, and promotion, among others, for the health and safety of their patients and society, nurses also are obliged to apply to themselves the same health maintenance and promotion strategies, use health care services when needed, and refrain from unnecessary risks to their health and safety while carrying out their professional and personal activities (pp. 19–25).

There are a varied range of concerns held by health care workers, including nurses, which need to be considered when planning for effective workforce presence during a disease outbreak. These concerns might have some influence on nurses' willingness to work during a pandemic (Cheong et al., 2007; Wong, Wong, Lee, Cheung, & Griffiths, 2012). These concerns include appreciation from employers, efficacy and side effects of vaccines, frequent policy changes, unclear protocols set for case management of infected patients, poor facility layout, and duty role stress. Finally, there is need for development of a curriculum that provides a better understanding of the knowledge, skills, and aptitudes required to care for patients during public health emergencies (Downes, 2015). Exploring the experiences of nurses during the Ebola outbreak would provide insight into the safety and social issues to be considered when developing realistic policies to meet the needs of nurses and other health professionals.

Our purpose for this study was to explore the experiences of nurses and midwives, including their decision whether or not to render care to patients during the Ebola outbreak in Liberia, West Africa. The findings are informative for clinical practice, policy decisions, research, and education and curriculum development for nurses and midwives in Ebola nursing care.

2. Methods

We used a qualitative design which combined the grounded theory method (GTM) of Charmaz together with Corbin and Strauss to identify concepts, develop theoretical explanations, and offer new insights into the experience of patient care during an Ebola outbreak (Charmaz, 2014; Corbin & Strauss, 2015). The GTM acknowledges that the interaction of the researcher and participants influence the nature of the data, and the concepts and theory that emerges are the mutual creation of meaning (Morse et al., 2009). The first author and primary investigator of this study is a nurse midwife who lived and worked in Liberia at the time of the Ebola outbreak. As a local investigator, her insider view contributed to the analysis and interpretation of the findings.

We used the GTM to describe the experiences of nurses and midwives and to develop a conceptual model of the work decision process used by nurses and midwives during the Ebola outbreak. The identification of the core category, subcategories, and the basic social process through strategies such as theoretical sampling, theoretical sensitivity, and constant comparison formed the basis of this analysis.

3. Ethics

The ethics review board of a Liberian University that had Federal Wide Assurance (FWA) status (#00004853) approved the study. Informed consent was signed by each participant before the interview. Confidentiality and anonymity of the participants was assured through the anonymous transcription of interviews and by the secure storage of the transcribed data during the period of analysis. Permission for hospital entry and recruitment was obtained from the hospital administrators.

4. Participants

The participants were recommended to the primary investigator by the nursing administrators of the hospitals selected for the study. Then the primary investigator approached each nurse and midwife to obtain consent. Interviews were conducted by the primary investigator with those who consented within the hospitals in a quiet empty room at time periods convenient for the participants. A total of 30 registered nurses and midwives living in the country during the outbreak, who worked at any of wards or units at the three hospitals selected, and who had a minimum of one year working experience were recruited into the study. We excluded the administrators and supervisors from the study because most were not required to work on the wards, except their offices. These 30 registered nurses and midwives (mean age: 38 years) were selected from three hospitals; 10 from each hospital. One was a faith-based, privately funded hospital that continued to provide regular health care services during the outbreak. The second hospital was faith-based and co-funded privately and by the government. During the outbreak, this hospital was used as one of the Ebola treatment units (ETU). The third hospital was government managed and was used as a holding center for suspected and confirmed Ebola cases due to overcrowding in the ETUs. Most participants were females (n = 29), with an average of nine years working experience. Most of the nurses and midwives worked in the hospital during the Ebola outbreak (n = 27) with an average monthly income of $23945.00 (Liberian dollars). Forty percent of the nurses and