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**EXPERIENCES OF FRONTLINE NURSES MANAGING PATIENTS WITH  
CORONAVIRUS DISEASE AT GA EAST MUNICIPAL HOSPITAL, ACCRA.**

**BY**

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**THIS THESIS IS PRESENTED TO THE UNIVERSITY OF GHANA, LEGON IN  
PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE AWARD OF A  
MASTER OF PHILOSOPHY DEGREE IN NURSING**

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**DECLARATION**

I, Evelyn Esenam Atuwo-Ampoh declare that apart from references to other people's work which has been duly acknowledged, this thesis is the result of research undertaken for the award of a Master of Philosophy in Nursing at the School of Nursing and Midwifery, University of Ghana, Legon. The research work was done under the supervision and guidance of my supervisors. This write-up has not been presented in part or whole to any other institution for the award of any degree or certificate.

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## ABSTRACT

The coronavirus disease 2019 (COVID-19) pandemic has affected many healthcare systems globally. Its impact was considered a serious risk to healthcare providers and had far-reaching consequences on their lives. In Ghana, treatment centers were designated to help patients isolate for treatment under the care of healthcare workers. Frontline nurses managing patients with COVID-19 experienced physical and psychological challenges whilst on their duty and were perceived as carriers of coronavirus. This study aimed to explore the nurses' experiences managing patients with COVID-19 at the Ga East Municipal Hospital, Accra. The ABC-X model of family stress and coping developed by Hill in 1949 underpinned this study. The study employed an exploratory descriptive qualitative research design to explore and describe the experiences of fourteen (14) purposively sampled nurses using a semi-structured interview guide. The interviews were audiotaped with participants' permission, transcribed verbatim, and analyzed using thematic content analysis. This study's findings identified four themes: COVID-19 care challenges, multi-dimensional support, care-related stressors, and perceived care outcomes. The frontline nurses experienced some physical and psychological stressors whilst managing patients with COVID-19 at Ga East Municipal Hospital. They were also perceived as carriers of coronavirus who might infect their friends and family. The nurses utilized diverse strategies and support from various individuals and groups as the pandemic unfolded. The frontline nurses-built resilience amidst the challenges encountered. The stressful experiences of the frontline nurses and other healthcare personnel in the facility should be considered and addressed, with sustainable interventions outlined to reduce the stress on healthcare workers.

## **DEDICATION**

I dedicate this work in memory of these fallen heroes to COVID-19: my friend and colleague in the Master of Philosophy Sandwich class; Ms. Elizabeth Adwoa Pobee, and my pastor; Apostle Nana Kofi Agyeman Kankam. May their gentle souls rest in peace.



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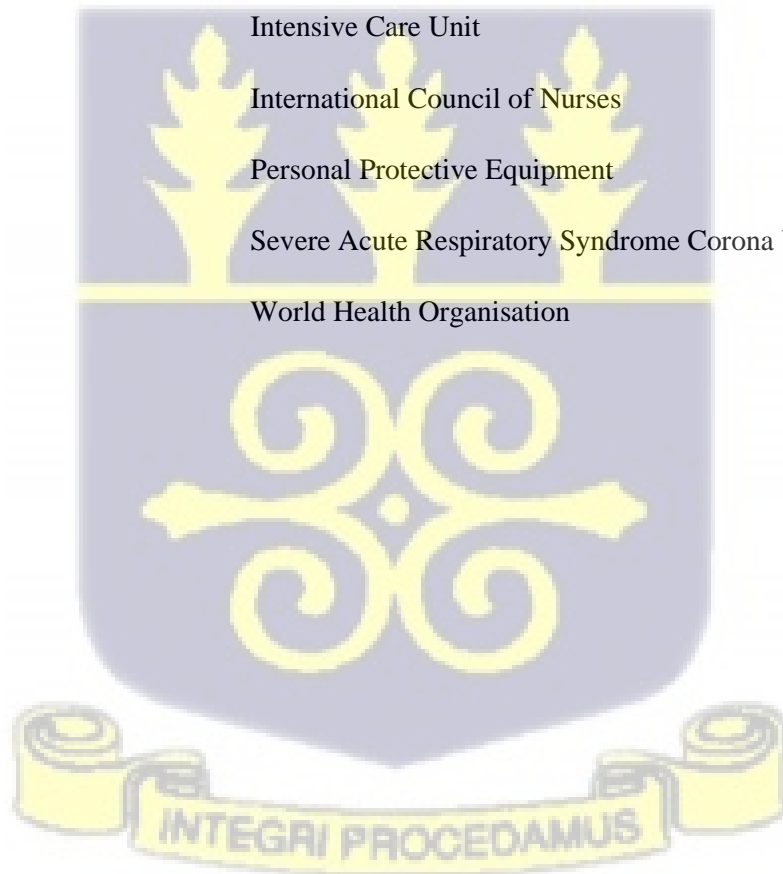
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## LIST OF ABBREVIATIONS

COVID-19	Coronavirus disease 2019
CDC	Centre for Disease Control
ER	Emergency Room
GMA	Ghana Medical Association
GRNA	Ghana Registered Nurses Association
GHS	Ghana Health Service
GHSERC	Ghana Health Service Ethics Review Committee
HCW	Healthcare workers
HDU	High Dependency Unit
ICU	Intensive Care Unit
ICN	International Council of Nurses
PPE	Personal Protective Equipment
SARS-CoV-2	Severe Acute Respiratory Syndrome Corona Virus 2
WHO	World Health Organisation



## CHAPTER ONE

### 1.0 Introduction

This chapter presents the background of the study, the statement of the problem, the purpose of the study, the objectives of the study, and the research questions. The significance of the study and operational definitions are also presented in this section.

### 1.1 Background of the study

The coronavirus disease 2019 (COVID-19) is an infectious respiratory disease caused by severe acute respiratory syndrome coronavirus 2 (SARS-COV- 2) (Huang et al., 2020). It is believed to be transmitted from animals, such as bats and pangolins to humans through droplet suspension, direct contact with infected persons, and nosocomial infection (Dimonte et al., 2020; Klompas et al., 2020). The coronavirus spreads when aerosol droplets from infected persons are generated from sneezing or coughing into the air space. Some patients may not show any symptoms but can infect others through direct contact (Xu et al., 2020).

The novel disease began in Wuhan, China in December 2019 and has spread rapidly across the globe with new cases being recorded in over one hundred and ninety-one (191) countries (Boulos & Geraghty, 2020) as of September 2020. The high prevalence of the COVID-19 pandemic made it a public health concern. The World Health Organization (WHO) on the 11<sup>th</sup> of March, 2020 declared the COVID-19 outbreak a global pandemic (World Health Organization, 2020). As of 30<sup>th</sup> September 2021, more than 240 million people had been confirmed to have tested positive with over 4 million deaths reported globally (WHO, 2021). Countries like China, the United States of America (USA), the United Kingdom (UK), Brazil, and Italy were the hardest hit, recording a high number of cases in the early stages of the disease (The Wall Street Journal, 2020; WHO, 2020). These hard-hit countries as of 31<sup>st</sup> March 2022 had recorded a significant rise in cases and deaths.

The USA had recorded about 79,399,671 reported cases and 1,004,993 deaths, UK had on record 20,887,469 cases and 168,081 deaths. Brazil had 29,947,895 cases and 695,860 deaths.

Africa also experienced the overwhelming impact of COVID-19 on its healthcare systems and providers (Muz & Erdoğan Yüce, 2021). Nigeria was the first country in Africa to report a positive case on 28<sup>th</sup> February 2020. Ghana recorded its first two (2) cases on 12<sup>th</sup> March 2020 (Afriyie et al., 2020) and has since recorded an exponential increase in the number of COVID-19 cases. As of 31<sup>st</sup> March 2022, there were 160,971 active cases of COVID-19 in Ghana with an estimated 1,445 COVID-19-related deaths reported within the same period. Although the severity of COVID-19 cases in Africa has been relatively lower compared to the European world, its impact has been devastating to families and healthcare systems. WHO COVID-19 situation report -171, reported that in a few months after declaring it a global pandemic, Africa had 410,744 confirmed cases and 7,559 deaths as of July 2020 (WHO 2020). As of 31<sup>st</sup> March 2022, Africa had recorded 8,521,974 cases and 170,822 deaths (Africa CDC, 2022).

Several healthcare workers were involved in limiting the high morbidity and mortality associated with COVID-19 despite the high risk of infection in the discharge of their duty. In many health settings, nurses constituted the majority of the workforce recruited to manage the increasing cases of COVID-19 (Said & Chiang, 2020). The nurses providing care for patients with COVID-19; referred to as frontline nurses, faced some challenges whilst caring for patients infected with SARS-COV-2. Due to the novelty of COVID-19, frontline nurses had to take up unexpected roles in caring for patients with COVID-19 despite the uncertainties and limited knowledge of its pathophysiology, management, and treatment (Muz & Erdoğan Yüce, 2021). Several studies have indicated that caring for these patients can be a stressful experience for frontline nurses (Ahmadidarrehsima et al., 2022; Aziato et al., 2021). The

stressful experiences were related to the frontline nurses' physical and psychological challenges encountered whilst providing care to the patients with COVID-19 and their relations. Stress can be defined as a circumstance in which an individual has no prior information or preparations and may perceive it as a challenge (Rosino, 2016). The frontline nurses experienced challenges such as the inadequate provision of personal protective equipment (PPE) during the outbreak of the pandemic, with an increasing number of patients with COVID-19 requiring hospitalization which contributed to the high risk of health workers contracting COVID-19 from their patients (Chersich et al., 2020).

Since the COVID-19 pandemic was declared, many health professionals have been infected in their line of duty and some have lost their lives. The International Council of Nurses (ICN) estimated that more than 230,000 health workers contracted the disease and over 600 died from COVID-19 as of June 2020 (International Council of Nurses, 2020). In April 2020, Italy estimated that about 10,000 of its healthcare force had been infected with coronavirus and about 74 of them had lost their lives (Indolfi & Spaccarotella, 2020). China, the USA, the UK, and other European countries have also been affected by the devastating effects of COVID-19. A joint report from the Health Workers Association in Ghana including Ghana Medical Association (GMA) and the Ghana Registered Nurses' and Midwives' Association (GRNMA) stated that 2,065 healthcare workers had been infected with coronavirus as of July 2020. About 588 of the infected healthcare workers were working within the Greater Accra Region (Ghana Registered Nurses Association, 2020).

Amidst the uncertainties, some challenges have been identified to affect the general well-being of frontline nurses. The challenges include psychological and work-related stress such as anxiety and fear of getting infected with coronavirus and transmitting it to their families. The other forms of stressful challenges encountered by the frontline nurses included fatigue due to heavy workload and schedule, exhaustion from the use of PPE, family

separation, stigma, and pain of losing their patients (Chersich et al., 2020; El-Hage et al., 2020; Liu et al., 2020). The news of other health workers contracting the coronavirus caused fear among the nurses who had direct contact with infected patients knowing they could contract coronavirus and infect their families or acquaintances (Bohlken et al., 2020). The nurses work by wearing PPEs such as overalls, goggles, N95 facemasks, and gloves that impede drinking water, eating, or using the washroom for hours, which causes discomfort (Sun et al., 2020). The death of COVID-19 patients sometimes also increases the apprehension of frontline nurses', which affects their psychological or mental state, which in turn affects the prognosis of other patients in their care.

Nurses played vital roles in the healthcare team during the pandemic and felt a sense of responsibility in caring for patients with COVID-19. A study by Rezaee et al. (2020) on the perception of nurses on ethical challenges encountered in managing patients with COVID-19, mentioned that the nurses felt their professional values were under threat and also expressed that the workload, stress, and fatigue they experienced could lead to a decline in the quality of health services. The study also mentioned that the absence of a holistic COVID-19 care approach was another ethical concern the nurses had regarding the discharge of their duties (Rezaee et al., 2020). Some frontline nurses felt stigmatized by people in society and even other health professionals because they worked with patients infected with COVID-19. The frontline nurses were perceived as carriers of the virus and some had to leave their homes because they feared infecting their significant others (Muz & Erdoğan Yüce, 2021).

Support systems play an important role to mitigate the negative impact these challenges could have on the frontline nurses. These support systems include work-based interventions, such as changing routines or improving equipment, and psychological support interventions such as counseling (Pollock et al., 2020).

## 1.2 Problem statement

Studies indicate that frontline nurses managing patients with COVID-19 play crucial roles in the care of their patients which can endanger their health and lives. Frontline nurses caring for patients with COVID-19 experience several physical and psychological challenges. Some frontline nurses were afraid of being infected with coronavirus as well as passing on the infection to their relations. The frontline nurses also experienced anxiety from the increasing numbers of confirmed COVID-19 cases which contributed to fatigue due to heavy workloads. Additionally, they experienced discomfort from the use of PPEs as well as stigma from others (Herald et al., 2020; Sun et al., 2020). Some frontline nurses have been observed to provide care to critically ill patients with COVID-19 without the necessary safety and security measures. This has resulted in several frontline nurses being infected with coronavirus globally (Chersich et al., 2020).

Despite all the above challenges and the frontline nurses' experiences regarding the care for patients with COVID-19 had not been adequately explored (Herald et al., 2020). Most studies that explored the experiences of frontline nurses providing care to patients with COVID-19 were conducted in settings with relatively well-resourced health systems with limited studies exploring the experience of the frontline nurses in Ghana (Jo et al., 2021; Kang et al., 2020; Maben & Bridges, 2020). The disparity in resource availability for the management of COVID-19 across various settings can influence the frontline nurses' COVID-19 care experiences. Furthermore, there is a paucity of studies on the resources for mitigating the challenges experienced by the frontline nurses within the Ga East Municipality of Ghana. Also, nurses' perceptions of stressors associated with providing care to patients with COVID-19 have not been adequately explored empirically. It is important to consider the experiences of the frontline nurses providing care to patients with COVID-19 within the Ghanaian context.

This study, therefore, seeks to explore and describe the experiences of the frontline nurses managing patients with COVID-19 within the Ga East Municipal Hospital.

### **1.3 Purpose of the study**

The purpose of this study is to explore and describe the experiences of the frontline nurses managing patients with COVID-19 at the Ga East Municipal Hospital.

### **1.4 Specific objectives**

The specific objectives of the study are.

- i. To explore the stressors (challenges) frontline nurses experience while managing patients with COVID-19 at the Ga East Municipal Hospital.
- ii. To explore the support systems (resources) available to the frontline nurses managing patients with COVID-19 at the Ga East Municipal Hospital.
- iii. To describe the frontline nurses' perception of stressors associated with managing patients with COVID-19 at the Ga East Municipal Hospital.

### **1.5 Research questions**

The research questions to be answered in this study are.

- i. What are the stressors (challenges) frontline nurses experience while managing patients with COVID-19 at the Ga East Municipal Hospital?
- ii. What are the support systems (resources) available to the frontline nurses managing patients with COVID-19 at the Ga East Municipal Hospital?
- iii. What are the frontline nurses' perceptions of the stressors associated with managing patients with COVID-19 at the Ga East Municipal Hospital?

### **1.6 Significance of the study**

The findings from this study will provide data on the experiences of frontline nurses providing care to patients with COVID-19 at the Ga East Municipal Hospital. The insights

generated from this study can inform frontline nurses' care provision to patients with COVID-19 to improve their treatment outcomes. The findings can also facilitate the development of relevant in-service and preservice training on how frontline nurses can preempt and cope with the possible challenges they may experience in their care. This study's results can give policymakers the information needed to implement policies to support frontline nurses engaged in the management of patients with COVID-19. Furthermore, it will add to the existing literature on the experiences of nurses in the management of COVID-19 patients in Ghana to inform future research. Such a study can generate insight that may inform nursing practice, education, and research.

### 1.7 Operational definition of terms

- i. **Management:** The process of providing care to patients with COVID-19.
- ii. **Coping strategies:** Mechanisms adopted by frontline nurses to mitigate the impact of potentially harmful stressful events or situations.
- iii. **Stress:** refers to a circumstance in which an individual has no prior information or preparations and may perceive it as a challenge. In this study, it is a feeling of being physically and mentally burdened because of managing COVID-19 patients.
- iv. **Stressor:** an agent or circumstance that causes stress in an individual.
- v. **Patient with COVID-19:** persons who have tested positive for COVID-19.
- vi. **Physical experience:** physical challenges that potentially cause discomfort to the frontline nurses providing care to COVID-19 patients.
- vii. **Psychological experience:** psychological challenges that result in the mental and emotional instability of the frontline nurses.

## CHAPTER TWO

### LITERATURE REVIEW AND THEORETICAL FRAMEWORK

#### 2.0 Introduction

This chapter focuses on previous relevant research work done relating to healthcare professionals' and nurses' experiences in the management of patients with COVID-19 as well as other emerging diseases. It also discussed the theoretical model of choice that underpins the study. An in-depth search was conducted to determine the evidence available globally on the management of patients with COVID-19, associated stress, and coping mechanisms. The following keywords were used to retrieve literature: "COVID-19", "nurses' experience", "stress experienced in managing COVID-19", "physical and psychological experiences", "support systems", and "coping mechanism". Grey and empirical literature were sourced from databases such as Google Scholar, SCOPUS, Lancet Global, Science Direct, PubMed, EBSCO Host, CDC America/Africa website, WHO website, Ghana Health Service website, ICN, and John Hopkins University Centre. Several studies found focused on the qualitative study of experiences of nurses in various countries with just a few in Ghana. The literature review took into account the justification for the use of the ABC-X model of stress and coping for this study. The review was organized under the following thematic areas:

- COVID-19 and the frontline nurses
- Physical experiences of the frontline nurses
- Psychological experiences of the frontline nurses
- Resources available for mitigating the challenges encountered
- The perception of the management of patients with COVID-19

## 2.1 Justification for the use of the ABC-X model for this study

The theoretical model serves as a guide for the research work, ensuring that it stays on track with the objectives of the study. This study considered three (3) models to underpin this study.

In 1977, George Engel proposed the biopsychosocial model of health to deal with the shortcomings of the biomedical model. He felt that the biomedical model viewed patients as diseased-based objects because only biological determinants were considered in diagnosing, treatment, and management (Engel, 1981). The biopsychosocial model is a way of looking at a person or a group of people's health or sickness in terms of biological, psychological, and social aspects. The biopsychosocial model has three principles of health determinants. Engel posited that the most significant part of care is the one provided to a patient and the steps taken by doctors and the healthcare system to manage that patient's sickness. After more than four decades, the biopsychosocial model has seen slow progress in the field of medicine with most critics saying it is vague and difficult to implement. It has also been used in some studies to identify psychosocial determinants of depression and other mental disorders in a selected population (Bolton & Grant Gillett, 2019). However, this study focuses on nurses providing care and not as sick persons. The biopsychosocial model is not suitable for this study since it focuses on disease occurrence and the sick person rather than the caregiver (frontline nurses) who are the focus of this study.

The other model is the socioecological model of health which was propounded by McLeroy in 1988. The socio-ecological model posits that the health of an individual or a group of people is influenced by a collection of sub-systems that occur at various levels, rather than being solely determined by biological factors. Individual, interpersonal, institutional, community and public policy are the most common levels. According to McLeroy et al. (1988), understanding how these multi-level social factors and systems work

helps to account for both the population- and individual-level determinants of health. Leinweber et al. (2017) applied the model to assess post-traumatic stress among Australian midwives. The COVID-19 pandemic has challenged the resilience of many health systems and the socioecological could also suggest targets for developing interventions to support and enhance resilience. The socio-ecological model is not suitable for this study since it is deficient in exploring the physical and psychological experiences of front-line nurses which is the focus of this study.

The biopsychosocial model of health by George L. Engel, (1977) and McLeroy et al. (1988) socioecological model of health was considered for use in this study. However, both were deficient in exploring the physical and psychological experiences of the frontline nurses.

## **2.2 The ABC X Model of family stress and coping**

The ABC-X model of family stress and coping is the basis for most stress models. It was originally propounded by Hill, (1949). The model was developed in the context of World War II and the great depression on family structures, to explain differences in families' abilities to remain intact and functional when faced with the stressors of social and economic changes (Rosino, 2016). The ABC-X model was used as a guiding framework for the study. It was used to study how families reacted to stressful situations (Rosino, 2016). The model explained the 'crisis-proneness' and 'freedom from the crisis' among families (Hill, 1949). The model describes the process of how a family encounters a stressful event or situation and the outcome dependent on the resources available to them and the meaning made of the stressful event. According to Hesamzadeh et al. (2015), the stressful event is denoted by a variable **A** (which represents the stressor events), **B** (the family crisis- meeting resources), and **C** (the perception of the family on the stressor event). The stressor (**A**) interacts with the family resources (**B**) to give a perception of the stressful situation (**C**), which leads to a definition of the crisis (**X**). The ABC-X model asserts that family or individual outcomes

following an encounter with a crisis result from an interaction of multiple factors (A, B, C, and X) all interacting with each other (Farhood, 1999). In a study by McCubbin et al. (1980), the stressor event was defined as a circumstance in which the individual or family had no prior information or preparations and was thus perceived as a challenge. The individual's ability to cope with a stressful circumstance is determined by how they react to the stressor and the outcome of events could span from high stress to a good adaptation (Amfani-Joe, 2012). This model has been used in other studies to explore the experiences of nurses managing patients with other medical conditions such as nurses caring for childhood developmental challenges (Jones & Passey, 2004). The domains of the model will be used to describe the nurses' experiences, and the model is presented in figure (1) below.

According to the ABC-X model, the stressor (A) is viewed as any situation or event that requires substantial adjustments for individuals, family members' relationships within the family, or the family system as a whole (Rosino, 2016). The COVID-19 pandemic required some form of substantial adjustment of frontline nurses. A study by Langran et al. (2022) explored the resilience, coping, and burnout of pharmacists during the COVID-19 pandemic. The following stressors were identified: uncertainty, lack of role clarity, a threat to professional identity, managing staff, family's health, workloads, the supply of PPEs, and changing guidelines. This is similar to the identified stressors in a study by (Sabzwari & Iqbal, 2021). In both studies, the stressors allowed for the drawing of inferences between the interaction stressors (A) and available resources (B).

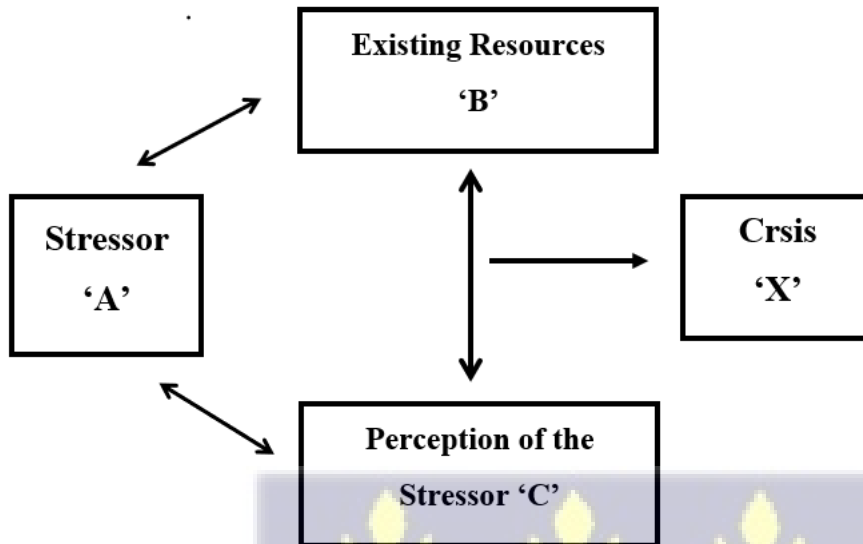
The resources (B) in the model are defined as interventions available to frontline nurses, which can help them evade crises associated with the stressors. Rosino, (2016) stated that these resources can be stem from the individual in the form of coping strategies and support from various groups and organizations resources such as family integration and mutual adaptability. The study by Langran et al., (2022) reported that resources available to

Pharmacists included clinical guidelines, team support, protected lunch hours, and PPEs. Institutional resources devoted to professional development are particularly important Kovner et al. (2021) as it forms the overall perceptions of how the pandemic was managed.

A family's available stress-meeting resources and perceptions of the stressor event interact to determine a family's susceptibility and adaptability to stress arising from a stressor event (Rosino, 2016). In the context of the study, the available resources provided to mitigate the stressors of frontline nurses determine the kind of perception they would have in the management of COVID-19 patients. The available resources impact directly on the perceptions of these nurses. The outcome (X) is the result of interactions between stressors (a) and resources (b). Putting that into context, frontline nurses' physical and psychological experiences in the management of patients will determine the overall stress and impact it has on them and their well-being.

The ABC-X model was chosen to guide the study as it explained the constructs being explored in this study. This model also explained how stressful it was managing patients with COVID-19 which was novel and seen as very infectious and deadly. The model's relationship to the physical and psychological stress events makes it easy to understand the interwoven factors that influence nursing and coping whiles managing patients with COVID-19. The nurses adopted unexpected roles to work in a facility that was not originally meant to be a treatment centre for COVID-19. The new experience has been overwhelming yet protective mechanisms were used to achieve resilience amongst the nurses in midst of the pandemic. The resources available to the frontline nurses influenced the management of their physical and psychological stress experiences (Xu et al., 2021). There is no evidence of the use of the ABC-X model in exploring the experiences of nurses or healthcare workers in COVID-19 management. However, the model was adopted for this study because it established a link

between stress and coping experienced by both families and nurses, thereby considered for use.



**Figure 1: ABC X Model of Family Stress (Hill, 1949)**

The review explored challenges faced by the frontline nurses managing patients with COVID-19, support systems available to them, and coping strategies adopted by the nurses to overcome the stressful challenges. The perception of the frontline nurse on managing patients with COVID-19 and the outcome of care was also explored. The review was done to help further discussions and identify gaps that needed to be filled. Due to the novelty of the disease and the paucity of literature on the study, related articles on the experiences of healthcare workers with other challenging conditions were examined.

### **2.3 COVID-19 as an emerging infectious disease and health workers**

This century has seen a significant number of epidemics in low to middle-income countries and quite recently, a pandemic (Chattu & Yaya, 2020). In the past two decades

alone, the following outbreaks occurred: the 2003 severe acute respiratory syndrome (SARS), the 2009 H1N1 influenza, the 2014 Ebola outbreak, and in 2019, the novel coronavirus disease (COVID-19) resulting in a pandemic. Usually, the novelty and unpredictability of these infections result in their outbreak (Mcarthur, 2019). Some other factors, including modern-day globalization, contributed heavily to the spread of COVID-19.

Medical emergencies in general, usually demand more health workers to mitigate potential negative effects. The outbreak of COVID-19 is a global health issue that demands large numbers of healthcare workers to deliver care to patients in isolation wards and the entire population. In some health settings, other health workers had to take up entirely new roles and there was the creation of field beds just to accommodate the pressure and numbers. In the Bergamo Cardiology Unit, 60% of beds were occupied by COVID-19-positive patients (Senni, 2020). 14 beds in the paediatric ICU of the General Children's Hospital in Massachusetts were occupied by adults (Yager et al., 2020). In Ghana, some hospitals created make shifts wards and moved nurses of other specialties into ICUs and isolation wards. According to Liu et al. (2020), most healthcare systems have been overwhelmed by the outbreak of coronavirus, even in high-income countries. The pandemic resulted in the disproportionate distribution between the needs of the sick and the available human resources.

Nurses play vital roles in the management of emerging infectious diseases and prevention. For example, nurses were required to be current on the disease outbreak in their jurisdiction and know where to locate resources on time because they manage the day-to-day running of wards (ICUs, isolation wards, etc). With the roles, they play in the management of positive patients and the fact that nurses form a majority of the workforce, it is not surprising

that they form a majority of frontline health workers managing COVID-19 patients. In China, they formed 68% of frontline health care providers (Liu et al., 2020).

The work of nurses is tedious and demanding (Barker & Nussbaum, 2011). They continue to give their primary or basic care and therapeutic care such as checking vital signs, bed bathing, self-care/ hygiene care, and administration of treatment. During pandemics like COVID- 19, more nurses are likely to have direct contact with positive patients for an extended period than other healthcare workers (Holton et al., 2020). Nurses are the largest occupational group in health service and have direct, intense, and sustained patient contact and are therefore particularly vulnerable to infection.

#### **2.4 Physical experiences of frontline health workers**

Frontline nurses in most countries expressed the fact that working on patients with COVID-19 can be challenging and very exhausting due to the increasing number of patients and the workload. When patients are unable to help themselves with their activities of daily living, nurses who spend most of the time with the tend to assist them in meeting such demands (Galehdar et al. 2021). Frontline health workers including nurses work by wearing PPEs that impede drinking water, eating, or using the washroom for hours, which easily causes discomfort. Some even go to the extent of shaving their hair to prevent infections (Smith et al., 2020; Thiagarajan, 2020). The use of the PPE causes discomfort when used for long hours leading to physical exhaustion, with some even developing skin allergies wearing the PPE.

The PPEs used included the N95 respirator, surgical face mask, face shield, goggles, gloves, gowns, and coveralls (Ranney et al., 2020). Nurses are at higher risk of getting infected with inadequate training and supervision on wearing and removing PPE. The use of the N95 made it difficult to breathe, eat and drink water whiles on duty, and communication

with patients was not clear when the PPEs are donned. The use of the coverall made it difficult to empty one's bladder while on duty coupled with the heat produced in it (Liu & Aunguroch, 2019). Also, inadequate provision of the PPE in high-income countries led to shortages in middle to low-income countries as well. This led to more frontline staff getting infected with coronavirus (Ranney et al., 2020). Frequent handwashing done by the frontline health workers after each procedure or attending to patients made the hand dry.

Langran et al. (2022) reported the lack of opportunities for downtime and physical space for relaxation, inferring that, relieving stress in an extended and overwhelmed shift is close to impossible. The pandemic demanded the reorganization of the physical spaces in ICUs and isolation wards. Many professionals were relocated to ICUs, to work with members with whom they were yet to establish cohesive bond relationships (da Silva & Barbosa, 2021). The implication on the physical well-being according to El-Hage et al. (2020); Maben & Bridges, (2020) was that some workers felt they did not have an open space to talk about their own emotions and the fear of making any mistakes and being judged. Physical demand has negative effects on health workers. Chew et al. (2020) assessed the physical symptoms of health workers during the pandemic. Commonest reported symptoms included headache, 31.9%, throat pain 33.6%, anxiety 26.7%, lethargy 26.6% and insomnia, 21.0%. The symptoms were generally mild in severity.

Frontline nurses despite the little knowledge of the pattern of the disease had the responsibility of managing patients in a new context amidst physical exhaustion associated with extended shifts and heavy workloads and the donning of protective gears, the fear of becoming infected, and feeling powerless to handle patients' conditions. All these make it paramount to understand the real feelings of Ghanaian front-line nurses combating COVID-19, as well as the demands and challenges that they face.

## 2.5 Psychological experiences of frontline health workers

Nurses working in the frontline play a crucial role in sustaining the healthcare system and have direct contact with most patients, the safety of these nurses is paramount for the sustenance of the healthcare sector and for controlling the spread of a pandemic (Sun et al., 2020). Many people recognize the commitment and role of these frontline nurses to health care delivery, however, challenges such as insufficient protection for them lead to them getting infected and subsequently death (Chersich et al., 2020).

Studies have shown that nurses working at the frontline most likely experience stressful physical and psychological challenges in managing patients with COVID-19, manifesting as fear of contracting coronavirus and in turn infecting their families, especially those with children and elderly relations, anxiety, physical exhaustion, fatigue, sleep disturbance, feeling of helplessness, discomfort, and stigma (Bohlken et al., 2020). A study by Kenny & Hull, (2008) showed that healthcare workers experienced some anxiety and depression during an outbreak of pandemics. The anxiety is heightened when there is a report of their colleagues or other healthcare workers having been infected with coronavirus and died. Also, the death of patients increases nurses' apprehension and affects their psychological or mental state, which in turn affects the prognosis of other patients in their care (Hui et al., 2020).

In a comparative study done in Australia, more nurses and midwives had mild to extremely severe anxiety levels (Holton et al., 2020). On the DASS-21 sub-scale used in the study, they recorded figures that were significantly higher in comparison to allied health professionals and doctors and the general Australian population. Nurses with more clinical experience recorded relatively lower anxiety levels than those with less clinical experience. Also, and most importantly, those who had had contact with confirmed COVID-19 cases were significantly more anxious than those who had not. However, Leng et al. (2021)

reported that even the most skillful and experienced nurses need intervention to ensure positive mental health during a pandemic.

News of infection and the death of colleagues tend to cause some psychological stress to the frontline nurse. Nurses tend to express both negative and positive emotions whilst caring for patients with COVID-19 which has an impact on the care they deliver. The expression of fear, anxiety, and helplessness arises when they are not able to nurse a suspected or confirmed case or patient the way they want to. With the increasing numbers being recorded in various countries, the workload of nurses increased as many more patients had to self-isolate in the hospitals to avoid direct contact with family members and infecting them. The nurses take care of the patient's physical and psychological needs as well and not just treat their disease condition (Chersich et al., 2020; Liu et al., 2020). Relatives are no more involved in the care of the patient and the nurses now tend to give all forms of support needed by the patient whilst being dressed in personal protective equipment (PPEs). These challenges, however, can be managed with coping strategies or adequate social support given to them. They tend to become resilient during challenges they encounter whilst managing the patients (Traynor, 2018).

## **2.6 Resources available for mitigating the challenges encountered**

The resources available for mitigating the challenges included the support mechanisms and coping strategies adopted by frontline nurses in managing patients with COVID-19.

### **2.6.1 Support Systems**

The major support system available was to alleviate stress in the provision of both physical and psychological interventions. Research works suggest that periodic psychological counseling provided to the frontline nurses either by their hospital or government, motivation with food and other supplies, and a comfortable working

environment for nurses, are important to relieve the psychological pressure and ordeal of nurses who care for COVID-19 patients (Kang et al., 2020; Liu et al., 2020). Also, periodic refresher courses for these frontline nurses to upgrade their knowledge and skills are important in helping these nurses overcome their psychological challenges (Said & Chiang, 2020). Supportive work culture provided by stakeholders has been recommended by several studies (Leng et al., 2021; Pasay-an, 2020)

### **2.6.2 Coping strategies**

The frontline nurses managing patients with COVID-19 did not have to just deal with the increasing intensity of work but adjust themselves to the new normal and its procedure (Maben & Bridges, 2020). Coping strategies are needed to restore mental and psychological balances after the induction of any form of stress, usually communal coping (Berardi et al., 2019). However, this may not be feasible due to social distancing and other COVID-19 protocols (Scheinfeld et al., 2021) To keep going, nurses and other frontline health workers need other forms to keep the resilience needed until the end of the pandemic.

Two major coping strategies exist in theory: problem-focused coping and emotion-focused coping. The coping mechanism utilized all stems from emotions such as fear, anger, and anxiety (Huang et al., 2020). In the study, Huang et al. (2020) established that nurses are more proactive in using problem-focused coping strategies which involve active coping, planning, and use of instrumental support. This was attributed to the fact that the nurses have more knowledge and strategies to face pressure. In another study similar to the findings of Huang involving pharmacists, clinical supervision, and psychological support served as their main coping strategies used (Langran et al., 2022).

Coping strategies used by frontline nurses include self-adjustment styles such as psychological adjustment and team support. According to Sun et al. (2020), some

psychological adjustment techniques used by these frontline nurses include deep breathing exercises, listening to music, sleeping adjustment, and emotional venting. Supporting each other was a good form of strategy used by the nurses to work together and encourage each other.

## **2.7 Perceptions of caring for COVID/-19 patients**

Nurses all over the globe were tasked to save and preserve lives in an entirely new situation with its uncertainties. One notable perception of nurses and frontline workers was inefficiency. Nurses who witnessed patients passing away, experienced psychological pressure with some reporting feeling helpless when there was nothing that could be done to save lives (Galehdar et al., 2021). In another study, nurses were of the view that factors such as nursing shortage, and fatigue meant they are not at the patient's bedside at the time of need, threatening responsibility and accountability in caring for patients (Rezaee et al., 2020). Nurses were also of the view that patients were receiving less compassion as well as family care.

Frontline workers in the discharge of their duties could not help but think of themselves as potential carriers of coronavirus to their families and loved ones. A study reported that the anxiety of some of these nurses prevented them from getting close to their families (Galehdar et al., 2021). The nurses described caring for positive patients as difficult and painful mainly due to the PPE they had to wear for hours (Galehdar et al., 2021). The restriction to their mobility to the increase in their body temperatures was just overwhelming. But then also, the insufficient PPEs in some jurisdictions were worrisome to some nurses (Jin et al., 2020).

Nurses all over regardless of specialty were willing to provide services despite the uncertainties and potential risks involved (Wu et al., 2020). The frontline nurses played

crucial roles in managing patients with COVID-19 and they see themselves as being responsible for the well-being of these patients as treatment options for patients infected with coronavirus are mostly isolation, monitoring, and symptom support. they are seen as the primary providers of care; however, they have been stigmatized as carriers of coronavirus by working with COVID-19 patients and are seen as threats to their families and society.

This study adopted the ABC-X model in exploring the experiences of frontline nurses as the framework to underpin the study. This is in recognition of the fact that this model has tenets that are relevant to the study and it is also compatible with the objectives of the study; exploring the physical and psychological experiences of the frontline nurses in managing COVID-19 patients, to explore the perception of the nurses associated with managing the patients, explore support systems available to the frontline nurses in the fight against COVID-19 and coping strategies used by the nurses, whilst managing patients with COVID-19. The framework is a straightforward model which creates an avenue to explore the stress-related experiences of front-line nurses, support and coping strategies of the frontline nurses, perception of managing patients with COVID-19, and its result on the impact of care by nurses.

## **2.8 Summary of Literature Review**

Coronavirus disease 2019 has placed extreme demands on healthcare workers with widespread infections in many countries and an increase in case of count since it emerged. It has posed tremendous consequences to health care systems all over the world and has a great impact on the frontline nurse (Zhang et al., 2020). Nursing patients with COVID-19 is seen as a high-risk job that needs to be performed with some soundness of mind (Rathnayake et al., 2021). The frontline nurses managing patients who have been infected with coronavirus face genuine threats to their physical safety and indirectly their families. They tend to experience some psychological distress that needs attention (Ghawadra et al., 2019).

The frontline nurses are stigmatized as carriers of coronavirus as they work with confirmed positive patients. It is important to examine the experiences they go through, the needed support measures put in place to help improve their health, and the care they render. Their health and safety are crucial not only for continuous and safe patient care but also for the control of any outbreak.



## CHAPTER THREE

### RESEARCH METHODOLOGY

#### 3.0 Introduction

This chapter describes the research design and methods used in the study. The philosophical underpinning of the study, description of the research setting, study population, inclusion and exclusion criteria, sample size, and sampling technique were also presented. The chapter also outlined the data collection methods, data analysis, ethical considerations, methodological rigour, and limitations of the study were also highlighted.

#### 3.1 Philosophical Underpinning of the study

Philosophical underpinning is important in every qualitative study since it seeks to bring to bear the quality of the research study and informs the choice of the methods to use in the study. Qualitative research is informed by the philosophical assumptions of the researcher. The researcher's declaration of the philosophical underpinning of the study can contribute to enhancing its rigour (Scotland, 2012).

The interpretivist orientation was used to guide the study. This philosophy involves interpreting the values, meaning, and experiences of others. In the works of Putnam & Banghart (2017), the philosophical stance creates and interprets reality as socially produced or rendered meaningful by the actors' interpretations of events. The interpretivist philosophy seeks to comprehend the varied ways of seeing and experiencing the world across settings and cultures because "reality is socially constructed" (Mertens, 2007). The interpretivist researcher tends to rely upon the "participants' views of the situation being studied" and recognizes the impact of the research on their background and experiences (Creswell et al., 2004). The subjective view of reality shapes the creation of reality. To understand and explain the participants' perspectives on their experiences in the management of patients with COVID-19, the researcher ensured the use of thick descriptions.

### **3.1.1 Ontology (Nature of Reality)**

Ontology refers to an individual's perspective on the nature of reality and being a subjective reality (Mack, 2010). According to Sayer (1993), ontology studies claims and assumptions that are made about the nature of social reality, claims about what exists, what it looks like, what units make it up, and how these units interact with each other. The researcher gets several views about a phenomenon from study participants based on their perception of reality and tries to explain their various experiences in their study. This study set out to explore the varied experiences of frontline nurses providing care to patients infected with COVID-19.

### **3.1.2 Epistemology**

Epistemology considers various perspectives on the most appropriate methods for enquiring into the nature of the world as well as what knowledge is and the various sources and limits of knowledge. Epistemology is the study of knowledge, or the theoretical underpinning of the methods being used in a study (Bleiker et al., 2019). According to Sayer (1993), epistemology is the theory or science of the method or basis of knowledge. The knowledge of a phenomenon is embedded in the theoretical perspective and the methodology used in its inquiry. The data collection process was done by engaging the participants through face-to-face semi-structured interviews to gain knowledge of the participants' experiences in managing patients with COVID-19. The data were transcribed verbatim and analyzed using the words of the participants who are seen as 'actors' informing the reality (Bleiker et al., 2019).

### **3.1.3 Axiology**

Axiology is the study of the theory of the nature of value. It is concerned with value, ethics, and moral judgments. According to Kivunja & Kuyini, (2017) axiology refers to the ethical issues that need to be considered when planning research. The credibility of the

research findings considers the role values play throughout the research process. In qualitative research, the role of values, ethics, and morality is of great concern. The study started by seeking ethical approval from the Ghana Health Service Ethics Research Committee (GHSERC) for the study to be credible. Informed consent was sought from all participants to empower them through voluntary participation. Ethical principles such as beneficence, non-maleficence, privacy, anonymity, and confidentiality were ensured to protect participants from harm.

### **3.2 Study Design**

A qualitative exploratory descriptive design was used for the study (Polit & Beck, 2013). This design was used to elicit responses from the participants on their experiences by using interviews and noting their responses to questions asked. It helped in collecting adequate information and gaining in-depth knowledge of the phenomenon being studied (Leppink, 2017). The interviews are conducted in the natural setting of the participant. The design was considered suitable for the study to explore the experiences of the frontline nurse providing care to patients with COVID-19.

### **3.3 Study Setting**

The study was conducted at the Ga East Municipal Hospital in the Greater Accra Region of Ghana which was designated by the government as one of the treatment centres to manage patients who had tested positive for COVID-19. The hospital is a hundred (100) bed capacity hospital that was opened in October 2019, situated in the Ga East Municipality of the Greater Accra Region. The facility has six (6) main clinical and diagnostic units for care which include the Out-patients Department (OPD), Laboratory, Pharmacy, Recovery Unit, Emergency Room (E.R), and High Dependency Unit (HDU). They had three (3) main wards which were categorized based on the severity of symptoms after triaging at the OPD and assessment on the ward. The recovery ward managed patients with mild COVID-19

symptoms, the emergency unit had patients with moderate to severe symptoms and the HDU had patients who had severe symptoms and needed intensive care and monitoring.

The hospital is a Ghana Hospitals Project Initiative to provide and improve infrastructure for healthcare delivery in the region. It was initially built to cater to the health needs of residents living within Dome, Kwabenya, Haatso, and Madina, however, it was converted to a treatment centre upon the emergence of the COVID-19 pandemic in December 2019. The facility however operated with about 80 beds to cater to patients who have tested positive for COVID-19 due to logistical constraints.

### **3.4 Study Population**

In this study, the target population was all frontline nurses managing patients with COVID-19 at the Ga East Municipal Hospital, Accra. According to Martínez-mesa et al. (2016), the target population in a research study is a group of people whose attributes are of interest to the researcher. About forty-two (42) frontline nurses were recruited to care for patients with COVID-19 at the health facility. The nurses were reshuffled periodically from one ward to the other. The ranks of the frontline nurses working in the facility included Enrolled Nurses', Staff nurses, midwives, Nursing Officers, and Senior Nursing Officers.

#### **3.4.1 Inclusion Criteria**

Participants were included in this study if they:

1. were qualified registered nurses who were managing patients with COVID-19 at the Ga East Municipal Hospital.
2. had worked at the Ga East Municipal Hospital for a minimum of six months irrespective of their ranks.

### **3.4.2 Exclusion criteria**

Participants were excluded from the study if they:

1. were frontline nurses who were under isolation on account of testing positive for COVID-19.
2. were on leave during the time of the study.

### **3.5 Sampling Technique**

A purposive sampling technique was used to select participants for the study. This non-probability sampling technique enabled the researcher to deliberately select participants with properties that are of interest to the researcher for the study to be carried out. Sampling is the technique of selecting a required number of participants who share similar characteristics of a target population (Martínez-mesa et al., 2016).

### **3.6 Sample size**

A total of fourteen (14) participants were selected for this study, which was informed by data saturation. Data saturation occurs when no fresh information can be gathered from the participant. Saturation occurred after interviewing the twelfth (12th) participant. Two more participants were interviewed till no new ideas emerged from their responses to inform the study's codes, subthemes, and themes.

### **3.7 Data collection**

Data collection is a process of systematically collecting information from participants on a phenomenon under study (Korstjens & Moser, 2018). The data was gathered using a semi-structured interview guide (Appendix C) in the English language. It allowed the researcher to redirect ambiguous responses of the participants (Creswell, 2014). The interview guide was designed based on the concepts in the theoretical framework, objectives of the study, and reviewed literature.

The interview guide was in two sections. The first part of the guide comprised the

socio-demographic data which included the sex, age, years of work experience (total years of service and within the COVID-19 treatment facility), rank, educational background, marital status, and working unit or department of the participants. The second part of the interview guide comprised the main questions relevant to the study. The interview guide also had some probes or follow-up questions to further explore and describe the experiences of the frontline nurses on providing care, challenges (stressors), resources available to them (support systems), and their perceptions regarding care provided to patients with COVID-19.

### **3.8 Pre-testing instrument**

The interview guide was pretested at the Greater Accra Regional Hospital (G.A.R.H), also known as the Ridge Hospital with two (2) frontline nurses. The hospital had a designated ward or area to render care to patients who had tested positive for COVID-19. This was done to ensure the questions on the guide were clearly understood and not ambiguous. The interviews were recorded and transcribed, after which adjustments were made to the interview guide to improve its clarity. However, the information generated from the pre-testing was not added to the main study.

### **3.9 Procedure for collection of data**

Ethical approval was sought from the GHSERC (GHS-ERC 032/01/21) to gain access to the research setting before the commencement of the study. Permission was also sought from the heads [Medical Superintendent and the Deputy Director of Nursing Services (DDNS)] of the Ga East Municipal Hospital with a permission letter (Appendix G), ethical approval (Appendix D), and an introductory letter from the School of Nursing and Midwifery, University of Ghana (Appendix E).

After being granted permission for the study, the researcher was introduced to the prospective participants by the frontline nurses' in-service training coordinator and ward-in-charges. The researcher established rapport with the frontline nurses and explained the

purpose of the study and their role in the study to each one of them privately. A consent form was signed by the participants who expressed their desire to take part in the study. The individual interviews were conducted in the English language through face-to-face interaction in a private office. Adherence to COVID-19 safety protocols was ensured by maintaining physical distance and the use of PPE (face mask). The interviews were conducted in a private and safe environment at the convenience of the frontline nurses. Anonymity was ensured by the use of generated codes (FN1, FN2, .... FN14 to represent “Frontline Nurse” 1, 2 and 14 respectively). The researcher sought permission from each participant to audio record the interviews to facilitate data transcription and analysis. Confidentiality was also ensured by assuring the participants that all audio recordings of the interviews and forms containing their documents will be kept safe in a locked cabinet in the researcher’s office. The socio-demographic characteristics of the participant were however separated from the audio recordings. The interview was recorded, and records were kept of both verbal and non-verbal cues. The interviews were transcribed verbatim after listening carefully and the audio. The interviews lasted between thirty-five (35) to sixty-five (65) minutes.

### **3.10 Data Analysis**

Data collection and data analysis were conducted concurrently to make meaning of participants’ responses on their experiences regarding the care of patients with COVID-19. The recorded interviews gathered from the field were analyzed immediately by transcribing them verbatim. The transcripts were read several times to bring out similar and divergent ideas and words. The data were coded and grouped as sub-themes and themes. Analysis of the data was achieved through reduction, display, conclusion drawing, and verification (Miles & Huberman, 1994). Data were analyzed using thematic content analysis. Content analysis is a process of organizing and interpreting the narrative of the participants, to reduce the volume of the data collected and regrouping together to gain some understanding of their experience

while staying close to the content of their words (Johnson, 2019). Thematic-content analysis was used to analyze the pattern of the data which helped in answering the research questions by listening to the audio severally, transcribing, coding, and generating themes for the various codes (Clarke et al., 2016; Crowe et al., 2015). The researcher's analyses were cross-checked by the study supervisors to ensure they were rigorous. The transcripts were exported into MAXQDA software to manage the data.

### **3.11 Methodological Rigour**

Rigour refers to the measures put in place to ensure the trustworthiness of the study. The four criteria for establishing the trustworthiness of the study are credibility, transferability, dependability, and confirmability (Lincoln & Guba, 1985). Rigour is very important in qualitative research as it shows that the findings are credible.

#### **3.11.1 Credibility**

The credibility of the research is ensured by establishing that the findings of the research represent the exact information of the participants. It confirms the accuracy of the findings to the participant's recorded data or information, ensuring participants meet inclusion and exclusion criteria. The researcher also employed reflexivity to examine how her background influenced the study. Participants were engaged for a duration between (35 to 65 minutes) to favourably elicit needed information from them. The same interview guide was used for all participants of the study. Member checking was done, and the participants were asked to confirm the understanding gained from the interview (Morse, 2015).

#### **3.11.2 Transferability**

The term 'transferability' occurs when findings of the research can be used in other settings or contexts at different times with similar participants. It is analogous to the generalizability of the study. This is ensured by giving a detailed description of the study setting, the participants, the method of data collection, and the process of carrying out the

research (Crowe et al., 2015). This research involved frontline nurses managing patients with COVID-19 at the Ga East Municipal Hospital and therefore can be replicated in other settings.

### **3.11.3 Dependability**

This study refers to the stability of data gathered over a period under different conditions (Elo et al., 2014). It is also referred to as the reliability of the research. It involves the need of reporting all the processes involved in the study to enable future research to replicate similar work (Korstjens & Moser, 2018). Data was gathered using an interview guide for all the participants. The researcher worked closely with her supervisors to discuss feedback and improve on the interviews.

### **3.11.4 Confirmability**

This study establishes the representativeness of the response of the participants rather than the researcher and shows the objectivity of the researcher (Lincoln & Guba, 1985). The audio-tape information was transcribed verbatim. The researcher ensured that the findings were reflective of the experiences of the nurses managing patients with COVID-19 and not her views. This was achieved by bracketing her assumptions. An audit trail of the records of the field notes, interviews, and any relevant information was kept showing how data was processed into achieving the findings of the study.

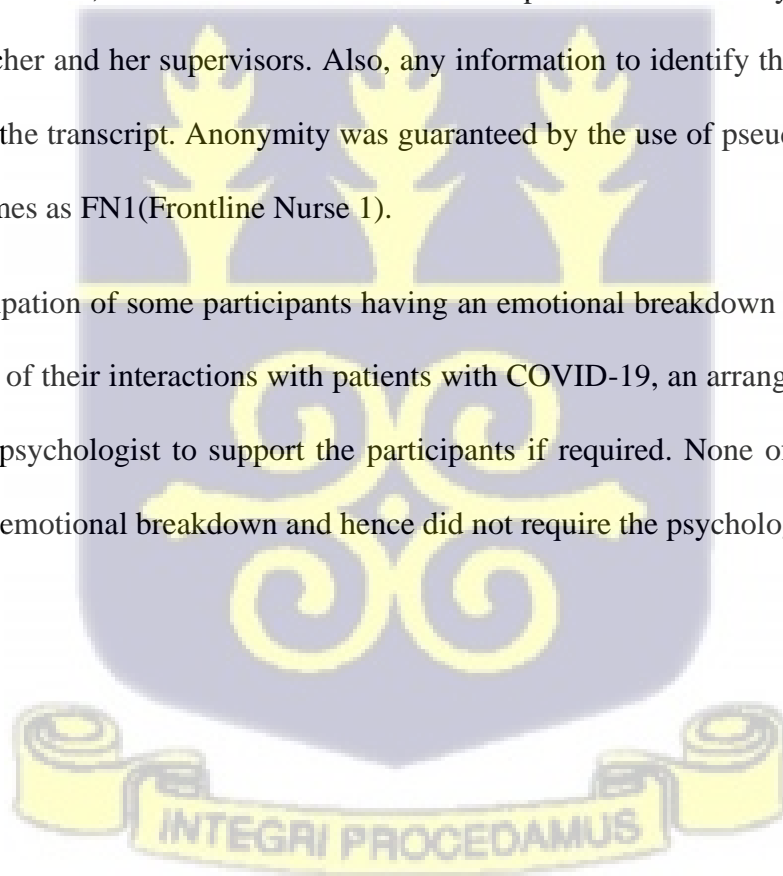
### **3.12 Ethical Considerations**

Ethical clearance was obtained from GHSERC with the study protocol. Copies of the ethical approval and introductory letters together with a permission letter (Appendix G) were sent to the authorities at Ga East Municipal Hospital for approval of the commencement of data collection. Other relevant gatekeepers (in-service training coordinator and ward-in charges) in the facility were used to get access to the participants.

A designed information sheet to explain the purpose, objective, potential benefits, and risks of the research was presented to the participant. Those who met the inclusion criteria were asked to sign a consent form to indicate their agreement to be part of the research. Participants were informed of the right to partake or withdraw during the research without any consequences, and they also had the right to refuse to answer any question they were not comfortable with.

Privacy was maintained by conducting the interviews in a private office within the health facility and away from others. Permission was sought from each participant to audio record the interviews. To ensure confidentiality, the participants were informed that the audiotapes, field notes, and consent forms would be kept safe with security locks known to only the researcher and her supervisors. Also, any information to identify the participant was separated from the transcript. Anonymity was guaranteed by the use of pseudo names instead of their real names as FN1(Frontline Nurse 1).

In anticipation of some participants having an emotional breakdown while recounting the experiences of their interactions with patients with COVID-19, an arrangement was made with a clinical psychologist to support the participants if required. None of the participants experienced an emotional breakdown and hence did not require the psychologist's support.



## CHAPTER FOUR

### FINDINGS OF THE STUDY

#### 4.0 Introduction

This chapter presents the findings of the analysis of data from the study: experiences of the front-line nurses managing patients with COVID-19 at Ga East Municipal Hospital, Accra. Fourteen participants working at the facility were interviewed on their experiences whilst caring for patients infected with COVID-19. The theoretical framework underpinning the study is Hill (1949) ABC-X model of family stress and coping as used in the work of Rosino, (2016). Four (4) themes and twelve (12) sub-themes were generated from the data based on the constructs of the framework and the objectives of the study COVID-19 care challenges, multi-dimensional supports, care-related stressors, and perceived care outcomes. Participants' verbatim quotes relating to the theme and subthemes were presented to support the analysis. The presentation of the results is preceded by the socio-demographic characteristics of the participants.

#### 4.1 Socio-demographic Characteristics of Participants

Fourteen (14) participants (twelve female and two male) who were frontline nurses providing care to COVID-19 patients were interviewed in the study. Their ages ranged from twenty-six (26) to thirty-six (36) years. All participants were professional nurses with four (4) having a certificate, six (6) having a Diploma in Nursing, three (3) with a Degree, and one (1) Master of Science in Nursing. One (1) participant was a critical care nurse. The participants included four (4) enrolled nurses, two (2) senior staff midwives, four (4) staff nurses, two nursing officers, and two (2) senior nursing officers. Four of the participants were currently pursuing a degree program whilst working. All participants had worked in the COVID-19 treatment centre facility for more than six (6) months. The working experience of these nurses ranged between two (2) to sixteen (16) years.

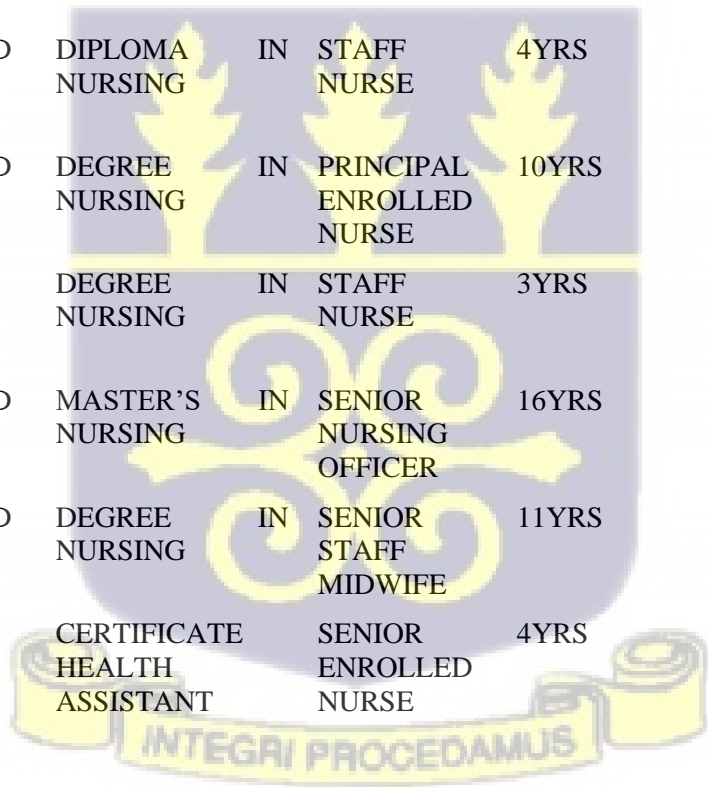
Eight (8) worked in the High Dependency Unit (HDU)/ICU and the remaining seven (7) were in the Emergency/Recovery wards.

From the data, nine (9) participants were married and five (5) were single. Of the nine (9) married nurses, two (2) were without children, and seven (7) stayed together with their husbands and children. The socio-demographic characteristics of the participants have been displayed in the table below.



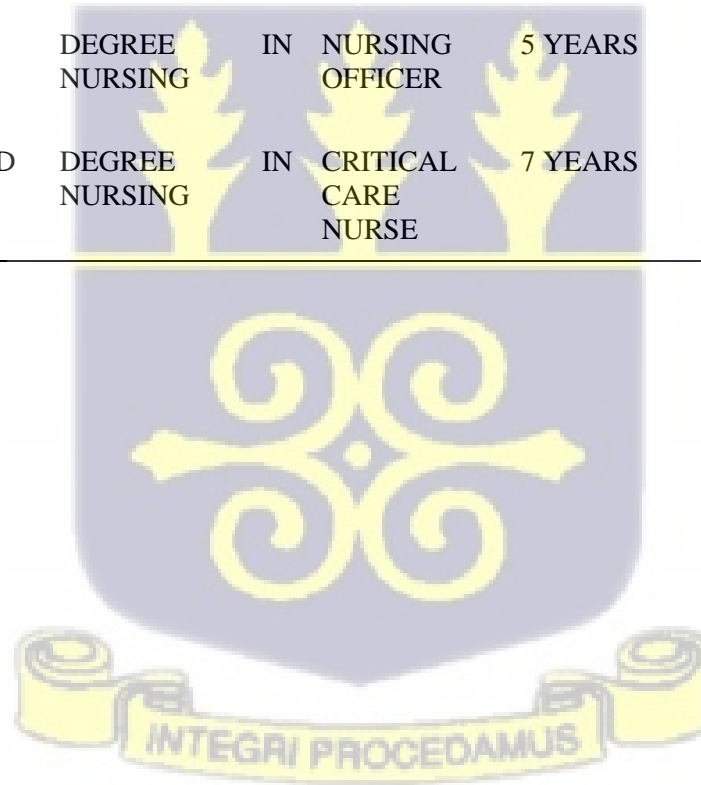
**TABLE 4.1: Socio-demographic Characteristics of Participants**

<b>PARTICIPANT</b>	<b>AGE</b>	<b>SEX</b>	<b>MARITAL STATUS</b>	<b>EDUCATIONAL BACKGROUND</b>	<b>RANK</b>	<b>YEARS OF WORK EXPERIENCE</b>	<b>YEARS AT CURRENT UNIT</b>	<b>UNIT</b>	<b>FURTHER STUDIES</b>
FN1	34YRS	F	MARRIED	DIPLOMA MIDWIFERY	IN SENIOR STAFF MIDWIFE	6YRS	15 MONTHS	HIGH DEPENDENCY UNIT (HDU)	-
FN2	26YRS	F	MARRIED	DEGREE NURSING	IN ENROLLED NURSE	2YRS	13 MONTHS	RECOVERY WARD	-
FN3	31YRS	M	MARRIED	DIPLOMA NURSING	IN STAFF NURSE	4YRS	15 MONTHS	HIGH DEPENDENCY UNIT (HDU)	PURSUIING FIRST DEGREE
FN4	35YRS	F	MARRIED	DEGREE NURSING	IN PRINCIPAL ENROLLED NURSE	10YRS	17 MONTHS	HIGH DEPENDENCY UNIT (HDU)	PURSUIING FIRST DEGREE
FN5	27YRS	F	SINGLE	DEGREE NURSING	IN STAFF NURSE	3YRS	18 MONTHS	HIGH DEPENDENCY UNIT	PURSUIING FIRST DEGREE
FN6	36YRS	F	MARRIED	MASTER'S NURSING	IN SENIOR NURSING OFFICER	16YRS	12 MONTHS	EMERGENCY ROOM (ER)	-
FN7	32YRS	F	MARRIED	DEGREE NURSING	IN SENIOR STAFF MIDWIFE	11YRS	18 MONTHS	RECOVERY WARD	-
FN8	28YRS	F	SINGLE	CERTIFICATE HEALTH ASSISTANT	IN SENIOR ENROLLED NURSE	4YRS	12 MONTHS	RECOVERY WARD	-



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FN9	26YRS	F	MARRIED	CERTIFICATE IN NURSING	IN SENIOR ENROLLED NURSE	2YRS	12 MONTHS	RECOVERY WARD	PURSUING FIRST DEGREE
FN10	26YRS	F	SINGLE	DEGREE NURSING	IN NURSING OFFICER	2 YEARS	7 MONTHS	COVID OPD	-
FN11	29YRS	F	MARRIED	DIPLOMA NURSING	IN STAFF NURSE	3 YEARS	7 MONTHS	POST COVID / HDU	-
FN12	26YRS	F	SINGLE	DIPLOMA NURSING	IN STAFF NURSE	3 YEARS	8 MONTHS	POST COVID / HDU	-
FN13	30YRS	M	SINGLE	DEGREE NURSING	IN NURSING OFFICER	5 YEARS	12 MONTHS	HDU / ICU	-
FN14	32YRS	F	MARRIED	DEGREE NURSING	IN CRITICAL CARE NURSE	7 YEARS	9 MONTHS	ICU	-



#### 4.2 Emerging Themes and Sub-Themes

Based on the thematic-content analysis conducted, four themes and twelve sub-themes emerged. The details of the themes and sub-themes are displayed in Table 4.2 below.

**Table 4:2 Emerging Themes & Sub-Themes**

THEME	SUB-THEME
COVID-19 care challenges.	<ul style="list-style-type: none"> <li>• Physical challenges</li> <li>• Psychological challenges</li> <li>• Patient-related challenges</li> <li>• Inadequate motivation</li> </ul>
Multi-dimensional support	<ul style="list-style-type: none"> <li>• Coping strategies</li> <li>• Team support</li> <li>• Institutions and governmental support</li> <li>• Non-governmental support</li> </ul>
Care-related stressors	<ul style="list-style-type: none"> <li>• Duty of care</li> <li>• Stigma</li> <li>• Social isolation</li> </ul>
Perceived care outcomes	<ul style="list-style-type: none"> <li>• Growth of the nurses</li> </ul>

### 4.3 COVID-19 care challenges.

This theme entails the various challenges experienced by the participants while they provided care to patients with COVID-19. The frontline nurses were challenged physically and psychologically owing to the contagious nature of COVID-19. Some patients demonstrated some behaviours suggestive of stressing out the nurses coupled with the feeling of inadequate motivation of the nurses a year after the emergence of COVID-19. The challenges experienced by the frontline nurses in the line of their work were demanding, leaving the nurses exhausted physically and psychologically.

The four (4) sub-themes that emerged from this theme include physical challenges, psychological challenges, patient-related challenges, and inadequate motivation.

#### 4.3.1 Physical Challenge

The frontline nurses faced a variety of physical challenges which could be considered stressful while providing care to the patients infected with COVID-19. The stressors experienced by the nurses included high workloads, challenges with the use of PPE, stressful work hours and schedules, and insufficient supplies.

The workload of the frontline nurses increased especially at the peak of each wave of COVID-19. Most of the nurses mentioned that the number of patients admitted was more and most of them who were hospitalized came in very ill. They also had severe symptoms leading to increasing care demand. Some of the activities carried out on the patients were bathing, changing their clothes and diapers, feeding, and serving their medications. Other activities included monitoring patients' vital signs, oxygen saturation, oxygen delivery devices, and perfusors as well as turning and lifting patients with COVID.

*“There was a lot we had to do. We had to feed, we had to bath the patients, we had to turn the patients in bed and the feeding took time because most of them were on C-*

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*PAP [oxygen delivery device], so you have to take the oxygen off, feed put it back, ...*’FN1

*‘Those on bed bath, those on pampers, those that ... cannot walk, you have to help them ... take the bedpan after, even if they are thirty and ten need the bedpan, see how you will suffer after you give them medication ...I said wow, then this place it is not easy. We are suffering it is not easy.’* FN10

Participants indicated they had to do almost everything for the patient when they entered the isolation ward before coming out.

*‘so make sure that when you enter you do all the nursing you have to do in, you feed, you serve medications, you change ... if possible, you change their attire, their diapers, you make sure you do everything before you step out’* FN5

The activities were tedious, such that a participant complained of waist pain after going in and coming out of the isolation ward. He was scared it might harm him in the future should he continue working there for a long time.

*‘the lifting when you finish sometimes all your waist will be paining you...One time too, I was scared that if I continue this for a year or two, I will develop some waist pain’* FN3

The majority of the participants spent long hours in the isolation ward, because of the high demand of care required by the patients with COVID-19. The nurses were exhausted as a result of these tasks. Some of the participants reported having to stay in the ward for extended periods providing care to the patients. The participants linked their high workload to

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the high number of severely ill patients on admission resulting in participants getting tired from the increased demand for care. Some nurses recounted their experiences caring for the very ill patient at the HDU.

*"Ideally the maximum you are supposed to spend is 45 minutes, because the more you stay in the more you risk yourself, ahaa and due to the severity of the cases ... that leads for us to spend much time inside"* FN3

*"during the waves, it was terrible here. The ICU was full, we had eight patients... seven on the ventilator and only one on the rebreather. It was very stressful. We go inside and then, and you spend more than two hours with one patient... I spend a whole day inside...."* FN14

The participants also indicated that the number of nursing staff assigned to provide care to patients with COVID-19 was inadequate thus they were usually unable to meet the demands of the patients in their units.

*"the staff strength we do not have the staff strength...before you realize you do one or two things... the three hours is up, yea so if we have more staff, we will be less tired but if not um..."* FN 13

*"So, I was the only critical care [nurse] on duty... so, in fact, I suffered that day... I did almost all the work"* FN14

The use of the PPEs (surgical face mask, N95 mask, coveralls, gloves, face shield, and goggles) by the frontline nurses was considered challenging. Participants indicated having initial challenges with donning and doffing the coveralls, boots, and face shields. Other participants mentioned that the PPEs were uncomfortable. The majority of the frontline nurses initially did not know about wearing and removal of the PPE, but they indicated that after having some training sessions, they became conversant with its use.

*“it was not that easy, as I said earlier on, we were taken through series of training and we also wore it on for them to see if you have worn it properly. How to wear go through steps of wearing it, and steps of even taking it off” FN6*

Furthermore, the nurses experienced a lot of discomfort from the use of the PPEs. Wearing the protective gear was described by most of the participants as uncomfortable. The discomfort was due to the thick and rubber nature of the coverall which made it produce heat that made them sweat a lot and got their clothes wet. Most of the participants shared accounts of the discomfort they felt with the PPE. They mentioned these about the PPE:

*"the coverall, it is like, like rubber so um, we sweat a lot. By the time you come out, your everything...everything you are wearing is wet. You will have to bath and change into a new scrub." FN 14*

*“ it is not the room that is hot, it is the coverall that is what generates the heat. The room is fully air-conditioned and the coveralls... those days the ones we had, they were very thick....I do not know...I think was it rubber or so you sweat yea" FN13*

Some other discomfort wearing the PPE that the participant experienced was having to wear heavy equipment which was also tiring to some of them. Some participants said:

*“It was not comfortable; it has never been comfortable. But it's your duty, you still have to manage, the patient really need help." FN1*

*" Because, as I said just wearing that dress alone and the boot alone especially me, the boot is so heavy and the dress alone, you are walking across the barrier to the entrance of the ward, you are already tired... it wasn't easy, its far. So, by the time you come, you are already tired as if you've run a race."FN8*

The participants had to wear several pairs of gloves before rendering care to the patients. This, some of the said hindered the activities they carried out on the patients.

*“with the gloved hand, we wear like three. Like three pairs, the movement of the fingers is quite difficult. And then when you want to have a hold of something it is even difficult it is not like using one layer of glove”FN 11*

*“ when it comes to tearing the plaster to secure the IV line, with the gloves, it is not....um....it is not easy...yes, because the moment you tear it your gloves also tears”*  
FN14

Again, the heat generated by the PPE and some nursing activities makes their face shield foggy blurring their vision when carrying out their nursing activities.

*“maybe you want to set and IV line, the shield, sometimes, as I am speaking if I was to be in the shield,...the air that was to escape from the masks, it forms something....mist or something on the shield so it makes....it blurs your vision”*  
FN14

*“with the face shield, it will become blur so you cannot even see, especially when you are sweating and normally...morning when giving err bed bath, bathing the patient in the morning... most of them like warm water so because of the water the vapor ...makes the face shield blur, so sometimes you have to manage”FN3*

They however developed ways of working out through the foggy shield.

*“normally what I do is something like that you close one eye and use one to write small.”FN3*

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*“Sometimes we come out for our colleagues to wear gloves and clean it for us and then go back. If not, you just doff off and then someone also goes and continues.”FN8*

Furthermore, a few participants said initially, they were unable to breathe wearing the N95 nose mask together with the other PPE when they had to enter the isolation wards.

*“I was like eiii, I will die. I will die in this dress. The coverall was too tight and there was no space for me to even breathe so I thought I could not make it. It was my first day.” FN14*

One male nurse who said he was eager to work at the facility had this to say about his first encounter in PPE in the isolation ward:

*“hmm actually when I went to the infectious area where the patients are in the ICU, erm, I think I did only ten to fifteen minutes then I became very anxious... I could not breathe through the mask, the N95 I did not know what happened”FN13*

Many of the participants said that working a twelve-hourly shift was stressful and made them tired due to the nature of the care they were rendering within the facility. Many of the participants spoke of how tiring it was for them:

*“It was stressful because we are not used to the normal straight 12-hour shift, we were used to normal 8-hour shift” FN7*

*“We start at eight a.m. we close at eight p.m. because we were doing twelve hours shift... Well, it wasn't easy” FN8*

One participant however indicated that:

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*"Sometimes we are supposed to spend 12 hours, but we extend to maybe 13....14 hours before we leave."FN12*

However, some participants opened up to tell how their various unit heads were able to help them get relief from the stressful shift.

*"It was, but sometimes your in-charge will also try to fix one dot off for you. Yeah, just to relax... if we are lucky or if the patients are not many then we can do that"*  
FN9

Participants also talked about the occasional shortage of oxygen when the demand was high, even though there was a constant supply. Again, some mentioned that if they had large number of patients who needed to be on a ventilator, they didn't have enough ventilators to utilize and had to rely on other departments.

*"Oh yes, we normally get shortages of the PPEs and other stuff"* FN2

Participants also talked about the occasional shortage of oxygen when the demand was high, even though there was a constant supply. Again, some mentioned that if they had large number of patients who needed to be on a ventilator, they didn't have enough ventilators to utilize and had to rely on other departments.

*"There was a constant supply till ... you know that week, was a little difficult. That was when we started moving some of the patients to the new facility even though the work there was not done. We had to move some of them there because the oxygen was not enough for them..."* FN10

*"... I think the ventilators too were not enough. We had only about 5 or 6 I'm not sure at the hospital. So, it was disturbing."* FN9

### 4.3.2 Psychological Challenges

The psychological stress experiences of the frontline nurses managing patients with COVID-19 included fear and anxiety, helplessness, emotional breakdown, and concerns of worried relations.

Most of the frontline nurses feared that they would contract coronavirus whilst caring for patients with COVID-19 and eventually infect their significant relations.

*“I was not going home too. Eerh, I was scared of infecting them, I was scared, maybe I would contract the disease here and then infect my family” FN1*

*“hmm.... We lived in fear each and every day, that we could be affected. We lived in fear. Now it is a bit better but in the initial stage, it was not comfortable at all. Because you have the fear of uncertainty what if tomorrow, I get?” FN6*

Some of the nurses mentioned that they were very worried and scared about working on patients who have tested positive for COVID-19. The fear emanated from the fact that they lived with some relations who had other comorbid conditions and were scared that, they might contract the disease and infect them.

*“My daughter is asthmatic. So, I was scared. The impression of coming here, taking it home, she will be infected and then it gets complicated” FN9*

*“Me even getting it was not even the problem oo but to infect others. That was what I was thinking because my parents both of them are hypertensive, diabetics and I am the only child around them now”. FN10*

However, most of the participants interviewed did not test positive for COVID-19. Only about four of the participants ended up testing positive for COVID-19. One nurse recounted

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an instance when his father tested positive, and she assumed she was the source of the infection.

*“When he [dad] got it when my mother called and told me has tested positive, I went to check because I was thinking maybe he got it from me... I go to visit them. But when I checked, I was negative”.FN9*

There was heightened fear and anxiety at the news of their colleague nurses testing positive for COVID -19. This was especially so after they have worked together or interacted with each other before the news, because of the cordial relationship that existed between them:

*"When we heard they [colleagues] had COVID we were scared. Because we had come into contact with them." FN1*

*“You get scared. This is someone you even ate with, someone you know, you were giggling and... some will even come to your room at the top there and they sleep on your bed...”FN9*

The majority of the nurse were anxious about their initial encounter with the patients infected with COVID-19. The fear and anxiety they experience were intense at the initial stages, however, as time went by, the training sessions, the motivation they got from their leaders, and adhering to the safety protocols, most of them calmed down and were no more anxious like before.

*"Initially when COVID came, we were all scared, when we received our first patient in the ward, but as time went on, it became normal". FN1*

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*"Because we were trained in donning the PPEs, so we became very confident, it was easy for us as time went on. But in the beginning, most of us did not have the privilege to be trained but after the training, it became very easy for us." FN1*

Nine of the participants said they were very anxious about their recruitment or posting to the facility to care for COVID-19 patients. Some were so scared that they even wanted to change their posting to the facility. A few others were not too bothered about it. However, two of them said they looked forward to working there caring

*" Surprisingly, I was so eager to come and join. Even the March, when they were nominating, they say, everybody if you want to join just, I wrote, and my colleagues told them that I am breastfeeding so they shouldn't add me'' FN4*

Although all the nurses recruited were trained physically and psychologically in managing patients with COVID-19, most of them were frightened at the first encounter with the patients. Some recount how they were scared and anxious the first time they had to don and enter the isolation wards to give care to the patient. They mentioned that they could hear their hearts beat very fast, others had difficulty breathing, and the like. One of the nurses who even said she was eager to work at the centre narrated how she felt:

*"the first day I went in, I was scared. Do you know that when I went inside, I could not breathe, so I had to go and hide behind the door and told myself that this is what you are supposed to do, so you better put yourself together" FN4*

The condition of some patients who were hospitalized and had other underlying conditions like Hypertension, Diabetes, and Asthma among others, got worse by the day. More of the participants in the study stated that they felt helpless when the condition of the patients changed or got worse, and they could not do much for them. It was difficult for

them to give out the best of care and looked on as patients' conditions deteriorate.

*"It was difficult for me seeing them lying there, some suffering on oxygen and all that. You know you try to put yourself in their shoes and you feel their pain. But the only thing you can do is to do your nursing duties and then pray for them." FN9*

*"It makes me unhappy especially if we had cared for you for quite a long time and you don't come out well...yea it's frustrating" FN13*

*"you do all you can to care for the patient... you can not really tell whether the person, you, you know that this patient will make it but at the long run, that is, because of the comorbidities, the patient ends up dying" FN1*

Almost all the participants said they were heartbroken when their patients got worse and eventually die. Most of the nurses had developed some close relationships with the patients and were emotionally broken and cried when they lost the patients after all the efforts they put in to get them healed. They sometimes wept even in their coveralls especially when they died in their presence.

*"I cried, I cried, when I was coming, the doctor was like, 'J', are you crying? ...I mean how?" this is one fine gentleman,... he was diabetic but... we did everything, I do not understand why he should die... I could not help myself; I was just crying."*  
FN4

*"You will cry. I remember we had one patient... I think he was in his early 30's, herrh, hmm, ..... it is not like you will cry loudly, but you will be in your coveralls and you will be shedding tears...when you talk, the patients will be like, nurse are you okay?"* FN5

One major psychological hurdle the participants had to deal with was concerns raised by their relations regarding their safety and caring for patients with COVID-19. Although some relations gave support to some of the participants to work in the treatment center, others did not get the needed support from them because they were not comfortable with them working in that facility due to the fear of them contracting coronavirus. Some participants even had to keep the information about them working at the facility from some relation.

*"They were not comfortable at all. You know initially, it was so scary to hear, that somebody is working at the COVID center.... People were very worried, my parents for once were very, very worried."FN6*

*" Some of my family members they argue with me aah, they said I should stop blah blah err; the worst one is when they heard of the 50% so they thought because of that's why so they were saying that I should stop'' FN3*

#### **4.3.3 Patient-related stressors**

The patient-related stressors were challenges about non-compliance on the part of the patient whiles in isolation and non-adherence of the patients to COVID-19 protocols. Some patients who came on admission showed symptoms of COVID-19 having tested positive which got worse sometimes. Others did not show any symptoms but still had to stay in isolation at the facility for at least two weeks before discharge. The nurses mentioned that some of the patients brought to the facility from the Airport who tested positive for COVID-19 but showed no symptoms were agitated about their stay in isolation for weeks. Some desperately wanted to leave the facility but as the protocol did not allow it, their anger was redirected at the nurses. The Nurses described some of these patients as being difficult because they misbehaved, by verbally and physically abusing the nurses.

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*“Those from Airport especially, when they come, ...they spend some days, we do every test before..., it was not easy. Some will insult you, some will try to even hit you if you are close to them” FN8*

*“Some fight us, some... hmmm... some will throw things at you, some will insult you. It's not easy.” FN9*

Some of the patients threatened to shoot at the nurses if they continued keeping them in there. The institution had to intervene by bringing in security (Military) personnel to guard the place.

*“a patient from the airport took out a gun, and threaten to shoot. And then they brought in the military personnel to guard the place.” FN 9*

Also, a few of the nurses indicated that some patients did not adhere to the treatment regimen. They removed the CPAP or O2 mask which was to deliver oxygen at a high flow to keep up their oxygen saturation level thus making the nurses enter the isolation wards more frequently than scheduled.

*“Those who do not make it on the vent, me I think it's cooperation. It is not comfortable so they keep on removing the mask and...the moment you take it off,...in some few seconds the saturation will be dropping.” FN 14*

*" We received a patient in the morning. Before she [my in-charge] comes out the patient has taken off the thing and she had to donn and go in again, she went in like four times before we had to restrict the patient so that he would not take it off " FN 4*

Four of the participants complained of non-adherence of the public to COVID protocol and were hurt by their comment when they tried to advise them on COVID protocol

*“If you tell them please can you put on your nose mask? They will say, ‘eii...why?’ the harsh comment that will come from the person, you will even regret you even spoke to the person.”FN2*

*“Because most people do not really take the precautionary measures seriously, they feel it is not there. You might go protect yourself but then somebody else’s negligence will make you affect, get you infected so that's it” FN7*

#### **4.3.4 Inadequate motivation**

Almost all the participants said that they were motivated financially. The government promised that all frontline health workers were to be paid a 50 % bonus of their salary each month. However, the challenge faced with this incentive package was the delay in payment of the money which made some participants angry.

*“The anger was, the President’s promises fifty percent and some of us we, we started from day one,... they paid, some people received, the worst one is some of us that rather joined from day one, we have not gotten and those that went late and under different facilities and co., they were all paid.”FN3*

*“This was where we were not even getting the 50% that was promised. It was not coming” FN9*

*“So can you put yourself in our shoes, we’ve sacrificed ourselves, we’ve worked for almost a year, it is even more than a year without any motivation”FN2*

Moreover, a year after the payment of the 50% bonus, the government stopped giving incentives altogether.

*“Yes, they have stopped the tax waiver and then the 50% ...meanwhile we are still taking care of COVID.”FN4*

Also, some participants mentioned they had challenges with the meals being provided for the staff. A participant mentioned that:

*"Initially, people volunteered and then they sponsored food but later the food was not that good, so it was a bit challenging to us" FN7*

Another participant lamented about the food and water which she felt the hospital management was not supportive enough since there were occasional shortages or lapses.

*“The food, the water kraa was a problem sometimes oo. You know you will go to stores for water and they will tell you they do not have enough water. If you look at our environment here, it is difficult to get something to buy, even food” FN9*

She describes with dissatisfaction, the meal served on a Christmas day at work, which she believed was a special occasion but was disappointed about the poor quality of the food served.

*“My dear if you had seen the kind of food they brought that Christmas day, you would have been surprised ... the hospital, I will sometimes, I will say the hospital management were not supporting the nurses as they were supposed to" FN9*

#### **4.4 Multi-dimensional Support**

The second theme sought to answer the research question "What resources were available to frontline nurses managing COVID-19 patients in mitigating challenges encountered? Four (4) sub-themes were identified from the data to describe the responses to the multidimensional supports utilized by the frontline nurses. These included coping

strategies, team support, institutional and governmental support, and non-governmental support. The resources available to frontline nurses helped in dealing with the difficult situations they encountered.

#### 4.4.1 Coping Strategies

The coping strategies were measures used by the frontline nurses to manage the challenging and stressful events they encountered. These strategies included adherence to the safety protocol, boosting their immunity, and religiosity.

##### *Adherence To Safety Protocols*

All participants needed to be fully covered before entering the isolation ward. They mentioned that adherence to strict safety protocols was key during this time in nursing, thus all of them consciously adhered to the safety guidelines whilst caring for the patients.

*“Oh, before you go in before you get in, you have to sanitize your hands. You perform all the COVID protocols” FN5*

*“We have become more conscious... with your infection prevention, especially hand washing. So, you see yourself washing your hands more frequently than probably you may be used to, ... cover your heads, you are conscious of wearing facemasks, you are conscious of wearing your scrubs alone, changing before you go home. ” FN6*

One participant said that once you were working here, you needed to keep safe by always thinking about your safety.

*“ As a nurse taking care of COVID patients, the first thing that comes to mind is your, you think about your safety. So, you make sure you are in the appropriate attire” FN2*

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*"We have more clients coming in, but because we were asked to follow the protocols... in pandemic situations, you still need to make sure that you are following the protocols so that you do not get yourself infected." FN6*

Each time they had to enter the isolation ward, all the participants said they had to be fully gowned in the PPE making sure no part of their bodies was exposed for coronavirus to settle on their skin.

*'you have to be in the full PPE before you go in thus you wear a coverall, then the face shield, then the nose mask normally you use in the N95 when you are going to attend to the patient then you wear your gloves then the boots'' FN3*

However, besides thinking of safety, another participant mentioned that being positive minded also helped in preventing them from being infected by the virus. She was of the view that, because they stayed positive-minded, none of them were infected even in instances when part of the bodies was exposed when they rushed into the ward during emergencies to help the patient without being fully gowned in PPE.

*"if you are caring for someone and you have this positive mind....there is no way, no matter what, sometimes there could be emergency...we wear only the cover aprons with boots and with face shield and N95... you enter because there is an emergency but surprising enough most of us did not get the COVID-19'' FN5*

There were times when to limit the frequent interactions they had with the patients, they took up the patients by checking on them through the back of their ward where they could have a view of them from.

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*"We stand at the back and talk to the patients; we do not enter. So, you stand behind the doors, and then you speak to the patient, you can see them, through the window, so you speak to them." FN1*

Most of the participants who lived with their families and were very concerned about infecting them were very particular about adhering to the protocols and will even avoid meeting them momentarily when they got back from work until they wash down before. Two female participants who lived with their children said:

*"Because I was leaving with my children, I needed to be more careful because they were young children. I needed to be extra careful with hygiene" FN6*

*"So, when I get home on a normal day, I do not see them, I take my bath first before I go and see them." FN1*

Even the participants who were single and lived alone also made sure they took off their clothing from work and washed down before anything else.

*"first thing when I get home I do not enter immediately, I make sure I undress at the entrance of my room" FN11*

*"I will rush to the washroom ..when I am walking I will make sure I will not touch anything so I will be walking slow-slow and I will make sure that my body does not touch anything in the room" FN5*

### **Immune Boosters**

A few of the participants also mentioned that to boost their immunity, they took in medications and fruits. Some also added the inhalation of steam and some local or natural herbs to prevent them from getting infected with the coronavirus.

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*‘Me, prevention, apart from the fruits and other immune boosters I take, steam inhalation, once in a while.’ FN9*

*‘normally, um...what I do is, I do take some I take some Vitamin C and stuff’ FN11*

*‘Let me be honest, I was oh I will drink this ginger thing.’ FN8*

### **Religiosity**

Amidst the fear and anxiety, most of the participants mentioned that they prayed when they felt overwhelmed with fear, especially during the first encounter with the COVID-19 patient. Some of the participants said:

*‘You know the time, the anxiety, the scare, and other things. The first day, I was praying, to be frank, my heart, I was so scared, my heart was beating when I was even donning the PPE to go inside’ FN3*

*‘The first time I donned and entered I was shivering... I was praying, God’ FN2*

Other participants said that when they also could not do much for their patients and saw them struggling after all the care they were given to no avail, they prayed for them.

*‘But the only thing you can do is to do your nursing duties and then pray for them.’ FN9*

She added that:

*‘... So sometimes you end up even praying for your patients. That is something we do not normally do but now, even before you go inside to take care of them, you pray for... you know, good knowledge, healing hands, those kinds of things.’ FN9*

*“me if I break down I pray for them. I am very emotional” FN2*

One participant, who was a critical care nurse recounts how she wanted God to intervene so badly in the life of her patient who happened to be a Reverend minister when his condition changed suddenly, and he kept deteriorating.

*“recently we had a reverend minister... all of a sudden, the condition changed ...when I look at his journey as a pastor, what he went through, I felt God should save him and it didn't happen. I saw the man going, he was dying. We stood there and there was nothing I could do” FN14*

#### **4.4.2 Team support**

Support derived from colleagues whom they worked with came in diverse forms. Almost all the participants mentioned that as team members, they encouraged and supported each other often.

*“The COVID colleagues, oh that one, we support each other a lot and always encourage each other that is why we never give up on anyone” FN3*

One other person said, they encouraged and kept watch over each other to keep them all safe whilst working.

*“We kept encouraging ourselves. we needed to check up on each other and make sure our partner is doing the right thing so that we all don't get infected. Because if one partner goes down everybody is exposed so” FN6*

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Each time a group had to enter the isolation ward, the other members of the team helped in getting them to dress up very well before entering the isolation ward. This was to prevent them from getting exposed to coronavirus. One of the female participants who worked at the HDU said they lived very well, more like family.

*“when it comes to donning, they {other colleagues} help. But it is like we became family, during this COVID, we became family. It is teamwork. If your colleague gets infected, those on duty, you guys will get infected” FN2*

Participants were assigned to work in groups. While on duty, entry schedules were planned for each of them because they did not want to come in at the same time to minimize PPE waste. However, if a team enters the isolation ward but requires assistance, the other team may be called in to assist.

*"We have clients who were very ill...they need more attention...it means another team will also have to don on and come in to relieve you to also go out."FN6*

Some also follow to help out colleagues who have entered the isolation ward from outside because they cannot go in and out, one participant said:

*“The six of us cannot go in because some of us have to be outside, because we will require you to bring some things we need, aha and then because of the monitoring we have a screen someone has to be watching what is happening in there and the help they can offer from outside” FN13*

According to one participant, everyone was ready to help and serve. She indicated that:

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*“As for staff, one thing I like about the staff, anytime you call on them, people were ready to assist” FN9*

#### **4.4.3 Institution and governmental support.**

The support coming from the government and hospital management was to ensure the safety and comfort of all the workers. All supplies that were needed for the work to go on were provided by the government for the hospital. Almost all the participants said that there was an adequate supply of logistics they needed because the facility was one major place designated to care for patients with COVID-19. One participant who is a Senior Nurse had this to say:

*“For treatment center we had almost everything because ... government was also bringing us all that we needed to work with so, we didn’t have too much challenge with resources.”FN6*

Another person also said PPEs were made available to them for use.

*"As I said the coverall was there. The face shield was there, the goggle was there, the mask was there, the glove, the boots everything was there." FN8*

All the participants in the study mentioned that before working at the facility as frontline nurses, they were taken through a series of physical and psychological training. These trainings were meant to equip the participants in handling COVID-19 patients and prevent them from getting infected with the coronavirus.

*"We were still on training when they said the first COVID patient had arrived...but then when we started work every day, we were still being trained whilst at the ward.*

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*You will still be told what to do and what not to do on the ward which was a form of training too."*

Initially, the participants mentioned that they monitored the patients through the back of the isolation wards and sometimes also gave out phone numbers to some relatively stable patients to help monitor the unstable patients. With time, CCTV cameras were installed in the wards to help the nurses monitor the patients outside the isolation ward.

*"But it got to a time ... we were monitoring them on a CCTV. They brought a TV, they connected them to the CCTV cameras, so we were seeing everything on the flat screen." FN5*

When the ICU was established, a monitoring room was created to view all the activities taking place, thus conscious patients were asked to just wave if they needed any form of help.

*"For the ICU they have CCTV... those who are a little bit conscious we tell them if you need anything just wave. So, if they need anything we will all be sitting in the monitoring room" FN13*

The hospital had also made provision for accommodating the frontline nurses whilst they worked in order not to go home to infect their significant others.

*"We have an apartment at the back ... so we use to stay there for some time, usually, we were running one week out, one week in, so you stay there for one week after you are done with everything then you go home for one week then .... you come back"*

*FN2*

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Even other staff who could not get the apartments within the premises, got accommodation secured for them and paid for by the government through the hospital. A Critical Care Nurse who stayed in one of such apartments added that they also provided meals for them.

*“The government paid for the accommodation and then food” FN14*

She also mentioned that transportation arrangements were made for staff who did not live close by the facility.

*“Ministry was providing transportation from Korle-bu to this place” FN14*

Again, according to some of the participants, their COVID-19 status was checked intermittently to maintain the optimum health of the staff and boost general confidence among the team.

*“from time to time too, we are being tested to know those who are positive and those who are negative. So, if you are positive, they quarantine you, they give you treatment so...confident so that you know that your friend is not infected. FN13*

#### **4.4.4 Non-governmental support**

These forms of support were derived from other people including family, the patients, religious organizations, media, and other companies or individuals that helped the participants in dealing with their stressful challenges.

##### ***Family Support***

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The majority of the participants spoke about the support they received from their family and some friends which were mainly prayers and words of encouragement. One of the enrolled nurses said

*“Oh, my mom was always praying for me. Sometimes she will call me and she will be like close your eyes and let us pray. She will pray with me, she will advise me to be extra careful” FN9*

Another female nurse said:

*"My husband used to encourage me a lot. Saying you are saving lives, so just go and do the work and come" FN1.*

A participant, whose dad once survived COVID-19 after he was hospitalized for some days at the same facility said, her daddy really appreciated the kind of care they gave there and always wanted her to be at work, to help save lives.

*“My dad, does not joke with me right now because he came to see the kind of work we are doing there. He really appreciated it. So my dad, even when he calls sometimes and I am like I am not at work, he is like ‘why did you not go to work? My dad, it was not easy for him, so he has really learned to appreciate...”FN9*

However, not everyone who knew they were working at the facility was supportive and encouraged them to continue with what they did. Some relations feared that the participant might contract the virus and it will not turn out well for them. One of the male participants who had been working in the facility since it started operating mentioned that

*“few of those that are ignorant will be scared thinking when you are*

*nursing COVID, you too you are going to die"FN3*

*"It wasn't easy. It wasn't easy at all because I realized that my mummy could call me almost every day to make sure that I was okay."FN6*

They also said some of their friends even asked:

*"why not take a leave and then come home?" FN1*

One of the participants who was a critical care nurse said her husband was not in agreement with her working on patients with COVID -19 and wanted her to find reasons to stop working at the facility and seek a transfer back to her former workplace.

*"He will panic, and he will be like I should go back to Atibie. I should not continue with the work here. He does not want me to do the COVID" FN14*

She said because he was not in support of her, so she did not inform him of testing positive for COVID-19 when she got infected along the line.

*"if I tell him I had COVID, I will stop work, so I did not tell him." FN14*

### **Patient Support**

Some of the participants mentioned that before CCTV cameras were installed to monitor what was happening to the patients inside the isolation ward, most of the patients who were a bit stronger and recovering helped them in monitoring the very ill ones by alerting them on their phone when something was not going well in the isolating ward. One participant who worked in the High Dependency Unit had this to say about how they were supported by the patient.

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*“We were away from the patient, so they call, we gave those who are a bit active our number, so they will call us in case something is happening in there, they will call and then quickly we will rush and go in and then see.”FN4*

Other participants said that some of the patients who recovered also came back to show appreciation to the staff by offering them gift items.

*“Some come to do ‘show’ for some of the nurses. And the patients if they have a particular nurse, they feel was kind or nice to them, they try to give you something. But besides that, some of them bring some to everybody” FN12*

**Other organizations**

There were other organizations including some churches, individuals, and groups that came in to donate food items, PPE, and other supplies to the hospital for use by both workers and the patients.

*“We had NGOs donating. Some brought food for the patient to have, and some were donating PPEs for patients.FN1*

*“Some religious organizations....I remember when we started managing the cases it was the Presbyterian church that was giving us food (lunch) for a while before others also took over” FN6.*

Some neighbourhood food joints such as Eddy’s Pizza were supporting the workers by supplying them with Pizza which most of them enjoyed after a stressful shift.

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*"But we had donations from outside the facility. They will bring in food, lunch, sometimes supper, sometimes pizza. We had Eddy's pizza always supporting us, donating pizza and all that."FN9*

Mention was made by one of the participants of another company 'Gizzid' which also supplied meals to the staffs till date:

*"those who come for the night, they are able to get the breakfast um...yes when we started yeah, breakfast, lunch, and supper but now...um, there is a company Gizzid ..., they provide us now with lunch and supper for the night staff"FN13*

**Media**

The media also played some advocacy roles by interviewing and filming what goes on in the facility and educating the public on the nature of care that took place. This encouraged the individuals and organizations to also come to support the staff and hospital. A participant mentioned that

*"Media...they did a lot of advocacy work for people to come and support us ... capturing, interviewing, what was going on, reporting, asking for people to come and help and all that" FN6*

She also reiterated that the media gave some public awareness about their appearance in PPEs which helped in allaying the fear and anxiety of the patients.

*"thankfully the media was also talking about it how the nurses and health team members was going to be dressing up so most of them before they come, they are aware that we are going to dress up like that"FN6*

Another participant had this to say about how the media helped them in sending messages to the government and public on some of the challenges they encountered whilst managing patients with COVID-19 at the facility.

*“The media really gave us big support. Sometimes they come over, they interview us, so we were always complaining about fifty percent and PPEs and support from outside. Either food donations, PPE’s donations, gloves a lot of things, toiletries, and they came to our aid too” FN5*

Some other participants said that the media made the hospital popular as most people were not even aware such a place exist.

*“the media too they help, they come and interview and I may say they too make the hospital popular because then it was a new hospital too so most of the people don’t even know it exists...Sometimes their mind go GAEC...”FN3*

#### **4.5 Care-related stressors**

This theme sought to answer the third research question ‘what is the perception of stressors associated with managing patients with COVID-19?’ The subthemes identified from the data were the duty of care, stigma, and social isolation.

##### **4.5.1 Duty of care**

The majority of the nurses said this was the first time they had to manage a contagious disease that was considered deadly, in a pandemic era. The participants indicated that they felt a sense of responsibility for the patients since they were trained to care for ill people. Some said that although this was their first time, they had to embrace the task because, amidst

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the fear and anxiety, they had to come in to help. One of the senior nurses who was part of the first badge of nurses to start managing the patients stated that:

*"We have been trained to brace up ourselves for anything, disease condition, all that comes, that intrinsic, um, preparation was.... It has been there already from training so the little that was added up also got us confident to work"* FN6

The nurses sometimes had to risk it to save the patients' life in emergencies because they felt that not doing anything to help at the moment it was needed put the patients' life in danger.

*"I had to go with the gown even though it wasn't right. So even though I put myself at risk too. But then you are trying to save the patients. You can't come out then go and don, by the time you come back, the patient would have been gone."* FN9

She added that:

*"Saving a patient's life was paramount for me at that moment, so far as the man had been saved, and he was okay. Yes, he was discharged"* FN9

One male participant who said he was curious to work with patients with COVID-19 also said:

*"I was not scared because they needed our help and then everybody was afraid so ... I went with the mentality that if it was my relatives, then who is going to care for them so I also have to care for somebody's relative so um I had no issue um.. I was enjoying the experience"* FN13.

#### 4.5.2 Stigma

The frontline nurses faced several forms of stigmatization. Many of the participants said they were seen as carriers of coronavirus by society and even by colleague nurses from other facilities, thus they were sometimes tagged and teased. Some participants said:

*"I remember before we wrote licensure, my colleagues, they were like; 'herrr, COVID fourr nu, ma mu ben yen oo'.(the COVID people should not come close)" FN4*

Another participant said:

*"people see you and they pass comments like you, "you are coming from the COVID centre, do not come and give us COVID oo" FN6*

For one participant, even her mum did not want her to get back home because she feared she might contract coronavirus from her daughter, all because she worked in that facility.

*"But when I told my mum like I am joining, they were all like then do not come home for some month. So, when I started I we started on March, I went home somewhere July." FN8*

Coughing whilst on duty was a source of embarrassment according to one participant. Colleague workers awkwardly looked at you and think you were infected with COVID-19. They teased each other when that happened.

*"Once your colleague is coughing one-two-three-four times and because cough was part of the symptoms, It was like cough was prohibited, so once you start coughing everybody will looking at you with some awkward face." FN6*

Furthermore, a participant mentioned that his friends stopped visiting him when they got to know he works at the COVID centre.

*‘so, from the beginning friends who knew I was doing that by volunteer, they stopped visiting me’’ FN13*

Similarly, a participant complained about the reaction of some neighbours around the apartments where they lived outside the hospital

*‘another apartment, the caretaker, and the workers before we went to the house, I think she was informed that they are giving it to people working here. So she and the workers, they were like, eii, the moment we, we enter the house they all vanish. Then they will be like, ei...‘they are in o...they are in’’ FN14*

#### **4.5.3 Social isolation**

Most of the participants had to move out of their family space into the hostel because they did not want to infect the others they lived with. Some participants mentioned they had to do the COVID test to confirm their status before going back home to meet their families or out of the hostel where they lodged.

*‘we too we stay with our parents,... we have now move to the hostel; so if on weekends you are free and you want to go wherever you want you can go but because of the test ...COVID that is rising so we have all moved to the hostel to stay for a while, so if you tested positive meaning you are not going anywhere.’ FN10.*

Also, some participants said they could no more go out to have fun and socialize with their friends and family like before.

*“We could not do this normal friendship thing. Go out hang around, hang out, and all that, the system has changed, from every angle. There are restrictions in place ” FN6*

#### 4.6 Perceived care outcomes

The fourth theme gathered from the data aimed at exploring the perceived outcome of the challenging situation and how managing patients with COVID-19 impacted frontline nurses. Some of the participants in the study reported that they had to psyche their minds to care and adapt to the prevailing circumstance. Others said they had gained a wide range of experience by working at the facility in managing patients with COVID-19 and would like to remain working there for as long as possible irrespective of the challenges. One participant who had worked at the facility since it started operations indicated that:

*" I did not think of going back though it was scary...I was just like, whatever it is, we are here, we are already here so let us just do it" FN7*

A participant mentioned that by getting herself involved in managing patients with COVID-19, she has had a changed perception of life because she realized they could all be potential patients.

*"I think I had a change to life, that, everybody is important. You wouldn't know where you get {COVID-19}, so you need to treat everybody as equals. That was what, initially I thought oh COVID, de3 wei benya, wei nnya, (this and this person could contract COVID). Later I realize that everybody is at risk of getting COVID." FN1*

Another participant whose dad was once on admission mentioned that the experience she got was to appreciate what it meant to be healthy especially after seeing and experiencing what the dad and other patients with COVID-19 go through.

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*“You get to appreciate health when they are sick... I was ok until my father also tested positive to COVID ... that was when I went to work in the emergency for some time... when it was my father I really felt the pain. That was when I got to know that, truly people were going through a lot” FN9*

Many of the participants said by managing patients with COVID-19, they gained some more professional confidence

*“The experience you get from being a frontline, it makes you strong. It makes you emotionally strong and you realize that....personally it builds you. It builds you emotionally.” FN5*

*“I heard a patient scream... I did not know how to set up a ventilator, there was no CCN around, I was the only one there...the CCN there, she had to stand behind the window and teach me what to do” FN9*

As a frontline nurse, one participant said you needed to be fast and proactive, or else you will lose the patients when they are in critical condition and their saturation levels were dropping. She shared an experience of how she had to save a situation on the ward.

*“And the patients’ oxygen saturation kept dropping. So, if you are not fast within that moment you might lose that person” FN9*

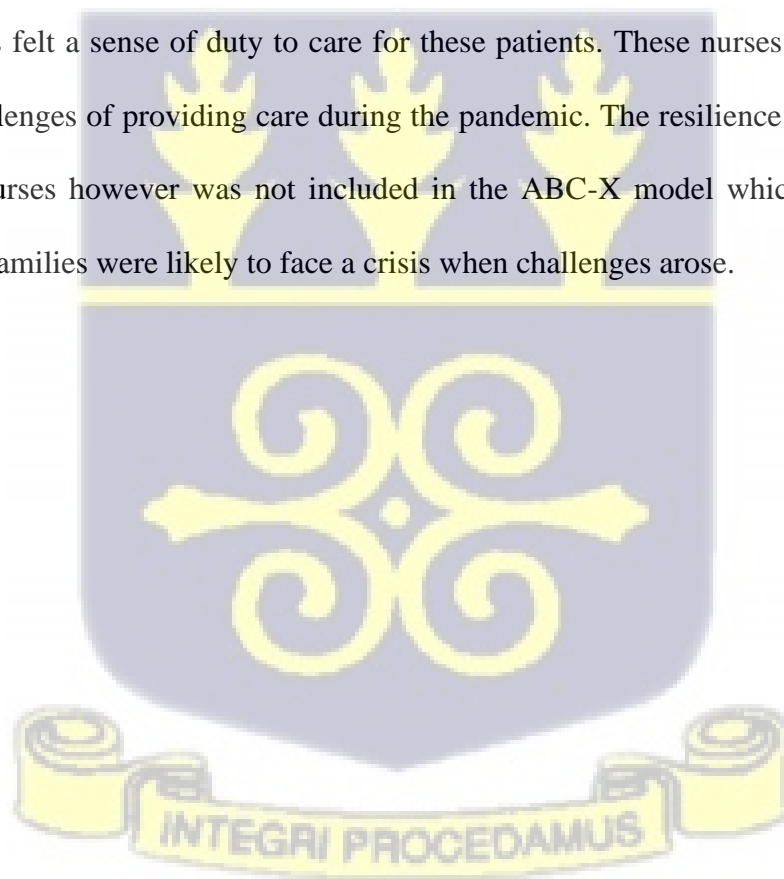
These were some of the many accounts of how frontline nurses perceived the stressors associated with managing patients with COVID-19.

#### **4.7 Summary**

The study explored the experiences of the frontline nurses managing patients with COVID-19 at the Ga East Municipal Hospital. The findings of the study reported the

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experiences of the nurses guided by the ABCX model. These findings were consistent with Hill, (1949) ABC-X model of family stress and coping which was applied to the frontline nurses. The nurses managing the patients with COVID-19 encountered several stressful challenging situations including physical and psychological challenges such as high workload, challenges with PPEs, patient-related stressors, and inadequate motivation. Some of the psychological problems experienced by the nurses were fear, anxiety, helplessness, and emotional breakdown. They relied on the varied support systems available to them and coping strategies to overcome the challenges they encountered. Nurses managing patients with COVID-19 were perceived as carriers of coronavirus and were stigmatized by the community and they had to even socially isolate themselves from family and friends. The frontline nurses felt a sense of duty to care for these patients. These nurses became resilient amidst the challenges of providing care during the pandemic. The resilience demonstrated by the frontline nurses however was not included in the ABC-X model which suggested that individuals or families were likely to face a crisis when challenges arose.



## CHAPTER FIVE

### DISCUSSION OF FINDINGS

#### 5.0 Introduction

This chapter discusses the study's key findings and relates them to existing literature. The study aimed at exploring the experiences of the frontline nurses managing patients with COVID-19 at Ga East Municipal Hospital, Accra. The discussion is organized based on the socio-demographic characteristics of the participants and the themes that emerged from the data. The discussion of themes derived from the data centered on COVID-19 care challenges, multi-dimensional support for the nurses, care-related stressors in managing the patients, and perceived care outcomes. The ABC-X model of family stress and coping by Hill, (1949) was used as the guiding framework of the study and served as the model for organizing the discussion (Rosino, 2016).

#### 5.1 Socio-demographic characteristics of participants

In this study, all fourteen (14) participants were frontline nurses who were physically involved in managing patients with COVID-19. This facilitated their ability to report on the stressful challenges they encountered and how they overcame the challenges and remained resilient amidst the challenges (Liu et al., 2020; Rathnayake, et al., 2021). In this study, twelve (12) participants were females and only two (2) males.

Young nurses are considered to have more positive energy and attitude to work (Xiao et al., 2013) The nurses providing care to the patients in this study were between the ages of 26 to 36 years and have between two (2) to sixteen (16) years' work experience. However, the participant had worked in the facility between six (6) months to sixteen (16) months. None of the participants was an expert in managing the contagious COVID-19. All the participants were professional nurses with only one being a critical care nurse (C.C.N).

Nine (9) of the participants in this study were married and living with their spouse and children with the other five (5) being single and either living with their parents or alone.

## **5.2 COVID-19 care challenges**

The theme of COVID-19 care challenges in this study focused on the physical stressors, psychological stressors, patient-related challenges, and inadequate motivation of the nurses. COVID-19 is novel and considered very contagious. The novelty and highly infectious nature of the disease increased morbidity and mortality, requiring high demand for care (Maben & Bridges, 2020). Frontline nurses managing patients with COVID-19 experienced physical and psychological stress whilst providing care for the patients. This is in tandem with a study by Rathnayake et al. (2021) who reported that frontline nurses experienced physical and psychological distress as a result of providing treatment to COVID-19 patients. These nurses were always with the patients, having close contact and spending much of their time carrying out activities that the patients themselves were unable to do. A study by Kieft et al. (2014) pointed out that because nurses spend so much time with patients, they have a significant influence on their experiences. Similar studies in Wuhan, China indicated that the outbreak placed nursing services under severe pressure as thousands of patients became sick with an unknown contagious respiratory disease, which spread across other nations (Catton, 2020). The pandemic brought significant pressure on nurses globally as they were on the frontline of care.

### **5.2.1 Physical Challenges**

The physical stress experienced by the nurses resulted from a high workload, challenges with the use of PPE, extended working hours within the isolation ward, and insufficient supplies. The nurses expressed feeling exhausted from providing care to the patients.

Most of the participants in this study reported being physically stressed from the high workload which was experienced during the peak of each wave of COVID-19 when there was a rapid spread of coronavirus and a subsequent surge in the number of patients being admitted to the hospital. A study by Ahmadidarrehsima et al. (2022); Bohlken et al. (2020) & Mo et al. (2020) reported frontline nurses experienced physical stress whilst providing care to patients with COVID-19. Also, nurses have been described to have experienced a considerable level of physical stress in Turkey, dealing with COVID-19 patients (Kackin et al., 2021). Many of the patients who were hospitalized came in very ill and needed to be helped with activities of daily living and managed till recovery or otherwise. Nurses were primarily involved in giving supportive care to the patients (Mcgillis Hall & Kashin, 2016), assessing and monitoring the progress of the patients, rapidly recognizing, and responding to any change in patient's condition, and relaying any information to the Physician (Liu et al., 2020).. They were also involved in giving care based on the symptoms presented by the patients and helping prevent further complications as well as psychological support. In Hubei China, Liu et al. (2020) reported that the nurses usually assisted the patients with their activities of daily living, which is analogous to this study, where the nurses assisted the patients in maintaining self-care needs, feeding, serving medication, monitoring their vital signs, oxygen saturation, and delivery devices, turning and lifting patients. Some previous studies have also looked at the intensity of high workload and physical stress in public health emergencies (O'Boyle et al., 2006). The intensity of work was identified to lead individuals to experience bodily pains which included waist pain (Saidane et al., 2018). The high workload and fatigue experienced by the nurses in this study were related to an increasing number of severely ill patients. These patients could hardly do much for themselves and needed more attention, for which the nurses helped as caregivers and thereby increasing the demand for care. The nurses worked very hard to keep the patients comfortable and alleviate

patients' pain and suffering. This puts them under immense pressure and makes them exhausted. One participant in this study reported he experienced pains in his waist due to the extent of work done in the isolation ward and was uncertain about long service in that facility.

Most nurses working at the frontline had to work on long and different shifts with fewer resting times which sometimes affected their working ability and sense of reasoning. Some previous studies done, established the fact that nurses who worked for long hours experienced fatigue or exhaustion more than those who worked short periods (Amy et al., 2012). In this study also, the nurses felt exhausted having to work a twelve-hour shift and from spending more hours when they entered the isolation wards giving extensive care to the patients due to the increasing number of severely ill patients warranting admission to the hospital, and the increase in demand in care (Maben & Bridges, 2020). The nurses were at risk of being infected with the disease by spending much time with the infected patients. A study by Ran et al. (2020) in Wuhan, China attributed the risks of infection in healthcare workers to the duration of shifts. A few participants in this study mentioned testing positive for COVID -19 and related it to the time they spent with the patient in the isolation ward. On the contrary, some participants in this study said that even though they stayed for long with the patients in the isolation ward and thought they could have tested positive for COVID, especially when they had some symptoms, their test results came back negative. Furthermore, the long hours spent in the isolation ward were attributed to inadequate staffing resulting in an increase in the volume and intensity of work.

In addition to the high workload experienced by the frontline nurses providing care to patients, wearing PPE for long hours also led to physical exhaustion, especially for nurses who had to stay in the isolation wards for longer periods (Liu et al., 2020). The nurses had to use protective equipment to cover every part of their bodies before entering the isolation ward

to provide care to the patients, however, wearing personal protective equipment caused a lot of discomfort for them (Rathnayake et al., 2021; Sun et al., 2020). Donning and doffing which is the art of wearing and removing personal protective equipment (PPE) was also another source of burden for the frontline nurses. Many of the participants admitted that they could only do it right after training and repeated use of the PPE which included coveralls, face shields, goggles, N95 respirator, surgical face mask, hairnet, varieties of gloves, and boots. Studies by Rathnayake et al. (2021) indicated that the nurses reported discomforts such as difficulty breathing, excessive sweating, headache, skin damage, and pressure on the nasal bridge due to strips of goggles, vomiting, fainting, and visual disturbances which are consistent with the current study where the participants complained of excessive sweating under the coveralls, difficulty breathing and foggy face shields which impeded some nursing care activities.

In this study, the majority of the participants mentioned that there were sufficient PPEs for use since the facility was a treatment centre, however, there were occasional shortages in some equipment that needed improvisation with other materials. Also, there were different qualities of the PPEs supplied which could be substandard sometimes. The findings are contrary to other studies that indicated that there was a global shortage of PPE even in high-income countries. Furthermore, the participants also hinted at the occasional shortage of Oxygen supply and limited ventilators.

### **5.2.2 Psychological Challenges**

The findings of this study showed that frontline nurses experienced psychological challenges such as fear, anxiety, helplessness, emotional breakdown, and concerns of their families. Other studies indicated that participants experienced a wide range of psychological challenges which spanned from fear.

Managing patients with COVID-19 disease can result in considerable psychological stress, leading to increasing levels of fear and anxiety, especially among nurses (Chersich et al., 2020). Due to the contagious nature of coronavirus, unknown transmission modalities, direct contact with patients, and infection occurring among their colleagues, healthcare personnel was always afraid of becoming infected with COVID-19. The fear of passing on the sickness to a family member was also a major concern for many of the participants. The front-line nurses witnessing the suffering of patients whose condition deteriorated each passing day made them breakdown emotionally

The patient-related challenges were acts of non-compliance on the part of the patients. The abuse and violation of the rights of the nurses, and attack on the nurse from patient's verbal and physical abuse (WHO, 2020).

### **5.3 Multi-dimensional Supports**

Frontline nurses providing care for COVID-19 patients relied on several factors to help ease the stressor situations. These factors included their coping strategies and varied support systems. There were various measures used by nurses to help cope with the threat of the COVID-19 pandemic.

To improve and support the frontline nurses during the COVID-19 outbreak, a lot of mitigating factors were utilized. Supporting nurses is deemed essential in preserving their health and the strategies involved should be at different levels and targeted at prevention and treatment (Maben & Bridges, 2020). Mention was made of the massive support from colleagues, relatives, friends, and all sectors of society (Sun et al., 2020). The resources gathered by the nurses also included personal coping strategies, and organizational and government support.

### **5.3.1 Coping strategies**

The study findings revealed that the participants engaged in many protective actions to help them from getting infected with the virus and overcome the stress of managing patients with COVID-19. They followed strict protocols such as handwashing and wearing of facemasks, observing social distancing protocols, and avoiding social gatherings. Adherence to all the COVID-19 protocols was observed both at home and at work. At home, most participants routinely observed personal hygiene protocols such as hand hygiene, taking off their clothes, and bathing before interacting with their family members to avoid infecting them if they possibly carried any virus home. These actions were similar to studies done on nurses who cared for COVID-19 patients in China, Iran, and Turkey (Kackin et al., 2021). The nurses had a routine of keeping themselves safe when they got home from work, such as taking off shoes, removing and washing their hands and body even before engaging in other activities.

To cope with the stress of managing patients with COVID-19, the participants tried to find some reasons for their stress and figure out how to manage the stress. According to Kelley et al. (2021) strategies used included prayer, good self-care and nutrition, watching a favourite program on television, and the use of social media. Almost all participants were Christians, and many prayed for the patients, hoping that God will do something about the situation for them to get better. Also, as most Ghanaians are very religious, it was evident that more than half of respondents in a study mentioned that they became more prayerful than before. The religious beliefs of individuals are seen as a core mechanism to cope with stress (Lartey et al., 2020). A similar study in Iran indicated that nurses used strategies such as reliance on God, reading, pacing around, repressing negative thoughts, and using other forms of relaxation techniques to reduce their stress experience (Ahmadidarrehsima et al., 2022).

### **5.3.2 Team support**

The findings in this study indicated that the participants worked in groups and kept watch over each other to prevent themselves from contracting coronavirus and in turn, affect others in the team should one person get infected. With an increased likelihood of the frontline nurses breaching the COVID-19 protocol, by incorrect donning and doffing of PPE, members of each team were tasked with assisting any of their colleagues who were going into the isolation ward (Huang et al., 2020).

### **5.3.3 Government and Institution Support**

In this study, all the participants mentioned that the government offered them a three-month tax-free wage relief was awarded by the government. Frontline health personnel were also given an allowance of 50% of their basic salary, as well as a life insurance policy for those who became infected with COVID-19 or died whilst managing patients with COVID-19. Again, transportation services were occasionally made available for these frontline workers. The supply of food and water to the workers was organized by the institution for the frontline nurses. This meal came from diverse organizations aside government to motivate the nurses and show gratitude for the work they did.

The reported learning needs of nurses included skills related to donning and doffing PPE, and skills in performing nursing procedures were also taken care of by the institution.

### **5.3.4 Non-Governmental Support**

Family and friends also provided some great support for the frontline workers during the pandemic. Support from family included monetary, emotional, psychological, and mental health support. Most colleagues at work also provided various sources of support that served

as mitigating factors to COVID-19. Shelter, food, and clothing were among others for frontline care nurses during the peak period. The overall support from the general public including the media was overwhelming as praises and encouragement were heard from the media. All these coupled with other measures ensued as some mitigating and support factors for frontline nurses.

#### **5.4 Care-related stressors**

The study revealed that the COVID-19 pandemic brought a lot of changes in the life of frontline nurses. These frontline nurses in this study had varied challenges, which were mentioned through their experiences in the management of patients during the pandemic. There were varied perceptions of the nurses managing the patients who had COVID-19. The nurses viewed the assumption of this new role as a duty and responsibility of care towards the patients. Twelve (12) participants in this study agreed to care for the patients after being posted to the facility to join in caring for the patients. It felt like they were duty-bound to help provide care to the patient to save their life. The nurses assisted especially the very ill patients, in activities of their daily living including self-care and nutritional needs, checking their vital signs, monitoring their progress and saturation levels, and administration of medication and food to the patients. This is consistent with studies conducted in some other countries where the frontline nurses dedicated themselves to the care of COVID-19 patients. Studies conducted by Liu et al. (2020) and Sun et al. (2020) in China showed that frontline nurses had a sense of responsibility toward their patients. The frontline nurses were praised for their professionalism and commitment to helping to manage patients with COVID-19.

However, they were several reports of them being publicly stigmatized within the community, family, and even among colleague nurses. Most participants experienced negative perceptions and emotions from the public. They were seen as carriers of coronavirus, tagged as ‘COVID nurses’ and sometimes shunned by even friends. They were

perceived as a threat to the safety of others. Most people were afraid to meet them for the fear of contracting COVID-19 if there was any contact or interaction. Similar occurrences were reported during the EBOLA and SARS (Hall et al., 2003). Also, a study in the United Kingdom by Maben & Bridges, (2020), indicated that the participants were vilified in the community and regarded as a danger to others.

Most health care workers working with COVID-19 patients experienced rejection by the community members, family, and even their colleagues. Many of their friends and family were not pleased to have them work at the treatment centre. Some were persuaded to stop working in that facility. Fear of infecting their family members, compelled some of the frontline nurses to separate from them whilst at caring for the patients with COVID-19. The frontline nurses were deeply worried about spreading coronavirus to their families and others when they got back home from work.

### **5.5 Perceived care outcome**

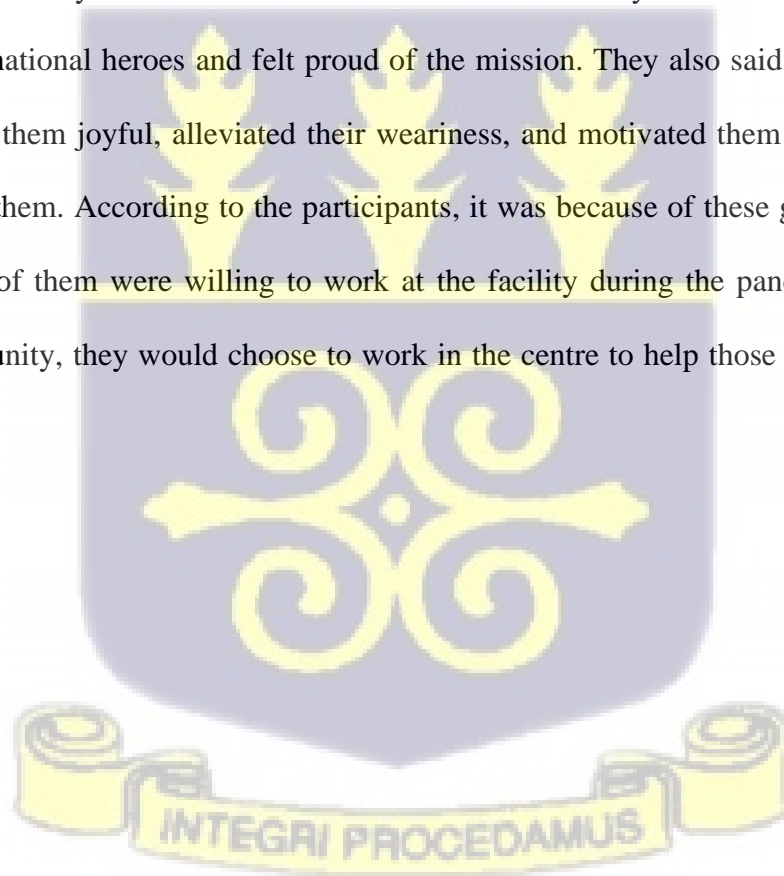
The theme perceived care outcome focused on the strength and resilience of the participants amidst all the challenges they experienced. Individuals or families exposed to unprecedented challenging situations do not necessarily experience only the negative effects of the circumstances. At times, they grow and find positive outcomes, especially with adequate support systems and coping strategies (Ahmadidarrehsima et al., 2022). Despite the challenges encountered in providing care to the patients, the experience resulted in the frontline nurses getting some personal gratification due to their devotion and professional responsibility (Rathnayake, et al., 2021). Many health care workers, especially nurses were seen as heroes and heralds as defenders of health (Catton, 2020).

Most of the frontline nurses in this study expressed gaining some positive experiences from the care of the patients during the COVID-19 pandemic period which included, self-

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confidence, and adaptation to the pandemic. The frontline nurses were of the view that, through successful treatment and management of COVID-19 patients, their self-confidence level increased. The nurses also thought that seeing many of the COVID-19 patients recovering enhanced their confidence as nurses and caregivers. As the pandemic unfolded, most frontline nurses said they adjusted and adapted to the COVID-19 pandemic situation. This was achieved by coping with isolation and social distancing strategies and using protective techniques. Participants said they did not see an end to the COVID-19 pandemic situation, hence had to adjust themselves to working in the ‘new normal’ era.

These experiences of the nurses also included receiving commendations, support, and empathy from family members and others in the community. All the participants saw themselves as national heroes and felt proud of the mission. They also said that the patients' recovery made them joyful, alleviated their weariness, and motivated them to keep working and caring for them. According to the participants, it was because of these good experiences that nearly all of them were willing to work at the facility during the pandemic, if offered another opportunity, they would choose to work in the centre to help those infected with the virus.



## CHAPTER SIX

### SUMMARY, IMPLICATION, LIMITATION, CONCLUSION, AND RECOMMENDATION

#### 6.0 Introduction

This chapter focuses on the summary of the study, the researcher's reflexivity and insight gained, as well as the implications for nursing practice, research and administration, and education. Limitations of the study, conclusions, and recommendations are also presented in this chapter.

#### 6.1 Summary of the study

The study set out to explore the experiences of frontline nurses managing patients with COVID-19 at Ga East Municipal Hospital. The study employed a qualitative exploratory descriptive design. The ABC-X model by Hill, (1949) was used as the theoretical framework that guided the study. A semi-structured interview guide was developed using the objectives and the ABC-X model to explore and describe the experiences of frontline nurses managing patients with COVID-19. Ethical approval was sought from the Ghana Health Service Ethics Research Committee (G.H.S.E.R.C). The interview guide was pre-tested at the Greater Accra Regional Hospital to ensure it was understood to elicit favourable responses that answer the research questions. The main study was undertaken at the Ga-East Municipal Hospital in the Greater Accra region where participants were sampled purposively. Participants who had agreed to participate in the study signed a consent. The interviews were audio-taped and transcribed verbatim. Data were analysed concurrently with data collection using thematic content analysis.

Frontline nurses managing patients with COVID-19 at the Ga East Municipal Hospital have experienced many physical and psychological challenges such as fear of contracting coronavirus, anxiety with uncertainties about the turn of events, helplessness, and

emotional breakdown when they lose their patients, high workload, challenges with PPEs, inadequate motivation and stressful working hour. However, the availability of support systems and the use of some coping strategies by the nurses helped in mitigating the stressful experiences they encountered. The frontline nurses were perceived as a carrier of coronavirus who could infect their significant others. They were stigmatized as carriers of coronavirus and hence they had to socially isolate although they felt a sense of responsibility in rendering care to the patients and saving lives.

## **6.2 Reflexivity and insight gained by Researcher**

The researcher in qualitative studies plays the role of a data collector, administrator, and analyst, thus the need to critically consider the biases of the researcher. The knowledge of the researcher's reaction to the responses of the participant and how it is incorporated into the analysis is referred to as reflexivity (Polit & Beck, 2012).

The researcher whilst carrying out this research had worked for the past thirteen years as a Registered General Nurse in an acute facility. During the emergence of the COVID-19 pandemic, she encountered patients who tested positive for COVID and had to manage them amidst fear and anxiety. This generated an interest to explore the experience of the nurses who provided care for these patients to describe the challenges they encountered, and measures put in place to mitigate these challenges to improve their quality of life.

Before collecting these data, the researcher noticed that most nurses were not forthcoming to be on the frontline due to the uncertainties surrounding the whole process of managing patients with COVID-19. The researcher had no previous knowledge of the experiences of the nurses working at the treatment centre and how they were able to cope. This warranted a literature search on their experiences taking into consideration possible biases whilst analysing the data collected.

The researcher's knowledge of the experiences of nurses managing patients with COVID-19 and how they coped has widened as a result of this study. The researcher identified some challenges encountered by these nurses and how they were able to remain resilient amidst the challenges.

### **6.3 Implications for Nursing**

The findings of this study have implications for the various aspects of nursing administration, practice, education, and research.

#### **6.3.1 Nursing Administration**

The results of the study indicated that the nurses were burdened physically and psychologically. This may serve as a guide in understanding the needs of the frontline nurses and bring about some interventions. Also, the feeling of being responsible for the care of the patients encouraged the nurses to stand up to the task being assigned to them. The frontline nurses must be actively guided and inspired, to realize their growth during this pandemic which may help in adjusting positively. There is also a need to make efforts in ensuring institutional awareness initiatives required to lay the framework for meaningful policy change, creating safe and reliable care systems that could affect future global disaster response.

#### **6.3.2 Nursing Practice**

Findings from the study noted that the frontline nurses assisted the patients in activities of daily living and other procedures while in isolation using protective equipment which was quite uncomfortable. There were several causes for fear and anxiety among the nurses. In helping to adjust and maximize the productivity of the frontline nurses, proper monitoring and supervision, counselling, and the provision of all necessary safety

mechanisms PPEs are all required. These may lessen the stress and anxiety experienced by nurses.

According to the findings of this study, some patients who had to isolate themselves at the facility were agitated and threatened the nurses. This necessitates strategies and policies for handling the abuse of nurses. A comprehensive approach by all stakeholders involved will help gain cooperation from the patients and have care rendered in safety.

### **6.3.3 Nursing Education**

Most of the frontline nurses in this study mentioned that they had no previous training in the management of this kind of contagious disease. They only got to be trained during their recruitment to the centre. Professional nursing practice is largely determined by one's educational background and training, therefore proper training regarding such critical health care areas is needed. This information also necessitates some form of curriculum reforms from the nursing training schools to training and equip nurses to be able to handle any of such novel and unexpected pandemics.

### **6.3.4 Nursing Research**

The findings of the study could provide information and assist in improving nursing reactions to future pandemics. The various forms of stressors experienced were not limited to only the nurses working at the Ga East Municipal Hospital. Future studies could explore the experiences of frontline nurses in other treatment centres in Ghana. Also, a longitudinal study of the experiences of the nurses who remained at the centre could examine any change in previous experiences.

### **6.4 Conclusion**

Nurses managing patients with COVID-19 at Ga East Municipal Hospital reported numerous difficulties, including excessive workload, challenges with the use of PPEs, fear,

anxiety, emotional breakdown, stigma, and social isolation. The challenges faced and multi-dimensional support used by the nurses were explored. They received the diverse support of their families, friends, government, and other non-governmental institutions. Additionally, team support and use of varied coping mechanisms, provision of adequate protective equipment, effective management of work shifts, and motivation for the nurses established a compassionate work atmosphere.

The study also explored the perception associated with managing patients with COVID-19 and the perceived outcome of the care experience. The frontline nurses felt a sense of responsibility toward the patients; however, they were perceived as carriers of the virus. The nurses had to adjust and accommodate the new normal, to remain resilient.

#### **6.5 Limitations of the study**

The participants in the study were all drawn from Ga East Municipal Hospital and due to the sample size and method employed, the findings may not necessarily reflect the experiences of all nurses in the facility and the Greater Accra region. Also, the findings of this study were based on the experiences of frontline nurses and not that of the entire healthcare workers. The views and experiences of other professionals which were not captured in this study could be explored to describe any varied perspective.

#### **6.6 Recommendations**

Based on the findings of the study, the researcher has made the following recommendations to the following departments. These are nursing management, the ministry of health and Ga East Hospital.

### **6.6.1 Recommendation for Nursing Administration**

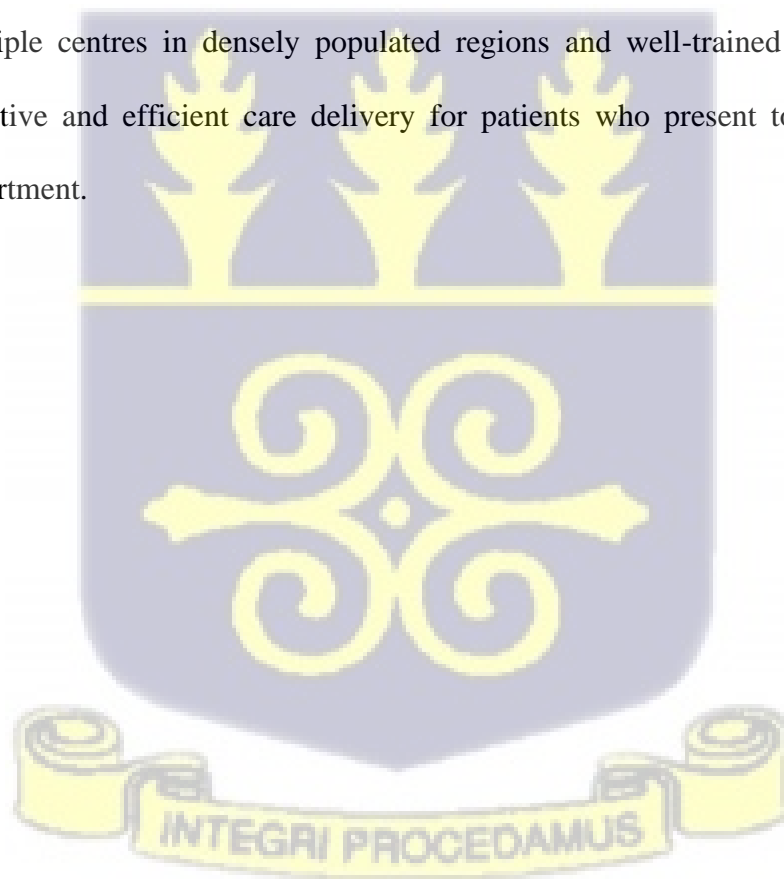
1. The nursing administration should engage in good support supervision to help improve care delivery.
2. The nurse leaders should consider the workload of staff at the various units, and assign more nurses, especially critical care nurses required to those units.
3. To help in mitigating the stressful challenges associated with managing patients with COVID-19, newly recruited nurses should be assisted to settle in properly by boosting their confidence in safety whilst managing the patients and developing coping skills to reduce stress and tiredness.

### **6.6.2 Recommendation for Ga East Municipal Hospital**

1. The hospital should organize periodic in-service training for the nurses managing the patients, to improve their skills and knowledge. The training should also keep them informed about current COVID-19 pandemic issues and help address the concerns of the nurses.
2. The various units can develop protocols or checklists for improving safety within the facility and for the nurses whilst managing the patients with COVID-19.
3. Provision should be made for psychological interventions for the frontline nurses who are mentally stressed whilst at their task.
4. The hospital should recruit the required number of staff needed to enhance staffing levels and keep up with the increasing numbers.
5. There should be standardization in awarding motivation packages for staff of the facility to avoid any feeling of discrimination.

### **6.6.3 Recommendation for Ministry of Health**

1. The government through the ministry of health should invest in more health care facilities to be able to withstand any future pandemic that may occur.
2. There should be increased motivational packages for nurses working in such critical healthcare facilities. Nurses who desire to pursue post-graduate training in critical care and Infectious Disease Nursing should be given priority and supported by the Ministry of Health to help in effective response to future pandemics.
3. The Ministry of Health and its related agencies as part of the policy need to improve on reporting COVID-19 incidence among its workforces.
4. Establishment of COVID-19 in-patient centres in all the regional capitals, with multiple centres in densely populated regions and well-trained staff to provide effective and efficient care delivery for patients who present to the emergency department.



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## APPENDICES

### APPENDIX A - Participant Information Sheet

The Information Sheet provides information about the research for participants to make an informed decision of whether to participate in the study or not. It outlines the nature of the research, what the research involves, risks, benefits, compensation, and dissemination of the findings.

### **Title of Study: Experiences of Frontline Nurses Managing Patients with Coronavirus Disease in Accra, Ghana.**

#### **Introduction:**

I am Evelyn Esenam Atuwo-Ampoh (Principal Investigator), an MPhil Nursing student at the School of Nursing and Midwifery, University of Ghana, Legon and a Registered General Nurse working at The Trust Hospital. I can be reached at the following contact: P.O. Box CT 589, Cantonments, Accra. Telephone number: 0244467708. Email: [evampoh@gmail.com](mailto:evampoh@gmail.com)

I am conducting a study on the experiences of frontline nurses managing patients with coronavirus disease. This study is for academic purposes and is aimed at exploring the physical and psychological experiences of the frontline nurse caring for patients infected with COVID-19 in the Greater Accra region of Ghana.

You have been selected to be a participant, though it is not compulsory for you to participate in the study. I would like you to provide me with information on your experiences so far in caring for patients who have been infected with coronavirus, the support systems available and coping mechanisms adopted to deal with the challenges you encounter. You have the right to ask questions or seek clarifications.

If you agree to participate, you will sign two copies of this Form, one of which will be with me and the other kept by you.

**Background and Purpose of the research:**

The novel coronavirus disease 2019, an infectious disease which started sometime in December 2019 in Wuhan, China and is moving extremely fast across continents and has hard-hit many healthcare systems. In Ghana, several treatment centres were designated to help patients isolate, for monitoring and treatment under the care of healthcare workers, especially nurses. The nurses experience physical and psychological challenges such as fear, anxiety, exhaustion, and discomfort from the use of personal protective equipment managing COVID-19 patients. Some healthcare professionals including the nurses have been infected and some have died because of the infection, however, no studies in Ghana have explored the experiences of these groups of healthcare professionals and how they are coping in caring for positive patients. A qualitative research design employing an exploratory descriptive approach will be used. The target population will be frontline nurses caring for patients in a hospital who will be purposively selected for the study. A sample size of about 15 to 17 participants will be used based on data saturation.

An interview will be conducted in the English language, scheduled at the convenience of participants and the session will last between 45 to 60 minutes. Consent to record the interview will be sought. A phone interview will be used as an option for follow up and with participants who have concerns with face-to-face interviews due to COVID-19 safety precautions.

You have the right to withdraw your participation at any time which will not affect you in any way.

**Possible Risk**

The study will not cause any harm to you. COVID-19 safety precautions will be adhered to. It will only need your time for participation.

### **Possible Benefits**

The study will not provide a direct benefit to you as a participant. However, you may benefit indirectly since the outcome of the study and recommendations from the study may lead to a review of protocols and provision of facilities that may enhance the work of other frontline nurses in different facilities. It will equip nurses with the required skills and ensure good working protocols that will lead to effective case management.

### **Costs**

The study will not be at any cost to the participant.

### **Compensation**

Payment will not be given for being part of the study, however, each participant will be given a token for participating in the study. Supplies of N95 mask, surgical mask, and hand sanitizer will be given.

### **Confidentiality**

All data given by you including voice recordings and transcribed information will be protected. The data will be kept in safe custody by my supervisor for a maximum duration of five years after which they will be destroyed. Only my supervisors and I will have access to the data gathered. Codes will be used in place of your real name and your socio-demographic data will be separated from the authentic interview to prevent outlining what you said.

### **Voluntary Participation and Right to Leave the Research**

You are free to withdraw from the study at any point in time without any penalties. Participation in this study is voluntary. You may inform the investigator of your intention to withdraw, and you may not be obliged to provide a reason for your withdrawal.

### **Outcome and Feedback**

A copy of the research finding will be given to the hospital after the completion of the study.

### **Funding Information**

This study is self-funded by the principal investigator.

### **Sharing of participants' Information/Data**

New findings will be forwarded to the appropriate authorities of the hospital and further dissemination through unit heads meetings and ward meetings.

### **Contacts for Additional Information**

In case of further information or enquiry about this study, please kindly contact the Principal Investigator.

Name: Evelyn Esenam Atuwo-Ampoh

Telephone number: +233 24 4467708

Email: [evampoh@gmail.com](mailto:evampoh@gmail.com)

You may also contact the following supervisors for enquires.

Dr. Gladys Dzansi

Department of Adult Health School of Nursing and Midwifery University of Ghana, Legon.

P. O. Box LG 43, Legon, Accra, Ghana.

Tel: +233243059316

Email: [gladysdzansi@gmail.com](mailto:gladysdzansi@gmail.com)

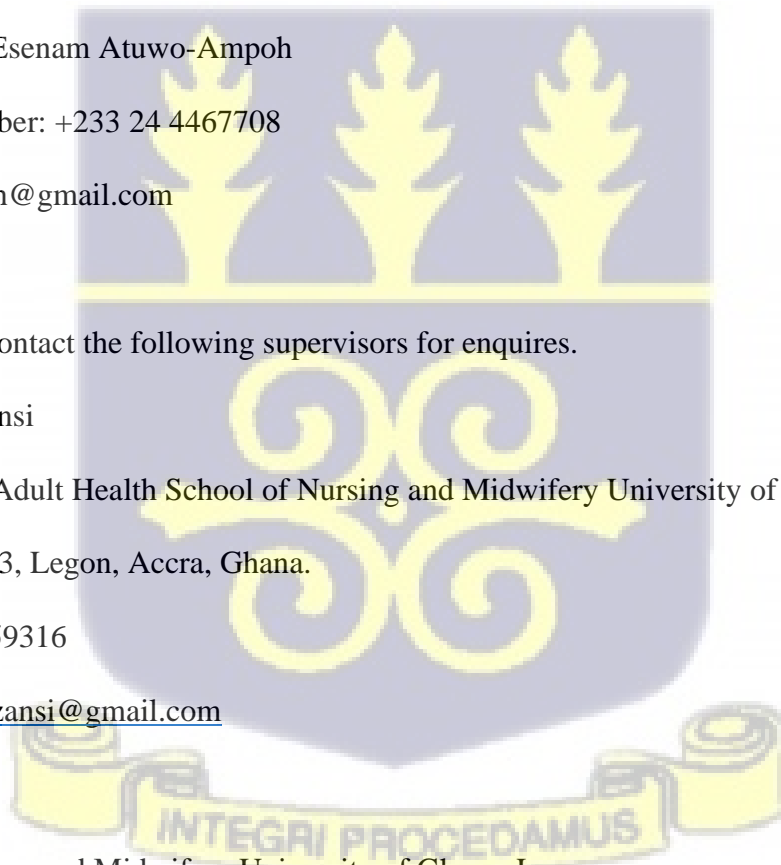
Mr Eric Tornu

School of Nursing and Midwifery University of Ghana, Legon.

P. O. Box LG 43, Legon, Accra, Ghana.

Tel: +233267074722

Email: [erictornu.students@gmail.com](mailto:erictornu.students@gmail.com)



University of Ghana <http://ugspace.ug.edu.gh>

Further clarifications can be sought from:

Nana Abena Apatu (E.R.C Administrator)

Ghana Health Service

P.O. Box 190, Accra, Ghana

Tel: +233503539896

Email: [ethics.research@gmail.com.org](mailto:ethics.research@gmail.com.org)



**APPENDIX B - Informed Consent Forms**

STUDY TITLE: EXPERIENCES OF FRONTLINE NURSES MANAGING PATIENTS WITH CORONAVIRUS DISEASE IN ACCRA GHANA.

PARTICIPANTS' STATEMENT

I certify that I have read or have had the purpose and contents of the Participants' Information Sheet read and all questions satisfactorily explained to me in a language I understand (English or Twi). I fully understand the contents and any potential implications as well as my right to change my mind (i.e., withdraw from the research) even after I have signed this form.

I voluntarily agree to be part of this research.

Name of Participant.....

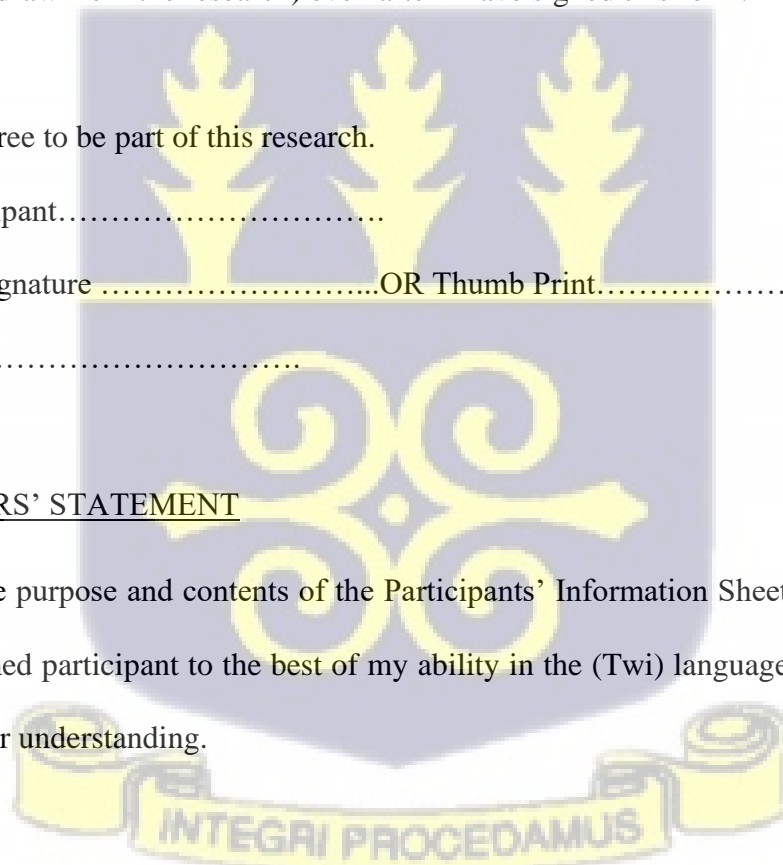
Participants' Signature .....OR Thumb Print.....

Date: .....

INTERPRETERS' STATEMENT

I interpreted the purpose and contents of the Participants' Information Sheet to the aforementioned participant to the best of my ability in the (Twi) language to his/her proper understanding.

All questions, appropriate clarifications sort by the participant and answers were also duly interpreted to his/her satisfaction.



University of Ghana <http://ugspace.ug.edu.gh>

Name of Interpreter.....

Signature of Interpreter..... OR Thumb Print .....

Date: .....

Contact Details

**STATEMENT OF WITNESS**

I was present when the purpose and contents of the Participant Information Sheet were read and explained satisfactorily to the participant in the language, he/she understood (English/Twi)

I confirm that he/she was given the opportunity to ask questions/seek clarifications and the same were duly answered to his/her satisfaction before voluntarily agreeing to be part of the research.

Name: .....

Signature..... OR Thumb Print .....



Date: .....

INVESTIGATOR STATEMENT AND SIGNATURE

University of Ghana <http://ugspace.ug.edu.gh>

I certify that the participant has been given ample time to read and learn about the study. All questions and clarifications raised by the participant have been addressed.

Researcher's name.....

Signature .....

Date.....



## APPENDIX C - Module III Interview Guide

### Socio-demographic data

1. Tell me about yourself

Probe:

Gender

Age (years)

Years of experience

Educational background

Marital status

Working unit

### Physical and Psychological Experiences

2. Tell me about a typical day at work.

Probes (type of shift, getting to work, changing, taking up and handing over, patient care, delegated responsibilities)

3. What is your experience in caring for patients with COVID-19?

Probes (physical care activities, routines, follow up, relationship with patients and family, relationship with colleagues?)

4. What challenges have you encountered during the delivery of care to the patients?

### Perceived Effect of Managing Covid-19 Patients

5. Please tell me about your understanding and views on COVID-19.

Probes (knowledge, belief, practices, attitude)

6. How has what you know about COVID 19 affected you?
7. Probes (personal schedules, family life, social life, emotion, etc.)
8. How has the outbreak impacted the kind of care that you give to your patients?

#### Support Systems Available

1. What resources have been available in managing your patients at your own facility?
2. What support have you received?

#### Coping Strategies

3. Tell me about your usual way of responding to stress?

Probes (Relaxed, nervous, irritated, overwhelm, getting help, engaging in physical activity)

4. How have you adjusted to the impact of the pandemic situation and work?
5. How do you cope with stressful experiences or situations?



## APPENDIX D - Ethical Clearance

### GHANA HEALTH SERVICE ETHICS REVIEW COMMITTEE

*In case of reply the  
number and date of this  
Letter should be quoted.*



Research & Development Division  
Ghana Health Service  
P. O. Box MB 190  
Accra  
Digital Address: GA-050-3303  
Mob: +233-50-3539896  
Tel: +233-302-681109  
Fax + 233-302-685424  
Email: [ethics.research@ghsmai.org](mailto:ethics.research@ghsmai.org)  
5<sup>th</sup> March, 2021

My Ref. GHS/RDD/ERC/Admin/App | 21/073  
Your Ref. No.

Evelyn Esenam Atuwo-Ampoh  
P.O. Box CT 589,  
Cantonments, Accra.  
Ghana

The Ghana Health Service Ethics Review Committee has reviewed and given approval for the implementation of your Study Protocol.

GHS-ERC Number	GHS-ERC 032/01//21
Study Title	Experiences of Frontline Nurses Managing Patients with Coronavirus Diseases at the Ga-East Municipal Hospital, Accra
Approval Date	5 <sup>th</sup> March, 2021
Expiry Date	4 <sup>th</sup> March, 2022
GHS-ERC Decision	Approved

**This approval requires the following from the Principal Investigator**

- Submission of a yearly progress report of the study to the Ethics Review Committee (ERC)
- Renewal of ethical approval if the study lasts for more than 12 months,
- Reporting of all serious adverse events related to this study to the ERC within three days verbally and seven days in writing.
- Submission of a final report after completion of the study
- Informing ERC if study cannot be implemented or is discontinued and reasons why
- Informing the ERC and your sponsor (where applicable) before any publication of the research findings.

**You are kindly advised to adhere to the national guidelines or protocols on the prevention of COVID -19**

Please note that any modification of the study without ERC approval of the amendment is invalid.

The ERC may observe or cause to be observed procedures and records of the study during and after implementation.

Kindly quote the protocol identification number in all future correspondence in relation to this approved protocol

SIGNED...  .....  
Dr. James Akazili  
(Head, Ethics & Research Management Department)

Cc: The Director, Research & Development Division, Ghana Health Service, Accra

APPENDIX E - Introductory Letter



**UNIVERSITY OF GHANA**  
**SCHOOL OF NURSING AND MIDWIFERY**

Ref. No.:.....ID: 10164922.....

December 3, 2020

The Chairperson  
Ethics Review Committee  
Ghana Health Service  
Accra.

Dear Sir/Madam,

**LETTER OF INTRODUCTION – ETHICAL CLEARANCE**

I write to introduce to you **Evelyn Esenam Atuwo-Ampoh**, an MPhil Nursing student in the School of Nursing and Midwifery, University of Ghana, Legon.

The Scientific Review Committee of the School has approved the thesis topic: **“Experiences of frontline nurses managing patients with coronavirus disease at the Ga East Municipal Hospital, Accra, Ghana.”**

As part of the School’s requirement, the student is required to obtain ethical clearance before embarking on data collection.

I hope that the Board will consider the proposal and grant her ethical clearance to enable her undertake the study.

Thank you.

Yours faithfully,

Charles A. Klutse  
School Administrator



**COLLEGE OF HEALTH SCIENCES**

P. O. Box LG 43, Legon, Accra, Ghana.

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**APPENDIX F - Support Letter**



**UNIVERSITY OF GHANA**  
DEPARTMENT OF ADULT HEALTH  
SCHOOL OF NURSING

ID: 10164922

Ref. No.: .....

December 3, 2020

The Chairperson  
Ethics Review Committee  
Ghana Health Service  
Accra.

Dear Sir/Madam,

**SUPPORT LETTER – ETHICAL CLEARANCE**


This letter is to support the application for ethical clearance of **Evelyn Esenam Atuwo-Ampoh**, an MPhil Nursing student in the Department of Adult Health, School of Nursing and Midwifery, University of Ghana, Legon.

As part of the programme, she is to undertake a research on the topic: “Experiences of frontline nurses managing patients with coronavirus disease at the Ga East Municipal Hospital, Accra, Ghana.”

I hope that the Board will consider the proposal and grant her ethical clearance to enable her undertake the study.

Thank you.

Yours faithfully,

For   
Dr. Gladys Dzansi  
Supervisor



**COLLEGE OF HEALTH SCIENCES**

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DEPARTMENT OF ADULT HEALTH  
SCHOOL OF NURSING

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Dear Sir/Madam,

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Thank you.

Yours faithfully,

*For: [Signature]*  
Mr. Eric Tornu  
Co-Supervisor



COLLEGE OF HEALTH SCIENCES

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APPENDIX G - Permission Letter

P.O.BOX CT 589

CANTONMENTS, ACCRA.

19<sup>TH</sup> APRIL, 2021.

THE MEDICAL SUPERINTENDENT,

GA EAST MUNICIPAL HOSPITAL,

ACCRA.

Dear Sir,

**PERMISSION TO CONDUCT A STUDY AT YOUR FACILITY**

I write to seek permission to conduct a research at your facility for an award of Mphil (Nursing) at the University of Ghana, Legon, titled: *Experiences of Frontline Nurses Managing Patients with Coronavirus Disease at Ga East Municipal Hospital, Accra, Ghana.*

The study is for academic purpose and I would be grateful if granted the needed permission and support to complete my project work. Please find attached, a copy of Ethical clearance from the Ghana Health Service (GHS) and protocol for the study for your perusal.

Thank You.

Yours faithfully,

Evelyn Esenam Atuwo-Ampoh

(0244 467708)

