**CHALLENGES FACED BY HEALTHCARE WORKERS DURING THE COVID-19 PANDEMIC IN TANZANIA: EVIDENCE FROM MUHIMBILI NATIONAL HOSPITAL**

**ORAITY SHOMARI ORAITY**

**A DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF** **MASTER OF HUMANITARIAN ACTION, COOPERATION AND DEVELOPMENT**

**DEPARTMENT OF POLITICAL SCIENCE, PUBLIC ADMINISTRATION HISTORY AND PHILOSOPHY**

**THE OPEN UNIVERSITY OF TANZANIA**

**2023**

# CERTIFICATION

I, the undersigned do certify that I have read and hereby recommend for acceptance by the Open University of Tanzania, a research report titled; **“Challenges faced by Healthcare Workers During the COVID-19 Pandemic in Tanzania: Evidence from Muhimbili National Hospital”** in partial fulfilment of the requirements for award of Master’s degree in Humanitarian Action, Cooperation and Development.

………………………………

**Dr. Jacob Lisakafu**

(Supervisor)

……………………………..

Date

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# DECLARATION

I, **Oraity Shomari Oraity**, do hereby, declare that, this dissertation is my own original work that has not been presented and will not be presented to any other University or institution for a similar or any other award. Where other people’s works have been used, due references have been provided.

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Signature

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Date

# DEDICATION

This work is dedicated to my family, my classmates and staff in the Department of Political Science Staff, the Open University of Tanzania.

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# ABSTRACT

The study sought to assess the challenges faced by Healthcare Workers During the COVID-19 Pandemic in Tanzania at Muhimbili National Hospital. With specific objectives that to assess the practices applied, to determine the occupational challenges and to evaluate the psychological challenges faced by health workers during the COVID-19 pandemic. The study follows Callista Roy's Adaptation Model of Nursing (RAM), which states that people are constantly adapting to changes in their environment. Roy's Adaptation Model let researcher systematically examine healthcare professionals' occupational and psychological challenges. The model considers how biological, psychological, and social factors affect individual change adaptation. The study adopted a descriptive research design and A mixed-methods approach to acquire data from MNH healthcare workers. Qualitative data was collected via interviews and quantitative data through questionnaires. The study found that healthcare workers assisted COVID-19 patients by monitoring and evaluating them, working closely with other professionals, preventing complications and staying update on scientific evidence. The study found 94% agreed on the statement that health workers had knowledge related to combating pandemic diseases.  Also, the study found that 84.7% of healthcare workers faced psychological challenges and had poor morale. They experienced high workloads, lack of allowances and encouragement from authorities, limited equipment for treatment and diagnostics, and poor training. Study also indicated that occupational and psychological challenges had a impact on the quality of care provided to COVID-19 patients. These challenges caused healthcare workers to deliver less compassionate treatment and be less attentive to patient demands. The, study recommends that health authorities should proactively plan to encourage and compensate healthcare workers for participating in future pandemics, such as COVID-19 strains and comparable outbreaks. Rewards like official public recognition or bonuses can help to overcome those challenges.

***Keywords****: Covid-19, Practical Challenges, Occupation Challenges, Psychological Challenges, Community Healthcare workers, Muhimbili National Hospital.*

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# LIST OF ABBREVIATIONS

APES Agent’s Polyvalence’s Elementary

CDC Centers for Disease Control and Prevention

CHWs Community Healthcare Workers

CMD Common Mental Disorder

COVID-19 Corona-Virus Disease 2019

HCWs Healthcare Workers

HIV Human Immunodeficiency Virus

IDIs In-Depth Interviews

IPC Infection Prevention and Control

KAP Knowledge Attitudes and Practice

MNH Muhimbili National Hospital

NGOs Non-Government Organizations

NHS National Health System

PHEIC Public Health Emergency of International Concern

PPE Personal Protective Equipment

SARS-CoV-2 Severe Respiratory Disorder Corona-Virus 2

SPSS Statistical Package for the Social Sciences

TB Tuberculosis

UK United Kingdom

USA United State of America

WHO World Health Organization

# CHAPTER ONE

## INTRODUCTION

### 1.0 Chapter overview

The outbreak of corona-virus disease (COVID-19) was declared as a Public Health Emergency of International Concern (PHEIC) and the virus has now spread into too many countries and territories (Sahebi *et al*, 2021). The virus that causes COVID-19 is still greatly unknown, but medics know that it spreads through direct contact with respiratory droplets that are produced when an infected person coughs or sneezes. A person can also contract the virus by touching the face, including the eyes, nose, and mouth, and even touching parts of their faces that have been exposed to the virus (Serafini *et al*, 2020). While COVID-19 was and still is spreading, it is crucial that communities take concerted actions to stop its further transmission, lessen the effects of the outbreak, and support all control measures initiated and directed by the Ministry of health, local governments, and policymakers and development planners at all levels.

### 1.1 Background of the study

The COVID-19 pandemic, also referred to as corona-virus pandemic, was first recognized as the health condition indicated by severe respiratory disorder as caused by corona-virus 2 (SARS-CoV-2) which spreads fast from one person to another. The transmission occurs when one person is in close contact with another with respiratory health symptoms (*Wong et al*, 2020). The COVID-19 was initially declared by the WHO on December 2019 s originating from the city of Wuhan in China (WHO, 2020a).

Globally the COVID-19 pandemic has resulted in increased prevalence of occupational and psychological distress (Serafini *et al*, 2020) the variety of actions to mitigate the spread of SARS-CoV-2 such as lock-downs, social distancing and school closures, and their knock-on effects on livelihoods have exacerbated psychological distress and anxiety. Healthcare workers (HCWs) have been and still are particularly vulnerable to psychological distress in the context of the pandemic (Sahebi *et al*, 2021). The risk elements include perceived elevated risk of SARS-CoV-2 infection, insufficient personal protective equipment (PPE) supplies, few COVID-19 patient treatment options, stigma and discrimination reflective of a profession, and personal fear of spreading the disease to their loved ones, isolation from family members, and quarantine enforcement (*Ibid*).

During the early stages of the outbreak of COVID-19 pandemic in the Hubei area, the majority of health-care workers joined efforts and included 42 000 health-care workers (including 28600 nurses) to prevent and control the spread of the disease inside Chinese communities (National Health Commission of China, 2020). Along the efforts made in China, several healthcare experts from around the world suggested strategies for combating the COVID-19 virus (Jaeger and Blaabaek, 2020). Community healthcare workers (CHWs) in the USA informed the families about the COVID and instructed them about when to contact their doctor and where to locate testing facilities for the virus. Early in the summer, USA CHWs began to provide video visits, and opened up a brand-new channel of radio and television communication with families (Columbia, 2020).

In sub-Saharan Africa, during the first six months of the pandemic the HCWs observed with high prevalence of anxiety, psychological distress, insomnia and symptoms of depression the oncoming of covid 19. In July 2020, Zimbabwe came up with an occupational health programme for HCWs offering screening for symptoms of common mental disorder (CMD) integrated with screening for SARS-CoV-2 and other infections including HIV and tuberculosis (TB) including common non-communicable diseases. In South Africa, healthcare workers employed temperature monitoring at the entrances of harbours, laboratory examination services, medical diagnosis, isolation services and renewal of selected hospitals as COVID-19 special healthcare centres in each and every province (Mahase, 2021).

In Kenya, Amref Health Africa together with the Ministry of Health Division of Community Health organized an active Community Engagement Strategy and implementation Plan for COVID-19. During the first four week of the COVID-19 response, over 85% of the country’s CHWs were sensitized and implemented targeted mobilization of critical sub-populations (Amref Health Africa, 2020).

Similarly, for Tanzania at the beginning of the pandemic, between February and April, 2020 the Government immediately applied different measures recommended by the WHO. Consequently, on Feb 27, 2021, the Ministry of Health came up with 15 guidelines statements alongside the WHO-recommended measures and insisted on building the needed capacity including local traditional medical expertise leading to different traditional remedies that could boost people’s immunity against the COVID-19 virus (WHO, 2021).

However, all these efforts to care for COVID-19 patients as well as the challenges faced are not well documented. Therefore, the study investigated the challenges facing health workers during the COVID-19, the study specifically examined the practices applied by health workers in assisting COVID-19 patients, the occupational and psychological challenges faced healthcare workers during the provision of the assistance to COVID-19 patients.

### 1.2 Statement of the problem

Tanzania had significant challenges in attempting to control the COVID-19 pandemic within its borders and to ensure the safety of its population as the disease spread throughout the globe. After registering its first case in March of 2020, these efforts were ramped up to a higher level. According to Mold and Mveyange (2020), healthcare professionals played an essential part in the delivery of direct healthcare as well as the tracking down of contacts, assisting patients, and provision of community care services. Workers in the healthcare industry undertake a vitally important leadership role in advocating for and raising public awareness as well as sharing their experiences via national and international platforms regarding the control and prevention of the spread of the COVID-19 pandemic (Ibid).

Given that there was neither a vaccine nor a treatment available for COVID-19 at the time, numerous medical professionals working in Tanzania's healthcare system and hospitals, such as the Muhimbili National Hospital, were understandably anxious and stressed out about the best way to safeguard themselves and their patients against contracting the disease. This is an indisputable fact that cannot be disputed. Providers of healthcare work in an environment characterized by an elevated level of anxiety around the risk of contracting an infection. Despite this, the vast majority of healthcare personnel were concerned that family members of the afflicted could become infected as well, leading to further mental stress (MNH profile, 2021).

However, Muhimbili National Hospital implemented several measures to mitigate the COVID-19 pandemic, including health education, social distancing, and mask-wearing. Despite extensive training in medical emergencies, healthcare workers (HCWs) faced significant psychological challenges, such as anxiety, depression, insomnia, and fear of sudden death. These challenges prompted the researcher to examine the practice, occupational, and psychological challenges faced by HCWs in assisting COVID-19 patients at Muhimbili National Hospital.

### 1.3 Objective of the study

The study objective included the general and specific objectives.

#### 1.3.1 General objective

The study aimed to identify and assess the challenges faced by healthcare workers during the COVID-19 using the case of Muhimbili National Hospital.

#### 1.3.2 Specific objectives

1. To assess the practices applied by healthcare workers in assisting COVID-19 patients
2. To determine the occupational challenges faced by healthcare workers during their provision of assistance to COVID-19 patients
3. To evaluate the psychological challenges faced by health workers during their provision of assistance to COVID-19 patients

#### 

#### 1.4 Research questions

1. How do health workers apply practices to assist COVID-19 patients?
2. How do occupational challenges affect health workers during the provision of assistance to COVID-19 patients?
3. How do psychological challenges affect health workers during the provision of assistance to COVID-19 patients?

### 1.5 Significance of the study

The findings of the study are expected to assist the government, specifically the Ministry of Health, to institute and improve measures to combat the COVID-19 pandemic and encourage healthcare workers to come up with more innovations to fight similar outbreaks that may occur in the future. In addition, the study aims to provide baseline information to policymakers on the contribution of health workers and the government in combating COVID-19 and similar pandemics and therefore come up with clearer and more focused policies that may assist in fighting future pandemics in the country.

Moreover, the findings of the study would also help to inform the community about different measures that healthcare workers can apply to prevent people from contracting the COVID-19 pandemic and its variants. The results could also help development planners design more effective strategies that can reduce the impact of the various challenges that health workers face in the course of their provision of assistance and support to patients with COVID-19 and similar or related pandemics.

### 

### 1.6 Scope of the Study

The study focused specifically on health workers at Muhimbili National Hospital. While the findings may have broader implications, the primary data collection and analysis was confined to this particular healthcare institution in Tanzania. Historical data used to provide context, assess the challenges faced by healthcare workers during the COVID-19 pandemic. The research primarily explored the challenges faced by various categories of health workers, including but not limited to doctors, nurses, and support staff directly involved in the care of COVID-19 patients. Then the study delved into both occupational and psychological challenges faced by health workers. It assessed the practices applied by health workers in assisting COVID-19 patients, with a specific focus on adaptation strategies and innovations.

The study extended to examining the community's awareness of the measures applied by healthcare workers to prevent the spread of COVID-19. However, the primary emphasis is on the healthcare workers' perspective rather than an in-depth community analysis.

The study explored how the findings can inform health policies, both at the institutional level within Muhimbili National Hospital of Tanzania and at a broader governmental level. It aimed to provide insights that contribute to the development of clear policies to support health workers and combat the COVID-19 pandemic.

The study extended to examining how the study's outcomes can support strategic planning, with a focus on addressing challenges faced by health workers during the provision of assistance to COVID-19 patients. The aim was to provide practical recommendations for enhancing preparedness for future outbreaks.

### 1.7 Organization of the study

The study comprises six chapters. Chapter one provides the background of the study, the statement of the problem, the objectives of the study, the research questions, and the significance of the study. Chapter is a review of related studies with a focus on occupational and psychological challenges facing health workers involved in assisting COVID-19 patients. This chapter also highlights the relating definitions of key terms and concepts, empirical review, theoretical basis of the study, a conceptual framework and the identified research gap.

Chapter three focuses on the methodology of the study with a focus on the data collection and analysis procedures. Chapter four presents the findings and analysis of the data. Chapter five provides the discussion of the study findings as detailed in Chapter four. Chapter six is on summary of the study, conclusion and recommendations for future actions.

# CHAPTER TWO

## LITERATURE REVIEW

### 2.0 Chapter Overview

This chapter reviews various literature related to the study to provide more insight into practices, and occupational and psychological challenges facing health workers in pandemic situations. The chapter provides the definitions of key terms and concepts, theoretical and empirical bases of the study, the research gap and conceptual framework.

### 2.1 Definition of key concepts

#### 2.1.1 COVID-19

Corona-virus disease 2019 (Covid-19) is defined as the illness caused by a new corona-virus known as severe acute respiratory syndrome corona-virus 2 (SARS-CoV-2; formerly referred to as 2019-nCoV). This disease condition was first announced as a respiratory illness discovered first in Wuhan City, Hubei Province, China (Talha, 2020). The information about the outbreak was for the first time released by the World Health Organization (WHO) on December 31, 2019. As of January 30, 2020, the WHO declared the COVID-19 pandemic as a global health emergency (Salehi *et al,* 2020).

#### 2.1.2 Pandemic

A pandemic refers to a disease eruption that spreads all over the world in different countries worldwide. It affects the big number of people and costs the life compared to an epidemic (Rosenwald, 2020). An analysis of world situations has revealed that the world has been experiencing a number of pandemics which have shaken the world since the early of 20th century. The pandemic such as H1N1 pandemic of 2009, the Spanish flu of 1918/19 (which did not originate in Spain), as well as flu pandemics in 1957 and 1968, and now the COVID-19 pandemic of 2019/20 are examples of world pandemics. The World Health Organization (WHO) declared COVID-19 to be a pandemic when it became clear that the illness was severe and was spreading quickly beyond the borders of China and the far East. (Talha, 2020).

#### 2.1.3 Healthcare Workers

Healthcare workers comprise a wide range of professions and occupations who provide some type of healthcare service, including such direct care typical of practitioners as physicians, nurses physician assistants, respiratory therapists, dentists, pharmacists, speech-language pathologist, physical therapists, occupational therapists, physical and behavior therapists, as well as allied health professionals such as phlebotomists, medical laboratory scientists, dietitians, and social workers (WHO, 2010). Such practitioners normally work in hospitals, healthcare centers and other service delivery points, but also in academic training, research, and administration institutions. Some provide care and treatment services for patients in private homes (Cho *et al*, 2020).

### 2.2 Theoretical review

#### 2.2.1 Callista Roy’s Theory

This theory was developed by Roy in 1976. The theory believes that the goal of healthcare is to promote patient adaptation (Roy and Andrews, 2008). It establishes that adaptation occurs when people respond positively to environmental changes. The theory assumes that people are bio-psycho-social beings that interact with the changing environment (Orem, 2001).

The Callista Roy’s adaptation model is based on four meta-paradigms common to other nursing theories, which are the assumptions related to the person, the environment, health, and nursing and other health workers in dealing with disease pandemics. The author states that the person is subjected to a system in which stimuli elicit coping mechanisms and responses from the individual, family, or community, which can then lead to new stimuli. When it comes to coping mechanisms, these are subdivided into regulators and cognates (Mcewen, 2016). Regulators include the physiological mode, which dialogues directly with the individual’s physiology, revealing aspects related to the organism’s situation and function (Roy and Andrews, 2008).

Concerning the responses that reflect the individual’s adaptive process, these are subdivided into adaptive and ineffective. The adaptive model encourages human integrity, hence positively affecting health. The ineffective response, on the other hand, is when the individual is unable to cope effectively, compromising his or her self-care and development (Mcewen, 2016).

Thus, considering this difficult moment of world health, the nurse who seeks appropriate actions, guided by science, reflection, and criticality, needs to consider the constructs of Callista Roy (Adaptation Theory), because through their assumptions, a view that contemplates the individual in its entirety is proposed, making up a singular path that the science that deals with caring can carry out to guarantee the accuracy of their responses.

This theory is relevant to this study, as it describes how healthcare workers adapt, take different measures, and apply diverse skills in fighting against the COVID-19 pandemic. Since the eruption of this pandemic, the MNH has devoted much time and effort to treating COVID-19 patients, giving them advice, and educating the community on how they can protect themselves from the COVID-19 infection.

The RAM is a valuable nursing theory that can be used to guide nursing practice in a variety of settings, including during the COVID-19 pandemic. Nurses can use the RAM to assess healthcare workers' adaptive responses, identify their needs, and provide interventions to promote adaptation.

### 2.3 Empirical Review

#### 2.3.1 Strategies used by Health Workers to assist COVID-19 Patients

Healthcare workers’ knowledge levels, attitudes and practices (KAP) focused on trends in Asian Community Health Workers (CHWs) and medical scholars and indicated that 61% of HCWs were having inadequate knowledge about COVID-19 transmission (WHO, 2020). Another study on HCWs’ roles in Pakistan indicated that 93% of HCWs were of higher knowledge and 89% applied good practices in handling COVID-19 cases (Saqlain *et al,* 2020). A study by Reuben *et al* (2020) focused on the contribution of levels of knowledge, attitudes and practices in COVID-19 containment in North-Central Nigeria revealed that the residents from Northern Nigeria had a high level of awareness of COVID-19 and prevention methods that is (99% and 95%, respectively. However, 80% of the respondents indicated that they only followed government procedures for prevention of COVID-19 pandemic transmission.

Feldman et al. (2021) on their part did a study on Community health workers’ knowledge, attitudes and practices relating to COVID-19 in Mozambique. The study found that knowledge, attitudes and practices (KAP) were important to community healthcare workers to contain COVID-19 through the use of digital health tools. The tools were well adapted to better support CHWs as part of the COVID-19 pandemic rapid response.

An empirical study in Uganda on the effectiveness of HCWs in dealing with pandemic patients, indicated that only 69% had adequate knowledge in dealing with COVID-19 disease conditions, the majority (about 74%) were reported to apply good prevention measures (Olum *et al,* 2019). In the Tanzania context, a study by Rugarabamu *et al.,* (2020) found that 84% of healthcare workers had adequate knowledge about COVID-19 prevention.

#### 2.3.2 Occupational challenges faced by health workers during their provision of Assistance to COVID-19 Patients

The providing of healthcare services to COVID-19 patients’ needs both comprehensive assessment and management as COVID-19 outbreaks come with excessive occupational challenges within the health-care systems (WHO, 2020b). Health-care workers from different healthcare departments were generally few and had inadequate clinical experiences in dealing patients with severe respiratory infections and illnesses (Li *et al*., 2020). However, the temporary efforts of providing intensive training to some extent increased HCWs knowledge and skills for the prevention of the wider transmission of the conditions (Li *et al*., 2020).

It has been noted that during the early stages of COVID-19 epidemic, because of little knowledge in prevention and control measures specifically for the corona-virus, approximately 3,000 healthcare workers were infected in Hubei, China, 40% among of them were infected in hospitals during the process of treating COVID-19 patients (Talha, 2020). Indeed, health-care workers involved in the COVID-19 eruption faced persistent fear of infection due to the infectious nature of the virus, unfamiliar transmission methods, the necessity to be near the patients and infection contracted by contemporaries (Saqlain *et al*, 2020). Similarly, it has been established that infection of health-care workers has been a common problem during the outbreaks. During the SARS epidemic, nurses and physicians experienced low levels of trust in equipment and infection control measures supplied from world commercial establishments (Marjanovic *et al.,* 2007).

Jeleff et al (2022) did a study on occupational challenges of healthcare workers during the COVID-19 pandemic using exploratory qualitative study with semi structured interviews. The results shown that healthcare workers faced the challenges of lack of preparedness, structural conditions, and physical and mental health of HCWs. Lack of preparedness included delayed infection prevention and control (IPC) guidelines, shortages of personal protective equipment combined with staff shortages (especially of nursing staff) and overworked personnel. Physical and mental strains resulted from HCWs being overworked and working permanently on alert to face medical uncertainties and the critical conditions of patients.

According to Islam *et al* (2020), in their paper on tackling the COVID-19 pandemic, it was revealed that the number of doctors in Bangladesh government healthcare centers was very small. Hence, many healthcare specialists worked for more than 17 hours per day including extended tele-counseling shifts per day. To alleviate this challenge, the government appointed an extra 2,000 doctors on May 2020 (Razu *et al*, 2021). Moreover, healthcare specialists faced severe shortage of masks, hand gloves, and personal protective equipment (PPE) to protect themselves from COVID-19 infection (8). Moreover, locally produced PPEs, masks, and other kits provided by the authority were reported to be of low quality and powerless to protect the medical workforce from infection (Tanim, 2020).

The World Bank (2020) highlighted that public awareness campaigns launched by the Afghan government's Citizen’s Charter I in Afghanistan have encouraged hundreds of Afghan women to step in voluntarily and help their communities with providing masks and awareness messages about the COVID-19 virus. Awareness campaigns have helped to dispel misinformation about the coronavirus while promoting precautionary measures like frequent hand washing and wearing masks. In several Afghan provinces, women who attended awareness sessions have turned to producing masks for their communities to help prevent COVID-19 outbreaks (World Bank, 2020).

The COVID‐19 pandemic has exposed a host of vulnerabilities in the healthcare system of African countries, especially in the wake of the third wave. Disruption of supply chains and inadequate distribution affected access to PPE, isolation beds, and ventilators for HCWs. A pancontinental study found that only 14% of HCWs reported proper access to PPE, 64% reported a lack of isolation wards, and 29% reported no access to ventilators in their work settings.

Reports from South Africa stated that most places had inadequate testing and isolation of patients with COVID‐19, irrespective of disease severity. The hospitals were being stretched to their peak capacities such that critical patients were being treated at home and often had no access to oxygen cylinders, a lifesaving commodity. Most of the hospitals were underprepared to deal with the massive surge of critical patients, contributing to the overall increased mortality, thereby creating a severe toll on the HCW's mental health, resulting in feelings of inadequacy, insomnia, anxiety, helplessness, and physical stress.

#### 2.3.3 Psychological challenges faced by health workers as they provide assistance to COVID-19 patients

During the severe stage of COVID-19 pandemic, psychological challenges such as social distancing, isolation, shutdowns of businesses, insomnia, mental distress, fear of COVID-19 infections, and loss of family members/friends were experienced by members of communities (Zhang *et al*, 2020). The COVID-19 pandemic heavily burdened, and in many cases overwhelmed healthcare systems including healthcare workers (Lee *et al.,* 2013). Consequently, the WHO emphasized needful actions to address the immediate needs and measures to save lives and prevent serious impacts on physical and mental health including of healthcare workers, the latter being the frontline expertise in providing healthcare to COVID-19 victims (WHO, 2020b).

Sun *et al* (2020) did a study on the psychological experience of caregivers of COVID-19 patients. The researchers found that healthcare professionals and staff involved in COVID-19 cases suffered from insomnia, loneliness, sleep disorder, and mental distress due to overwork and other stressful conditions. Indeed, healthcare workers experienced anxiety attacks and frustrations from inadequate knowledge, environmental changes, and fear of infection for themselves and their family members (Botchway and Fazel, 2021). Evenso, the healthcare workers were encouraged by their employers to keep physical distance from their family members in the effort to reduce the risk of infection, which could complicate the situation through psychological depression (Tanim, 2020).

Earlier, virus-related eruptions showed that frontline healthcare workers are at high risk of infection and other physical health conditions (Xiao *et al.,* 2020). Furthermore, healthcare workers reported mental health problems associated with occupational activities during and after the epidemics, including symptoms of post-traumatic stress, burnout, depression and anxiety (Lancee *et al*., 2008). Pappa *et al*. (2020) noted that during the COVID-19 pandemic more than five healthcare workers suffered from anxiety and depression.

Vindegaard and Benros (2020) established that COVID-19 resulted in healthcare workers suffering from anxiety, depression, and sleep problems when compared with the general population evidently due to their frontline positions in offering services to infected persons.

### 2.4 Research gap

The reviewed literature showed most of the studies conducted from developed and developing countries indicated that healthcare workers faced various challenges during the COVID-19 such as insomnia, loneliness, sleep disorder, and mental distress due to their overwork and other stress conditions (Zhang et al, 2020). Other challenges noted included anxiety attacks and frustration due to inadequate knowledge, environmental changes, and fear of infection for health staff themselves and their family members as well as psychological problem caused by the fear of COVID-19 infections by virtue of health staff being in the frontline during the pandemic (Li and Yan, 2020).

From the literature review shows that in Tanzania there is less to no studies conducted to examine the challenges faced by healthcare workers during the COVID-19. Therefore, the researcher ventured to investigate the challenges faced by healthcare workers during the COVID-19 workers as they assisted COVID-19 patients, taking Muhimbili National Hospital as a case of the study.

### 2.5 Conceptual framework

A conceptual framework is a systematic outline of the factors, variations and contexts impacting and guiding a study. Reiche and Ramey (1991) defined conceptual framework as “a set of broad ideas and principles taken from relevant fields of enquiry and used to structure a subsequent presentation”. A conceptual framework is a visual or textual representation of the key concepts, variables, and relationships that underlie a research study. It helps situate the research within existing knowledge and theoretical perspectives, offering a structured way to approach and interpret the research questions. By using a conceptual framework, the researcher can clarify the key concepts, variables, and relationships that are relevant to the study. This helps establish a common understanding of the context and lays the groundwork for interpreting the research findings.

Therefore, the researcher developed a befitting conceptual model that served as roadmap of the major concepts associated with the practice, occupational and psychological challenges facing health workers as they assisted patients of COVID-19 conditions.

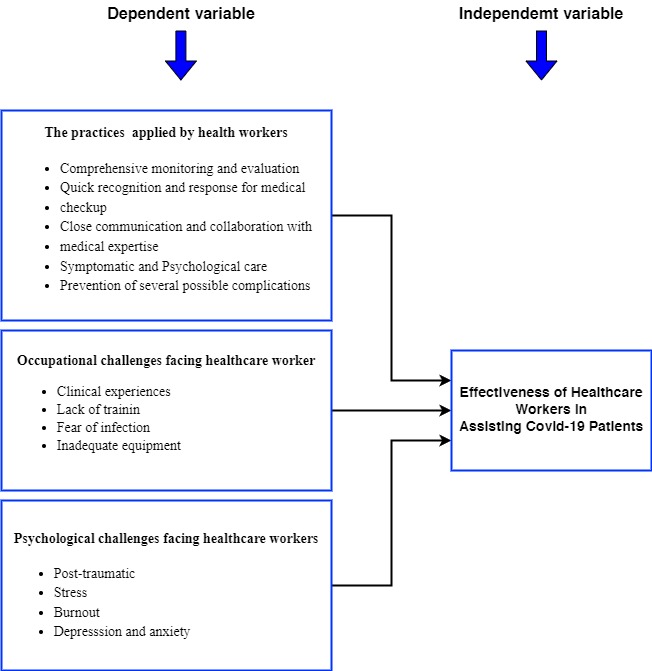


Figure 2. 1: Conceptual Framework

*Source*: Researcher (2023)

**Interpretation of the Conceptual Framework**

Healthcare workers’ practices involved in assisting the patients of COVID-19 pandemic faced some occupational and psychological challenges.

**Healthcare** providers like doctors and nurses are involved in providing comprehensive patients’ monitoring and evaluation, quick recognition and response to medical checkup, close communication and collaboration with other medical expertise for symptomatic care, psychological care, and prevention of possible complications.

**Occupational Challenges faced by h**ealthcare workers as they aided COVID-19 patients can face risky conditions like lack of experience and training and inadequate equipment and medicines**.**

**Psychological Challenges** impacting healthcare workers as they aid COVID-19 victims can arise and include such as post-traumaticstress, burnout, depression and anxiety.

# CHAPTER THREE

## RESEARCH METHODOLOGY

### 3.0 Chapter overview

This section presents the methods and resources needed and used in this study. It includes the research design, area of the study, population of the study, sample size, sampling techniques, data collection tools and procedures, data analysis as well as data reliability and validity.

### 3.1 Research design

The study adopted the descriptive research design. The research design answers the questions of why and how a phenomenon occurs, rather than how often it occurs (Kombo and Tromp, 2006). This design is adopted because it can be used to investigate the background of a research problem in the effort to collect the required information that enables further research (Kothari, 2014).

### 3.2 Research approach

The study was based on a mixed research approach constructed from both, qualitative and quantitative paradigms. however, the quantitative research features dominantly and qualitative aspects of data feature at a very low level. Qualitative research method views human social life as qualitatively different from the other aspects of the study. As such, truth depends on socially- constructed beliefs, norms and perceptions, and thus, there is no universal objective truth in social life. Quantitative research method on the other hand is premised on describing a specific population in numerical values and test hypotheses (Cresswell, 2014).

In this study, data collected from quantitative research method was combined with data collected from qualitative research method. This was done during Data collection process, data analysis and interpretation. Although each research method has its own merits which stem from different philosophical assumptions that shape the ways researchers approach problems, collect and analyse data, the two methodss are complementary and their combined application helps to optimize both the reliability and validity of research undertaking and data collected (Kothari, 2019). The use of both research methods ensures not only the methodological exactness but also increases the robustness of the study in the attempt to test the validity of the findings.

### 3.3 Area of the study

The study was conducted at the Muhimbili National Hospital (MNH). MNH is the Tanzania national referral hospital operating in collaboration with the Muhimbili University of Health and Allied Sciences. The MNH is the largest hospital in Tanzania with 1,500 beds, attending 1,000 to 1,200 patients per week. The hospital consists of 1200 employees of which 300 are doctors and specialists, 900 registered and enrolled nurses and the rest are supporting operations employees (MNH profile, 2021). Muhimbili National hospital is located within Dar es Salaam region in the eastern coastal area of Tanzania. The MNH was chosen for the study because it has various health professionals with experience in fighting epidemics such as Ebola, cholera and currently COVID-19 pandemic.

### 3.4 Research Population

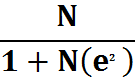
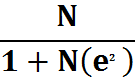
A population is the complete collection of all the elements that are of interest in a particular investigation (Creswell, 2012). A target population is the population from which the sample is drawn (Adam and Kamuzora, 2008). The study population involved doctors, health specialists, laboratory technicians and nurses from the MNH.

### 3.5 Sampling procedures

A sampling technique is a method used to select elements from a population for a study (Schindler and Cooper, 2011). In this study simple random sampling was used to obtain respondents from the Muhimbili National Hospital healthcare workers and expected to provide responses to questions relating to medical practice, occupational and psychological challenges facing health workers as they assist patients of COVID-19. Simple random sampling enables anyone from the sample population to have equal chance of being selected to participate (Kothari, 2019). In this study simple random sampling used to select a sample of 92 healthcare workers from Muhimbili National Hospital. This means that every healthcare worker at the hospital had an equal chance of being selected for the study. The researcher first created a list of all the members of the population also known sampling frame, then used a random number generating algorithm to select a subset of members from the sample. This sampling technique helped to avoid bias in collecting information from the respondents (*Ibid*).

### 3.6 Sample Size

A sample size is the number of items collected from a population to constitute a sample (Kothari, 2019). The sample for this study was based on the sample framework of 1200, MNH healthcare workers. In this study, a sample size was obtained through the use of mathematical model formulae propounded by Taro Yamane (1964), namely,

n=

where:

n= sample size

N=population of the study

e = level of significance or error term which is equal 0.1.

N=1200.

n= 1200

1 + 1200 (0.12) = 92.

The sample size for this study is as illustrated in table 3.1 below;

Table 3.1: Sample size

|  |  |  |
| --- | --- | --- |
| **Category** | **Frequency** | **Percentage** |
| Doctors | **30** | **33** |
| Health Specialists | **15** | **16** |
| Laboratory technicians | **27** | **29** |
| Nurses | **20** | **22** |
| **Total** | **92** | **100** |

**Source:** Researcher (2022)

### 3.7 Data Collection Instruments

This study involved both primary and secondary data collection methods, specifically questionnaires, interviews and documentary reviews.

#### 3.7.1 Questionnaires

A questionnaire is a research instrument that consists of a set of questions or other types of prompts that aim to collect information from a respondent (Saris and Gallhofer, 2014). The questionnaire in this study enabled the researcher to generate data specific to the research questions (Adam and Kumzora, 2008). In this study a list of close and open questions was distributed to a total number of 92 MHN healthcare workers (Appendix I). This instrument gave the respondents freedom and time to digest the questions before responding to the questions. This study was convenient on grounds of time and resources availed including avoidance of personal bias from the researcher.

#### 3.7.2 In-Depth Interview (IDIs)

In-depth interviewing is a qualitative research technique that involves conducting intensive individual interviews with a small number of respondents for in-depth exploration of the respondents’ perspectives on a particular topic of the study (Boyce, 2006). An ‘interview’ is typically a face-to-face conversation between a researcher and a participant involving transfer of information to the interviewer (Cresswell, 2012). In this study the IDIs targeted 20 respondents namely; 5 doctors who are heads of units, and 15 specialists (Appendix II). The questions were designed to get more detailed information on the study. The IDIs questions were prepared in English but conducted in Kiswahili. All the IDIs responses were recorded and later transcribed and translated into English for analysis and report writing.

#### 3.7.3 Documentary Review

In this study various published and unpublished working documents from a variety of sources included articles, website and diaries and different research studies, journals, brochures, media articles. This was important for the researcher to justify and test the study data validity and reliability as collected and analysed.

### 3.8 Data Analysis Techniques

Data analysis involves stepwise organization of details about the cases categorization of data (Kothari, 2014). After completion of data collection, the researcher cleaned the data to ensure accuracy and completeness. The analysis was done both qualitatively and quantitatively. The intention of qualitative analysis was to discern the process and cause of action. This involved description and explanations derived from the data obtained. Quantitative analysis was employed on the data from the questionnaires as well as interviews. The SPSS software was used to analyze the collected data.

### 3.9 Data Validity and Reliability

#### 3.9.1 Data Validity

Validity is defined as the extent to which a concept is accurately measured in a quantitative study (Kombo and Tromp, 2006). Validity is considered to be the degree that allows the instrument to measure aspects that were intended (Kothari, 2019). Validity was enhanced through the pilot study that was purposely undertaken to pre-test the research tools and methods before the study was undertaken on a bigger scale. Validity enhanced the study validity as the interviews and questionnaires were clearly checked and constructed basing on the objectives of the study.

Furthermore, validity was assured by obliging with the administration of research tools as used by the researcher and testing of some tool before the actual data collection process. The validity of data collection tools was assured by testing them before their actual use in data collection. The testing of data collection tools was conducted in order to assure their validity before the actual survey.

#### 3.9.2 Data Reliability

Reliability is basically associated with the degree of consistency of the instrument or tool in repeated trials (Creswell, 2012). Therefore, reliability implies stability or dependability of an instrument or procedure in obtaining information (Bryman, 2012). To achieve reliability of the study, the researcher constructed different questions cutting across the information required, hence the reliability of data. Moreover, data collections were made reliable by pretesting the instruments before they were used in data collection.

#### 3.10 Ethical Considerations

Ethical approval was obtained from the Open University Tanzania where an introduction letter was issued and presented to the MNH for field research clearance. The MNH issued a signed letter from Executive Director as approval to conduct a survey within the MNH community. All the respondents who participated in the study were informed in advance about the purpose of the study. The anonymity and privacy of the respondents were protected and so no names were mentioned anywhere in this study report.

# CHAPTER FOUR

## PRESENTATION AND ANALYSIS OF FINDINGS

### 4.0 Chapter Overview

This chapter presents the findings of the study. The findings were analysed in relation to the objectives of the study. The objectives of the study are presented below to take a closer look at the findings in response to each objective: = to assess the practices applied by health workers in assisting COVID-19 patients, to determine the occupational challenges faced by health workers during their provision of assistance to COVID-19 patients, and to evaluate the psychological challenges faced by health workers during their provision of assistance to COVID-19 patients at the MNH.

### 4.1 Demographic characteristics of the respondents

Table 4.1 indicates that 52(56.5%) out of 92 respondents were male; 40 (43.4%) respondents were female. According to Table 4.1, 4 (4.3%) respondents of the Muhimbili National Hospital healthcare workers involved in the study were under the age of 25, 20 (21.7) respondents were between the ages of 26 and 35, 40 (43.4%) were between the ages of 36 and 45, and 22 (23.9%) were between the ages of 46 and 55, and the remaining 6(6.5%) were between the ages of 56 and above.

Table 4.1 shows that 36.7% had a university degree, making them the majority of the total respondents. The healthcare workers with an ordinary diploma made up 26% of the total study respondents, making them the second largest group of healthcare workers who were interviewed. Certificate holders were 17.3%, making it the third most popular group. Master's degree holders made up 15.2% of all respondents, ranking them fourth group. While the level of education that had the fewest participants was that of PhD holders at 4.3% of the total respondents. This result indicates that majority of the respondents used in this were having Bachelor degree and above. This implies that most of the selected respondents were having enough education and experience on issues concerning the pandemic diseases like COVID-19.

Table 4.1: Demographic characteristics of respondents

|  |  |  |  |
| --- | --- | --- | --- |
| **Variable** | **Frequency** | | **Percentage** |
| **Gender of healthcare workers** | | | |
| Male | 52 | | 56.5 |
| Female | 40 | | 43.4 |
| Total | 92 | | 100.0 |
| **Ages of healthcare workers** | | | |
| Below- 25 | 4 | | 4.3 |
| 26-35 | 20 | | 21.7 |
| 36-45 | 40 | | 43.4 |
| 46-55 | 22 | | 23.9 |
| 56 and above | 6 | | 6.5 |
| Total | 92 | | 100 |
| **Education Level for healthcare worker** | | | |
| Certificate | 16 | 17.3 | |
| Diploma | 24 | 26.0 | |
| Bachelor | 34 | 36.9 | |
| Masters | 14 | 15.2 | |
| PhD | 4 | 4.3 | |
| Total | 92 | 100 | |

**Source:** Field data, 2022

### 4.2 Years of experience of healthcare workers at Muhimbili National Hospital

Table 4.2 shows that 3(3.2%) of respondents have been working at the Muhimbili National Hospital for less than 3 years, 24 (26%) of respondents have been working with the Muhimbili National Hospital for 4-10years, 30 (32.6%) of respondents had 11-15 years’ experience, and the remaining 35(38%) of respondents had more than 15 years’ experience as healthcare personnel. This implies that majority of respondents of about 70% were having enough working experience of more than 10 ten years in the field of healthcare.

Table 4.2: Years of experience of healthcare workers

|  |  |  |
| --- | --- | --- |
| **Years of Experience** | **Working Experience** | **Percentages** |
| Less than 3 years | 3 | 3.2 |
| 4-10 years | 24 | 26 |
| 11-15 years | 30 | 32.6 |
| More than 15 years | 35 | 38 |
| **Total** | **92** | **100** |

**Source:** Field data, 2022

### 4.3 Practices applied by healthcare workers to assist COVID-19 patients

#### 4.3.1 Healthcare workers’ knowledge and attitudes relating to COVID-19 pandemic

Table 4.3 indicate whether or not the respondents agreed with the statement "I have knowledge and good attitudes in assisting COVID-19 pandemic victims." The table shows that eighty-six (86) respondents equivalents to (93.4%) said, yes, they had knowledge and good attitudes in assisting COVID-19 pandemic victims; six (6) respondents equivalents to (6.5%) said, no, they did not have adequate knowledge and attitudes in assisting COVID-19 pandemic victims. This applies that many healthcare workers at Muhimbili National Hospital obtain some skills and knowledge on dealing the COVID-19 victims. This is supported by one senior nursing officer during the interview, who said; “In response to this dangerous disease of COVID-19, we were given a seminar together with regular capacity building training programs on how to protect ourselves and protect others from the infection of the coronavirus.”

Table 4.3: Healthcare workers Knowledge and attitudes during COVID-19

|  |  |  |
| --- | --- | --- |
|  | **Frequency** | **Percentage (%)** |
| **YES** | 86 | 93.4 |
| **NO** | 6 | 6.5 |
| **Total** | **92** | **100** |

**Source:** Field data, 2022

#### 4.3.2 Effectiveness of practices applied by healthcare workers during COVID-19 pandemic

Table 4.4 shows that 33 of the respondents in the study, equivalent to 35.8% agreed that wearing masks *(barakoa*) was an effective means applied by Muhimbili healthcare workers to control the COVID-19 continued transmission. Also, 24 of the respondents equivalent of 26% agreed and supported having a bucket of water with sanitizer in the main entry gate for hands washing. Moreover, 18 of the respondents’ equivalents to 19.5% agreed with on the provision of education to the community members attending at MNH about protection methods for COVID-19 transmissions and 17 of the respondents equal to (18.4%) agreed with the need for special therapy area for smokers. This implies that at Muhimbili National Hospital various measures were applied to control the transmission of coronavirus, the most measures or strategy applied was insisting on wearing of mask among the healthcare workers and the patients and other visitors who were coming to the hospital. During the interview, one of the healthcare officers from the management added that; “During the period of COVID-19, among the methods we were using to protect ourselves from the infection of the coronavirus is to encourage the wearing of masks for our healthcare workers as well as patients and all visitors. With that, we emphasized a lot on washing hands with clean running water as well as using sanitizers to clean hands.”

Table 4.4: Practices applied by healthcare workers during COVID-19

|  |  |  |
| --- | --- | --- |
| **Practices (tools)** | | |
| Wearing of mask (Barakoa) | 33 | 35.8 |
| Having a bucket of water with sanitizer in the main entry gate for hands washing | 24 | 26 |
| Providing education to the community members attending at MNH | 18 | 19.5 |
| Demarcation of a special therapy area for smokers | 17 | 18.4 |
| **Total** | **92** | **100%** |

**Source:** Field data, 2022

#### 4.3.3 Types of treatments applied by healthcare workers during COVID-19

Table 4.5 indicates that 11 of the respondents, equivalents to 11.9% agreed with the strategy used of comprehensive monitoring and evaluation of the spread of the pandemic. 15 of respondents’ equivalents to 16.3% agreed with the strategy of quick recognition and response to in terms of medical checkup as essential for the rapid recovery of patients. In addition, 20 respondents, equivalent to 21.7% agreed with the plan for close communication and collaboration with physicians. Furthermore, 28 of the respondents, equivalent to 30.4% agreed with the plan on symptomatic and psychological care and also 18 respondents equivalent to 19.5% agreed with prevention of possible complications.  These results indicates that most of treatment applied by healthcare workers to heal the victims of COVID-19 was the strategic planning on symptomatic and psychological treatments. During the interview, one doctor added that; “Since this disease was more psychological due to the fact that many people were suffering from any disease that makes the body boil such as malaria and flu, they were running to feel that they are suffering from COVID-19. So, the main method we were using was to build the patients psychologically even before testing them so to lower their fear and pressure.”

Table 4.5: Treatments used by healthcare workers during COVID-19

|  |  |  |
| --- | --- | --- |
| **Treatment (Statement)** | **Frequency** | **Percentage** |
| Comprehensive monitoring and evaluation | 11 | 11.9 |
| Quick recognition and response in terms of medical checkup, | 15 | 16.3 |
| Close communication and collaboration with medical experts | 20 | 21.7 |
| Symptomatic and psychological care | 28 | 30.4 |
| Prevention of possible complications | 18 | 19.5 |
| **Total** | **92** | **100%** |

**Source:** Field data, 2022

### 4.4 Occupational challenges Faced by Health Workers during the COVID-19

#### 4.4.1 The Number of COVID-19 Patients Attended by Healthcare Workers Per Day

Table 4.6 shows that 38(41.3%) of respondents agreed that healthcare workers attended 1 to 5 COVID-19 patients per day at the Muhimbili National Hospital, 32 (34.7%) attended 5 to 10, 18 (19.5%) attended 10 to 15 and 4 (4.3%) attended more than 15 COVID-19 patients. These findings imply that healthcare workers were attending large number of COVID-19 patients per day.

Table 4.6: Number of Patients Attended per day by Healthcare Workers

|  |  |  |
| --- | --- | --- |
| **Number of patients per day** | **Frequency** | **Percentages (%)** |
| 1- 5 | 38 | 41.3 |
| 5-10 | 32 | 34.7 |
| 10-15 | 18 | 19.5 |
| More than 15 | 4 | 4.3 |
| Total | 92 | 100 |

**Source:** Field data, 2022

#### 4.4.2 Challenges that hindered the smooth Provision of Healthcare to COVID-19 Victims

Table 4.7 below represents the frequencies and percentages of healthcare workers’ knowledge about the challenges that hindered the smooth provision of healthcare treatment to COVID-19 patients. The results showed that 14 (15.2%) respondents agreed with poor administration. 26 (15.2%) agreed with insufficient equipment for treatment and diagnosis. 19 (20.6%) respondents agreed with inadequate training. Equally 33 (35.8%) of the respondents agreed about the lack of allowances and motivations for medical staff involved with the pandemic. Some Doctors at the MNH asserted during the interview that among the challenges faced by the healthcare workers in many Tanzanian healthcare centres during the COVID-19 pandemic was insufficient personal protective equipment (PPE) and the majority of MNH staff were not trained in how to use available equipment. During the interview one respondent at MNH stated; “Despite the essential need of PPEs the hospital had no more than two PPE which is not sufficient compared to the number of COVID-19 patients that were administered per day. Consequently, I was forced to buy my own PPE to save my health during the time of attending the patients”.

Another challenge was heavy workload for staff. The healthcare workers were assigned heavy workload regardless of their inexperience in dealing with outbreak diseases such as COVID-19 pandemic. This was attributed to big numbers of people in Dar es Salaam region with about 7 million many of whom could contract the disease conditions and needed prompt diagnosis and treatment. This has resulted in many doctors and nurses being tired due to lack of time to rest. During the interview one respondent stated. “During the period of COVID-19 I was very tired due to the large accumulation of patients. But we also had a great fear of getting coronavirus infection considering there was a shortage of masks, hand gloves, and personal protective equipment (PPE) to protect ourselves from COVID-19 infection”.

Table 4.7: Challenges that Hindered the smooth Provision of Healthcare to COVID-19 Victims

|  |  |  |
| --- | --- | --- |
| **Statement** | **Frequency** | **Percentage** |
| Poor administration | 14 | 15.2 |
| Insufficient of equipment for treatment and diagnosis | 26 | 28.2 |
| Inadequate training | 19 | 20.6 |
| Lack of allowances and motivations | 33 | 35.8 |
| Total | 92 | 100% |

**Source:** Field data, 2022

#### 4.4.3 Education and Mass Awareness Campaign during the COVID-19

Table 4.8 shows that 20 (21.7%) of the healthcare workers strongly agreed that education and mass awareness campaign offered by MNH healthcare reduced the sizes of the consequences of services to COVID-19 victims. Moreover, 30 (32.6%) of the respondents moderately agreed, and 8 (8.6%) slightly agreed while, 16 (17.3%) disagreed and 18 (19.5%) strongly disagreed. It is clear from the results that more than 62% of the respondents argued that education and mass awareness campaigns offered by MNH healthcare reduces the bad consequences of providing service to COVID-19 victims. During the interview one of the senior doctors said; “Mass awareness campaigns about education on how to protect yourself from this dangerous disease of COVID-19 were being given in various places within the hospital but also using the media including newspapers, radio and television to educate the public about the symptoms of COVID-19 and how to protect against its infection.”

Table 4.8: Education and Mass Awareness Campaign during the COVID-19

|  |  |  |
| --- | --- | --- |
| **Responses (staff)** | **Frequency** | **Percentages** |
| Strong agree | 20 | 21.7 |
| Agree | 30 | 32.6 |
| Slightly agree | 8 | 8.6 |
| Disagree | 16 | 17.3 |
| Strongly disagree | 18 | 19.5 |
| **Total** | **92** | **100** |

**Source:** Field data, 2022

### 4.5 The Psychological Challenges Faced by Health Workers During the COVID-19 Pandemic

#### 4.5.1 Psychological Challenges

Table 4.9 indicates that 25 (27.1%) of the respondents agreed with post-traumatic stress as one of the psychological challenges faced by healthcare workers during their provision of health assistance to COVID-19 patients. Another 18 (19.5%) agreed with burnout, whereas 21 (22.8%) agreed with depression and 28 (30.4%) agreed on anxiety. This implies that most of the healthcare worker faced the problem of post-traumatic stress and anxiety during the provision of healthcare to COVID-19 patients. During the interview with one of the specialists from the MNH it was asserted that, “COVID-19 healthcare experts faced psychological challenges including post-traumatic stress, anxiety attacks, and frustration. This was attributed to by heavy workload and inadequate knowledge in dealing with new Coronavirus”

Table 4.9: Psychological Challenges faced by healthcare workers during COVID-19 pandemic

|  |  |  |
| --- | --- | --- |
| **Respondents (Healthcare workers)** | **Frequency** | **Percentage** |
| Psychological challenges (Statement) |  |  |
| Post-traumatic stress | 25 | 27.1 |
| Burnout | 18 | 19.5 |
| Depression | 21 | 22.8 |
| Anxiety | 28 | 30.4 |
| Total | 92 | 100% |

**Source:** Field data, 2022

#### 4.5.2 Psychological low Morale of Healthcare Workers during the COVID-19 Pandemic

Table 4.10 indicates that 78 (84.7%) of the respondents reported that post-traumatic stress, burnout, depression and anxiety during work with the COVID-19 pandemic reduced the morale of healthcare workers in aiding COVID-19 victims. While 6 (6.5%) of the respondents said there was no stress and did not experience post-traumatic stress, burnout, depression or anxiety during the time when they were aiding COVID-19 victims thus for them morale to work remained the same. The remaining 8 (8.6%) of respondents gave neutral view that post-traumatic stress, burnout, depression and anxiety during the COVID-19 pandemic reduced the morale of healthcare workers in aiding COVID-19 victims. This morale of healthcare workers is the ethical and professional standards that healthcare workers are expected to uphold. This includes things like being honest and transparent with patients, providing care without discrimination, and respecting the confidentiality of patients. From the interview conducted by the researcher of this study to those Health Workers at Muhimbili National Hospital, one of the doctors stated; “…In fact, during the COVID-19 pandemic we were very affected psychologically considering that the disease itself was new to us, it was when you were attending to the patient that you were concerned that perhaps the patient you attended already has COVID-19 and has been infected. In fact, the morale to work dropped a lot due to mental stress due to thinking that every patient you will care for may have COVID-19.”

Table 4.10: Psychological Challenges and the Morale of Healthcare Workers

|  |  |  |
| --- | --- | --- |
| **Response** | **Frequency Number** | **Per cent** |
| Yes | 78 | 84.7 |
| No | 6 | 6.5 |
| Neutral | 8 | 8.6 |
| **Total** | **92** | **100** |

**Source:** Field data, 2022

# CHAPTER FIVE

## DISCUSSION OF THE FINDINGS

### 5.0 Chapter overview

This chapter highlights the discussion on the findings of the study as provided in chapter four above. This part of the report concentrated on the analysis of the demographic characteristics, practices applied by health workers in assisting COVID-19 patients, occupational challenges faced by health workers during the course of their provision of assistance to COVID-19 patients as well as psychological challenges faced by health workers during risky work under COVID-19.

### 5.1 Practices Applied by Healthcare Workers during COVID-19

Even though during the COVID-19 outbreak social distancing was the most effective means recommended to control the spread of the coronavirus, it was not easy to implement this strategy for healthcare workers who were required to be in close contact with COVID-19 patients for diagnosis and treatments. This put healthcare workers at high risk of being infected by coronavirus. The study found that majority of respondents about 93.4%, agreed that knowledge, attitudes, and practice play a big role in assisting COVID-19 pandemic victims. The interview findings supported this that majority of healthcare workers attended seminar and training on how to deal with COVID-19 infections. These results are similar to those of Olum et al. (2019) who argued that in Uganda healthcare workers were having sufficient knowledge of COVID-19 disease and consequently succeeded to come up with good COVID-19 pandemic prevention measures. Similarly, Saqlain et al. (2020) commented that community health workers (CHWs) during the COVID-19 outbreak in Pakistan applied higher knowledge and good practices for the purpose of controlling the transmissions of coronavirus.

In addition, the findings revealed that most of the measures applied by in controlling the transmission was wearing masks (Barakoa) for healthcare workers and people attending the hospital, and other measures were having a special bucket of water with sanitizer in all main entrances into buildings for hand washing, providing education to the community members attending at MNH, and demarcation of a special therapy area for smokers. This is in line to what was recommended by the WHO (2020) that in order to control the transmission of COVID-19 the community should apply physical or social distancing, quarantining, ventilation of indoor spaces, covering coughs and sneezes, hand washing, and keeping unwashed hands away from the face.

In the same vein, Ong et al. (2020) observed that masks for patients and other barrier precautions, enhanced hand hygiene, and surface decontamination as key to safety. The coronavirus is known to live on surfaces for hours or days (CDC, 2020). However, masks, goggles, gloves, and other barrier precautions will fail to protect caregivers who often encounter contaminated surfaces and may fail to wash their hands for every area visited in the hospital.

The Centers for Disease Control and Prevention (2019) highlighted that health care personnel must focus on meticulous hand hygiene to avoid contaminating workspaces. Clinical staff should clean workspaces and personal items such as stethoscopes, mobile phones, keyboards, dictation devices, landlines, nametags, and other items and hospitals also provided disinfectants or specifically alcohol-based disinfectants.

On the other hand, the findings of this study revealed that among the kinds of treatments that were applied to ensure that COVID-19 patients recover from illness were comprehensive monitoring and evaluation, quick recognition and response to medical check-ups, close communication and collaboration with medical expertise, symptomatic care, psychological care, and prevention of possible complications. The kinds of treatment that seemed to be applied mostly were symptomatic care and psychological support (30% of respondents), followed by -close communication and collaboration with physicians (22% of respondents).

### 5.2 Occupational Challenges Faced by Health Workers during their Provision of Assistance to COVID-19 Patients

Indeed, during the COVID-19 outbreak, healthcare workers were mainly vulnerable when offering treatment to patients (Antonia, 2022). The findings indicated that among the challenges that hinder the provision of healthcare treatment to COVID-19 patients were bad governance, insufficient equipment for treatment and diagnosis, inadequate training, the lack of allowances, and lack of motivation. The results showed that most of the factors that hindered the efficient provision of healthcare treatment to COVID-19 patients were insufficient equipment for treatment and diagnosis and the lack of allowances and staff motivations.

These results are similar to those of Razu et al. (2021) who argued that during the COVID-19 pandemic in Bangladesh, healthcare workers experienced higher workloads, psychological distress, scarcity of good personal protective equipment (PPE), stigmatization, the absence of incentives, a lack of coordination, and improper management. Also, healthcare workers faced the challenge of coping with environmental changes. Similarly, Pratiwi (2021) in Indonesia pointed out several challenges facing healthcare workers including inadequate skills in using PPE, difficulties in conducting assessments, failure to perform physical examinations, and physical and psychological exhaustion due to heavy workloads.

Furthermore, the study findings revealed that despite the hard work healthcare workers were doing during the COVID-19 period, considering that the patients were very many, the workload increased but the allowances and benefits were still low. The equipment was also inadequate, including beds, medicines, and respirators. This is similar to Dashti et al.'s (2020) study, argued that in Iran despite the large number of patients that the doctors were attending to for a long time in a day but the payment and their other entitlements could not be increased, even motivations were difficult to provide. Also, the necessary protective equipment was limited.

On the other hand, Gerada (2020) commented that during the COVID-19 pandemic within the healthcare system, medical staff and equipment were not enough to meet the number of COVID-19 patients, which resulted in a heavy workload and a safety threat within the healthcare centers and hospitals.

Moreover, the findings indicated that the majority of respondents (62%) agreed that education and mass awareness campaigns offered by MNH Healthcare reduced some consequences encountered during the provision of healthcare services to COVID-19 victims. This implies that education and mass awareness campaigns in healthcare facilities was among the measures that was implemented to mitigate the effects of pandemic disease transmissions, such as Ebola and cholera, COVID-19 etc. This is in line to what highlighted by the World Bank (2020) that public awareness campaigns launched in Afghanistan have encouraged hundreds of Afghan women to step in voluntarily and help their communities with providing masks and awareness messages about the COVID-19 virus. Awareness campaigns have helped to dispel misinformation about the coronavirus while promoting precautionary measures like frequent hand washing and wearing masks. In several Afghan provinces, women who attended awareness sessions have turned to producing masks for their communities to help prevent COVID-19 outbreaks (World Bank, 2020).

### 5.3 Psychological Challenges Faced by Health Workers During the COVID-19 Pandemic

The findings established that among the psychological challenges facing healthcare workers during the provision of health assistance to COVID-19 patients were post-traumatic stress, burnout, depression, and anxiety. Most of the healthcare workers from the study area complained that during COVID-19 experienced the challenges of insomnia, post-traumatic stress, and mental illness because of heavy duties, anxiety attacks, and frustration due to inadequate training on how to deal with COVID-19 victims, environmental changes, and fear of infection. The findings are similar to those of Zhicheng *et al.* (2021)’study that psychological problems were the most serious challenge facing healthcare workers during the COVID-19 who were in the frontlines attending COVID-19 victims.

Similarly, Ruiz-Fernández et al. (2020) in Spain during the period of the highest incidence of cases and highest mortality rates of COVID-19, healthcare workers encountered with medium-to-high levels of compassion fatigue and burnout. In another Spanish survey by Martnez-López et al. (2020), observed that 39% of healthcare workers reported high depersonalization and 43% considered that they might need psychological or psychiatric treatment in the future.

# CHAPTER SIX

## SUMMARY, CONCLUSION AND RECOMMENDATIONS

### 

### 6.0 Chapter overview

This chapter provides the summary, conclusion and recommendations of the study.

### 6.1 Summary

The study sought to assess the challenges hindered health workers in helping and supporting COVID-19 patients at the Muhimbili National Hospital. Specifically, the study examined the practices applied by health workers in assisting and supporting COVID-19 patients, to determine occupational and psychological challenges faced by health workers during their provision of assistance to COVID-19 patients. The findings indicated that among the practises applied by healthcare workers to control the spread of COVID-19 pandemic included wearing masks (Barakoa), hand washing with sanitizer, soap and clean water, provision of education to the community, setting special areas for smokers and providing medication including conducting research into befitting vaccines.

In addition, the kinds of treatments that were applied to treat COVID-19 patients included comprehensive monitoring and evaluation of each patient, quick recognition and response to medical checkup, close communication and collaboration among medical expertise, symptomatic care, psychological care, and prevention of possible complications. Furthermore, the study established that the challenges that hindered the smooth provision of healthcare treatment to COVID-19 patients included uncoordinated governance efforts, insufficient of equipment for treatment and diagnosis, inadequate training of staff involved, and the lack of medical allowances and motivations.

The findings further established that the size of the workload for medical staff increased due to the big number of COVID-19 patients yet the allowances and benefits for staff involved remained low. Moreover, the findings showed that healthcare workers from Muhimbili National Hospital not only suffered occupational challenges such as higher workload and inadequate allowances during the provision of healthcare education to COVID-19 victims and family members but also psychological challenges resulting from involvement in the provision of health assistance to patients. The challenges included post-traumatic stress, burnout, insomnia, isolation, anxiety attacks and frustration caused by heavy workload and inadequate knowledge and skills in dealing with COVID-19 victims.

### 6.2 Conclusion

In general terms, COVID-19 pandemic created several challenges for healthcare workers nationally and globally since healthcare workers are always in the front line to prevent and controls disease transmission and the spread of infection. Corona-virus was declared by the WHO in 2019 as a dangerous virus that spreads at very high speed from one person to another. Therefore, in order to control the wide spread of infection of the virus different measures were recommended including wearing of masks (Barakoa), hand washing with sanitizer or clean water and soap.

This study used a mixed-methods approach to investigate the occupational and psychological challenges faced by healthcare workers at Muhimbili National Hospital during the COVID-19 pandemic. The study found that healthcare workers faced a number of challenges, including heavy workload, lack of allowances and motivations, insufficient equipment for treatment and diagnosis, inadequate training, post-traumatic stress, burnout, depression, and anxiety.

The study also found that younger healthcare workers were more likely to experience post-traumatic stress and anxiety, while older healthcare workers were more likely to report burnout and depression. Healthcare workers with higher levels of education were more likely to be aware of the occupational and psychological challenges faced by their colleagues, and were also more likely to support interventions to address these challenges.

This study's conclusions have important implications for theory, practice, and policy. First, the study provides empirical evidence for the theory that during pandemics, healthcare personnel are more likely to face occupational and psychological challenges. Second, the study emphasizes the necessity of providing proper training, resources, and support to healthcare personnel. Third, the study advises that governments and healthcare organizations create policies to support healthcare workers' mental health.

### 6.3 Recommendations

Ministry of Health and Muhimbili National Hospital spent resources and time on training and preparedness for healthcare workers during the COVID-19 pandemic. They did it, but it is also possible that more could have been done. In cases of any outbreaks of infectious diseases healthcare personnel such specialist doctors, nurses, pharmacists, therapists, medical laboratory specialists and support staff should immediately be given relevant and focused training in relevant knowledge and skills to protect themselves and their family members and close friends from contracting the infections as they treat patients. The training will prepare healthcare workers to cope with different psychological and other challenges, including anxiety, depression, insomnia, and fear of infection and will attend to patients with due concentration and confidence. This training should be provided on a regular basis and should be updated to reflect the latest scientific evidence and best practices.

The government should ensure arrangements for smooth coordination of efforts and guidelines issued by the WHO and the government in the effort to share relevant knowledge, skills and experiences in dealing with pandemic outbreak like COVID-19. Such preparedness will reduce uncertainties and tensions among medical staff and family members as they endeavor to help and support patients while at the same time ensuring that they are safe from contracting the infections. The Ministry of Health should develop and implement a comprehensive preparedness plan for future outbreaks of infectious diseases. This plan should include provisions for training healthcare workers, stockpiling supplies, and coordinating with other agencies.

In the effort to retain qualified staff dealing with pandemics, the government should ensure and should provide incentives to healthcare workers involved in outbreaks like COVID-19. The incentives will serve as a motivation to encourage the workers to work hard and save the lives in pandemic situations. The Ministry of Health should consider providing financial and non-financial incentives to healthcare workers who are involved in the treatment of patients with infectious diseases. This could include things like tax break, risk allowance, hazard pay, bonuses, Loan forgiveness, mental health support and paid time off. Furthermore, those health institutes can implement system that will that will allow them to Recognizing and rewarding health workers for their contributions through awards and other forms of public recognition. This might play a huge role on helping them to face most of the challenges that they face during this kind of situations.

### 6.4 Suggestions for further studies

This study investigated occupational and psychological challenges facing healthcare workers as they assist patients Covid-19. It took Muhimbili National Hospital Dar Es Salaam, Tanzania as the case of focus. The study established insights which are believed to stand as useful contributions that healthcare workers should consider in their future engagement with pandemics if they are to reduce possibilities for occupational and psychological challenges such as have impacted medical staff in the past.

There are, however, other areas for further research in the area of pandemics. Whereas this study focused only on occupational and psychological challenges and practices that challenge healthcare workers in dealing with patients of Covid-19, with a focus on one hospital, the researcher believes that more researches is needed on the same theme and related areas of engagement by medical personnel in other parts of the country and other hospitals such as health centres, regional referral hospitals and indeed private polyclinics and privately-run hospitals. From such studies the nation can discern issues to guide policy changes for the future confidence building protection frameworks and guidelines for all healthcare workers called upon to deal with, assist and guide victims of pandemics and their loved ones.

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# APPENDICES

# APPENDIX I: QUESTIONNAIRES

**SECTION A: GENERAL INFORMATION OF THE RESPONDENTS**

Please put a tick in the appropriate space

1. Sex: Male ( ), Female ( )

2. Age: (a) Below 25 ( ), (b) 26-35 ( ), (c ) 36-45 ( ), (d) 46-55 ( ), ( e) Above 55 ( ),

3. Level of education: (a) Certificate holder ( ) (b ) Diploma holder ( ) (

c ) Degree holder( ) ( d ) Degree holders above first degree ( ) ( d ) PHD holders ( )

4. What is your job title at the MNH?

|  |  |
| --- | --- |
|  | Tick |
| Doctor |  |
| Health Specialist |  |
| Laboratory technician |  |
| Nurse |  |

5. How long have you been working at the MNH?

|  |  |
| --- | --- |
| **Experience of respondents** | Tick |
| 0-3 years |  |
| 4-10 years |  |
| 10 and above |  |

**Section B: Practices applied in assisting COVID-19 patients**

6. Do healthcare workers knowledge, attitudes and practices play any role in assisting COVID-19 pandemic victims

1. Yes ( )
2. No ( )

7. What effective practises have you applied to control the transmission of COVID-19 pandemic at MNH?

1. Wearing of masks (*Barakoa*) ( )
2. Having buckets of water with soap and or sanitizer in the main entry gates for hands washing ( )
3. Providing education to the community attending at MNH ( )
4. Preparing a special therapy area for smoking ( )
5. Others specify

……………………………………………………………………………………………………………………………………………………………………

8. What strategies and kinds of treatments have you applied to ensure that COVID-19 patients recover from illness?

1. Comprehensive monitoring and evaluation ( )
2. Quick medical recognition and response treatment ( )
3. Close communication and collaboration with medical experts ( )
4. Symptomatic and psychological care ( )
5. Prevention of possible complications ( )

**Section C: Occupational challenges faced by health workers during their provision of assistance to COVID-19 patients**

9. How many patients of COVID-19 pandemic did you receive per day on average?

1. Less than five 5 ( )
2. More than five ( )
3. More than 10 ( )
4. More than 20 ( )

10. Can you tell what safety and security risks health workers faced during the COVID-19 pandemic?

……………………………………………………………………………………………………………………………………………………………………………………

11. What challenges often hindered the provision of healthcare to COVID-19 victims?

1. Bad governance
2. Insufficient equipment for treatment and diagnosis
3. Inadequate training of staff
4. Lack of allowance and staff motivation

12. It is argued that education and mass awareness campaign provided by MNH healthcare reduced the the consequences of o COVID-19 infection. Do you agree?

i. Agree ( ) ii. Strongly agree ( ) iii. Slightly agree ( ) iv. Disagree ( ) v. strongly disagree ( )

**Section D: Psychological challenges faced by health workers during the COVID-19 pandemic**

13. What different psychological challenges did face healthcare workers during their provision of health assistance to COVID-19 pandemic? (tick as applicable)

1. Post-traumatic stress
2. Burnout
3. Depression
4. Anxiety
5. Others (specify)

……………………………………………………………………………………………………………………………………………………………………………………

14. Does post-traumatic stress, burnout, depression and anxiety during the COVID-19 pandemic reduce the morale of healthcare workers in aiding COVID-19 victims

i. Yes ( ) ii. No ( ) iii. Somehow ( )

**APPENDIX II: INTERVIEW GUIDE**

1. Do healthcare workers’ knowledge levels, attitudes and practices play any role for assist COVID-19 pandemic victims?
2. What effective measures have you applied to control the transmission of COVID-19 pandemic at MNH?
3. What occupational challenges often face healthcare workers as they provide assistance to COVID-19 patients?
4. What psychological challenges, if any, often hinder healthcare workers’ provision of health assistance to COVID-19 patients?

